

COMPLETION REPORT  
PHASE I  
CONTRACT NO. EG-77-S-07-1691

VOLUME B  
APPENDIX I  
WASHINGTON REACH DATA TABLES

**A RESOURCE SURVEY OF  
LOW-HEAD HYDROELECTRIC POTENTIAL  
PACIFIC NORTHWEST REGION**

JOHN S. GLADWELL  
LEROY F. HEITZ  
CALVIN C. WARNICK  
IDAHO WATER RESOURCES RESEARCH INSTITUTE

IN COOPERATION WITH  
CLAUD C. LOMAX  
STATE OF WASHINGTON WATER RESEARCH CENTER

PETER C. KLINGEMAN  
OREGON WATER RESOURCES RESEARCH INSTITUTE

ALFRED B. CUNNINGHAM  
MONTANA UNIVERSITY JOINT WATER RESOURCES RESEARCH CENTER

THIS PROJECT FUNDED BY THE  
UNITED STATES DEPARTMENT OF ENERGY

MARCH 1979

## FORWARD

Due to the tremendous volume of information presented in this report, final publication has been split into ten volumes. The first volume (Volume A) contains the main report which describes study methodologies and sample data tables. The remaining nine volumes (Volumes B-J) contain sets of complete data tables for all the streams studied. Page iii of this volume contains a listing of the contents of all of the volumes. A listing of the distribution of the different report volumes is contained on pages 98 and 99 of Volume A.

Those desiring information from or copies of any of the reach sheets should contact the Idaho Water Resources Research Institute or the water research institute in the particular state in which the stream or streams of interest are located. Institute addresses are shown on the distribution list.

## REPORT VOLUME CONTENTS

- Volume A Main Report and Sample Appendices
- Volume B Appendix I, Washington Reach Data Tables
- Volume C Appendix I, Washington Reach Data Tables continued
- Volume D Appendix I, Washington Reach Data Tables continued
- Volume E Appendix II Oregon Reach Data Tables
- Volume F Appendix II Oregon Reach Data Tables continued
- Volume G Appendix II Oregon Reach Data Tables continued
- Volume H Appendix III Idaho, Nevada and Wyoming Reach Data Tables
- Volume I Appendix III Idaho, Nevada and Wyoming Reach Data Tables  
continued
- Volume J Appendix IV Montana Reach Data Tables

MAIN REPORT  
VOLUME A  
TABLE OF CONTENTS

	Page
Forward . . . . .	ii
Acknowledgements . . . . .	iii
Executive Summary . . . . .	iv
Report Volume Contents . . . . .	viii
List of Tables . . . . .	x
List of Figures . . . . .	xi

Chapter

I. Introduction . . . . .	1
II. Analysis Techniques . . . . .	4
III. Presentation of Tables . . . . .	27
IV. Reach Ranking . . . . .	79
V. Bibliography . . . . .	94
IV. Distribution List . . . . .	98

- Appendix I Sample Washington Reach Data Tables
- Appendix II Sample Oregon Reach Data Tables
- Appendix III Sample Idaho, Nevada, and Wyoming Reach Data Tables
- Appendix IV Sample Montana Reach Data Tables

TABLE OF CONTENTS

VOLUME B

APPENDIX I

WASHINGTON

Forward . . . . . ii

Report Volume Contents . . . . . iii

Main Report (Volume A) Table of Contents . . . . . iv

Washington State Map . . . . . vi

Table I  
Reach Index . . . . . 1

Table II  
Feasibility, Transmission and Load Considerations . . . . . 4-83

Reach Hydro-Potential  
Characteristic Sheets . . . . . W1-1 to W10-426

VOLUME C

*Appendix I contains*

*Reach Hydro-Potential  
Characteristic Sheets*

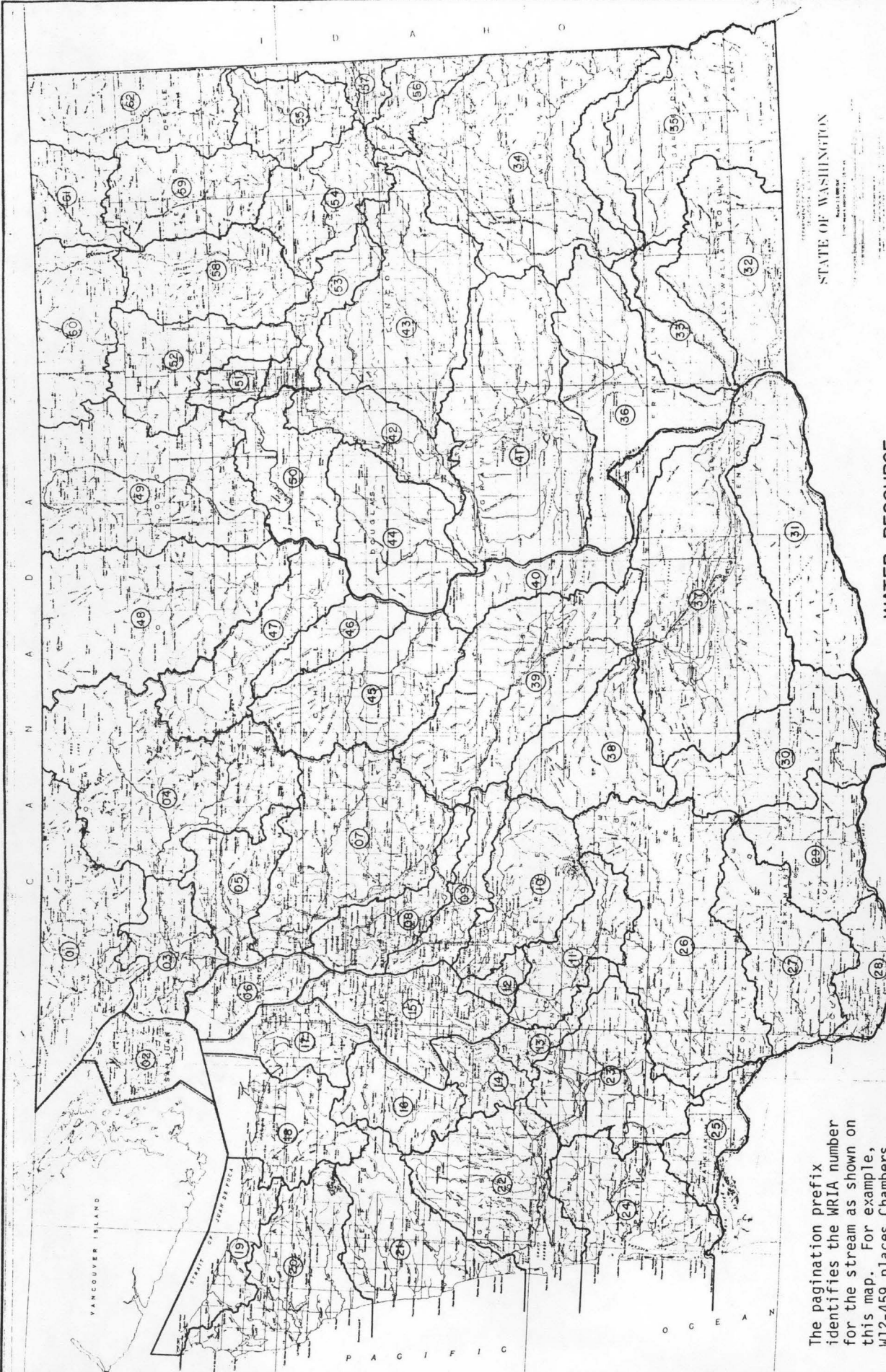
*W11-427 to W25-903*

VOLUME D

*Appendix I contains*

*Reach Hydro-Potential  
Characteristic Sheets*

*W26-904 to W62-1421*



The pagination prefix identifies the WRIA number for the stream as shown on this map. For example, W12-459 places Chambers Creek in WRIA 12.

**WATER RESOURCE INVENTORY AREAS**

### Washington Reach Index

STREAM NAME	REACH NUMBER	PAGE THRU PAGE
Nooksack River	01-023-000-000-000-R0001 - R0035	W1-1 - W1-35
Silesia Creek	01-024-000-000-000-R0001 - R0004	W1-36 - W1-39
Chilliwack River	01-025-000-000-000-R0001 - R0007	W1-40 - W1-46
Sumas River	01-026-000-000-000-R0001 - R0004	W1-47 - W1-50
Samish River	01-060-000-000-000-R0001 - R0006	W3-51 - W3-56
Skagit River	01-061-000-000-000-R0001 - R0184	W4-57 - W4-240
Stillaguamish River	01-022-000-000-000-R0001 - R0033	W5-241 - W5-273
Snohomish River	01-034-000-000-000-R0001 - R0092	W7-274 - W7-365
Sammamich River	01-020-000-000-000-R0001 - R0003	W8-366 - W8-368
Cedar River	01-021-000-000-000-R0001 - R0008	W8-369 - W8-376
Green River	01-028-000-000-000-R0001 - R0014	W9-377 - W9-390
Puyallup River	01-001-000-000-000-R0001 - R0036	W10-391 - W10-426
Nisqually River	01-029-000-000-000-R0001 - R0032	W11-427 - W11-458
Chambers Creed	01-005-000-000-000-R0001	W12-459
Deschutes River	01-006-000-000-000-R0001 - R0002	W13-460 - W13-461
Sherwood Creek	01-014-000-000-000-R0001	W14-462
Gosnell Creek	01-015-000-000-000-R0001	W14-463
Goldsborough Creek	01-018-000-000-000-R0001 - R0002	W14-464 - W14-465
Tahuya	01-004-000-000-000-R0001	W15-466
Lilliwaup Creek	01-027-000-000-000-R0001	W16-467
Dosewallips River	01-030-000-000-000-R0001 - R0007	W16-468 - W16-474
Duckabush River	01-031-000-000-000-R0001 - R0006	W16-475 - W16-480
Hamma Hamma River	01-032-000-000-000-R0001 - R0010	W16-481 - W16-490
Skokomish River	01-033-000-000-000-R0001 - R0030	W16-441 - W16-510
Little Quilcene River	01-019-000-000-000-R0001 - R0002	W17-511 - W17-512
Big Quilcene River	01-063-000-000-000-R0001 - R0006	W17-513 - W17-518
Dungeness River	01-004-000-000-000-R0001 - R0008	W18-519 - W18-526
Morse Creek	01-002-000-000-000-R0001 - R0002	W18-527 - W18-528
Elwha River	01-003-000-000-000-R0001 - R0019	W18-529 - W18-547
Sekiu River	01-008-000-000-000-R0001 - R0002	W19-548 - W19-549
Hoko River	01-009-000-000-000-R0001 - R0005	W19-550 - W19-554
Clallam River	01-010-000-000-000-R0001 - R0002	W19-555 - W19-556
Pysht River	01-011-000-000-000-R0001 - R0003	W19-557 - W19-559
Deep Creek	01-012-000-000-000-R0001	W19-560
Lyre Creek	01-013-000-000-000-R0001 - R0002	W19-561 - W19-562

STREAM NAME	REACH NUMBER	PAGE THRU PAGE
Sooes River	01-035-000-000-000-R0001 - R0002	W20-563 - W20-564
Ozette Creek	01-036-000-000-000-R0001 - R0002	W20-565 - W20-566
Dickey River	01-038-000-000-000-R0001 - R0006	W20-567 - W20-572
Quillayute River	01-037-000-000-000-R0001 - R0039	W20-573 - W20-611
Goodman Creek	01-039-000-000-000-R0001 - R0004	W20-612 - W20-615
Mosquito Creek	01-040-000-000-000-R0001 - R0002	W20-616 - W20-617
Hoh River	01-041-000-000-000-R0001 - R0020	W20-618 - W20-637
Cedar Creek	01-042-000-000-000-R0001	W20-638
Queets River	01-043-000-000-000-R0001 - R0027	W21-639 - W21-665a
Raft River	01-044-000-000-000-R0001 - R0007	W21-666 - W21-672
Quinault River	01-045-000-000-000-R0001 - R0039	W21-673 - W21-711
Moclips River	01-046-000-000-000-R0001 - R0002	W21-712 - W21-713
Copalis River	01-047-000-000-000-R0001 - R0003	W21-714 - W21-716
Humptulips River	01-048-000-000-000-R0001 - R0014	W22-717 - W22-730
Hoquim River	01-049-000-000-000-R0001 - R0006	W22-731 - W22-736
Wishkah River	01-050-000-000-000-R0001 - R0009	W22-737 - W22-745
Johns River	01-052-000-000-000-R0001	W22-746
Elk River	01-053-000-000-000-R0001	W22-747
Chehalis River	01-051-000-000-000-R0001 - R0093	W23-748 - W23-840
North River	01-054-000-000-000-R0001 - R0009	W24-841 - W24-849
Smith River	01-055-000-000-000-R0001 - R0004	W24-850 - W24-853
Willapa River	01-056-000-000-000-R0001 - R0012	W24-854 - W24-865
Bear River	01-059-000-000-000-R0001	W24-866
Palix River	01-062-000-000-000-R0001 - R0003	W24-867 - W24-869
North Nemah River	01-057-000-000-000-R0001 - R0003	W24-870 - W24-872
Naselle River	01-058-000-000-000-R0001 - R0009	W24-873 - R24-881
Grays River	01-500-002-000-000-R0001 - R0009	W25-882 - R25-890
Skamokawa River	01-500-004-000-000-R0001 - R0005	W25-891 - W25-895
Elochoman River	01-500-006-000-000-R0001 - R0003	W25-896 - W25-898
Mill Creek	01-500-008-000-000-R0001	W25-899
Abernathy Creek	01-500-010-000-000-R0001 - R0002	W25-900 - R25-901
German Creek	01-500-012-000-000-R0001	W25-902
Coal Creek	01-500-014-000-000-R0001	W25-903
Cowlitz River	01-500-020-000-000-R0001 - R0144	W26-904 - W26-1047
Kalama River	01-500-038-000-000-R0001 - R0011	W27-1048 - W27-1058
Lewis River	01-500-040-000-000-R0001 - R0036	W27-1059 - W27-1094
Salmon Creek	01-500-042-000-000-R0001 - R0002	W28-1095 - W28-1096



STREAM NAME	REACH NUMBER	PAGE THRU PAGE
LaCamas Creek	01-500-044-000-000-R0001 - R0003	W28-1097 - W28-1099
Washougal River	01-500-046-000-000-R0001 - R0011	W28-1100 - W28-1110
Hamilton Creek	01-500-048-000-000-R0001	W28-1111
Rock Creek	01-500-096-000-000-R0001 - R0002	W29-1112 - W29-1113
Wind River	01-500-100-000-000-R0001 - R0013	W29-1114 - W29-1126
Little White Salmon River	01-500-106-000-000-R0001 - R0003	W29-1127 - W29-1129
White Salmon River	01-500-120-000-000-R0001 - R0016	W29-1130 - W29-1145
Klickitat River	01-500-160-000-000-R0001 - R0029	W30-1146 - W30-1174
Walla Walla River	01-500-238-000-000-R0001 - R0030	W32-1175 - W32-1194
Palouse River	01-500-240-020-000-R0001 - R0003	W34-1195 - W34-1197
Asotin Creek	01-500-240-050-000-R0001 - R0002	W35-1198 - W35-1199
Tucannon River	01-500-240-010-000-R0001 - R0003	W35-1200 - W35-1202
Grande Ronde River	01-500-240-060-000-R0001 - R0006	W35-1203 - R35-1208
Yakima River	01-500-260-000-000-R0001 - R0058	W37-1209 - W37-1266
Columbia River	01-500-000-000-000-R0001	W40-1267
Crab Creek	01-500-280-000-000-R0001 - R0002	W41-1268 - W41-1269
Wenatchee River	01-500-300-000-000-R0001 - R0044	W45-1270 - W45-1313
Entiat River	01-500-320-000-000-R0001 - R0010	W46-1314 - W47-1323
Chelan River	01-500-340-000-000-R0001 - R0026	W47-1324 - W47-1349
Pasayten River	01-064-000-000-000-R0001 - R0002	W48-1350 - W48-1351
Methow River	01-500-360-000-000-R0001 - R0022	W48-1352 - W48-1373
Okanogan River	01-500-380-000-000-R0001 - R0013	W49-1374 - W49-1386
Nespelem River	01-500-390-000-000-R0001 - R0002	W51-1387 - W41-1388
Sanpoil River	01-500-400-000-000-R0001 - R0005	W52-1389 - W52-1393
Spokane River	01-500-420-000-000-R0001 - R0012	W54-1394 - W54-1405
Colville River	01-500-440-000-000-R0001 - R0006	W59-1406 - W59-1411
Kettle River	01-500-460-000-000-R0001 - R0006	W60-1412 - W60-1417
Big Sheep Creek	01-500-470-000-000-R0001 - R0002	W61-1418 - W61-1419
Pend Oreille River	01-500-480-000-000-R0001 - R0002	W62-1420 - W62-1421

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Nooksack River 01-023-000-000- 000-R0001		X		X	1	55(PS)		1
R0002		X		X	1	55(PS)		14
R0003		X	X	X	4	55(PS)	1	13
R0004		X		X	4	500(B)	1	12
R0005				X	3	500(B)	1	4
R0006				X	7	500(B)	1	10
R0007				X	6	115(PS)		16
R0008					9	115(PS)		18
R0009		X		X	5	500(B)	1	15
R0010				X	6	500(B)	1	14
R0011					6	500(B)	1	11
R0012					7	115(PS)		13
R0013					7	115(PS)		19
R0014				X	4	55(PS)		15
R0015				X	7	500(B)		20
R0016					13	55(PS)		22
R0017		X		X	3	55(PS)		10
R0018					8	55(PS)		12
R0019					8	55(PS)		14
R0020				X	8	55(PS)		20
R0021				X	12	55(PS)		23

\* Distance in air miles to nearest city with population greater than 100

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0022		X		X	1	55 (PS)		15
R0023		X		X	1	55 (PS)		21
R0024		X		X	1	55 (PS)		24
R0025		X			3	55 (PS)		30
R0026					6	55 (PS)		35
R0027					8	55 (PS)		36
R0028	X				10	55 (PS)		38
R0029					2	55 (PS)		15
R0030		X			2	55 (PS)	1	15
R0031					6	55 (PS)		25
R0032		X	X		7	55 (PS)		25
R0033					3	55 (PS)		33
R0034					6	55 (PS)		35
R0035		X			9	55 (PS)		40
Silesia Creek 01-024-000-000								
000-R0001				X	12	55 (PS)		40
R0002				X	12	55 (PS)		40
R0003				X	12	55 (PS)		40
R0004				X	12	55 (PS)		40

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Chilliwack River								
01-025-000-000-000-R0001	X			X	15	55 (PS) *		47
R0002	X			X	15	55 (PS)		47
R0003	X			X	15	55 (PS)		47
R0004	X			X	15	55 (PS)		47
R0005	X			X	15	55 (PS)		47
R0006	X			X	15	55 (PS)		47
R0007	X			X	15	55 (PS)		47
Sumas River								
01-026-000-000-000-R0001		X	X		1	55 (PS)		10
R0002		X	X		1	55 (PS)		8
R0003		X	X		1	55 (PS)		7
R0004		X	X		1	55 (PS)		9
Sammish River								
01-060-000-000-000-R0001	X	X	X	X	6	500 (B)		8

\* See pages 84 and 85 for ownership codes.

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0002	x	x	x	x	6	500(B)		8
R0003		x	x	x	0	500(B)		5
R0004		x	x	x	2	500(B)		5
R0005		x	x	x	0	500(B)		7
R0006		x	x	x	0	500(B)		9
Skagit River 01-061-000-000- 000-R0001		x	x	x	3	115(PS)	1	2
R0002		x	x	x	1	115(PS)		1
R0003		x	x	x	1	115(PS)		5
R0004		x	x	x	1	115(PS)		1
R0005		x	x	x	2	115(PS)		17
R0006		x	x	x	1	115(PS)		20
R0007		x	x	x	0	115(PS)		23
R0008		x	x	x	3	115(PS)		18
R0009		x	x	x	3	230(S)		15
R0010		x	x	x	1	230(S)		19
R0011		x	x	x	1	230(S)		22
R0012		x	x	x	1	230(S)		24
R0013		x	x	x	1	230(S)		26
R0014	x	x		x	1	230(S)		30

TABLE II  
 FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
 Washington

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
R0015	X	X	X	X	1	230(S)		33
R0016	X	X	X	X	1	230(P)		33
R0017				X	1	500(B)		3
R0018		X	X	X	1	500(B)		3
R0019		X	X		5	115(PS)	1	19
R0020				X	4	115(PS)		9
R0021				X	5	115(PS)		11
R0022		X	X	X	1	115(PS)		16
R0023				X	3	115(PS)		18
R0024				X	14	115(PS)		16
R0025				X	8	115(PS)		22
R0026				X	1	115(PS)		27
R0027				X	1	115(PS)		29
R0028				X	3	115(PS)		30
R0029				X	4	115(PS)		30
R0030		X		X	5	115(PS)		32
R0031				X	9	115(PS)		35
R0032	X			X	11	115(PS)		38
R0033	X			X	13	115(PS)		40
R0034	X			X	14	115(PS)		41
R0035	X			X	15	115(PS)		42
R0036	X			X	17	115(PS)		44

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0037				X	2	115(PS)		28
R0038				X	4	115(PS)		30
R0039				X	4	115(PS)		30
R0040				X	2	115(PS)		24
R0041				X	2	115(PS)		25
R0042				X	3	115(PS)		25
R0043		X		X	2	115(PS)		26
R0044				X	5	115(PS)		24
R0045				X	1	115(PS)		28
R0046				X	2	115(PS)		28
R0047				X	5	115(PS)		26
R0048				X	4	115(PS)		26
R0049				X	4	115(PS)		29
R0050				X	6	115(PS)		28
R0051				X	6	115(PS)		30
R0052				X	6	115(PS)		31
R0053				X	8	115(PS)		32
R0054				X	10	115(PS)		32
R0055				X	8	115(PS)		31
R0056				X	9	115(PS)		33
R0057				X	6	115(PS)		33
R0058				X	10	115(PS)		36
R0059				X	10	115(PS)		36

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0060				X	10	230(P)		42
R0061				X	9	230(P)		41
R0062				X	9	230(P)		42
R0063				X	14	230(P)		41
R0064				X	12	230(S)		28
R0065		X	X	X	1 ??	230(S)		
R0066		X	X	X	1	230(S)		10
R0067		X	X	X	1	230(S)		4
R0068		X	X	X	2	230(S)	1	1
R0069				X	6	230(S)	1	5
R0070		X		X	11	230(S)	1	10
R0071		X	X	X	14	230(S)	1	13
R0072		X		X	18	230(S)		18
R0073		X		X	2	230(S)		8
R0074				X	5	230(S)		8
R0075				X	7	230(S)		9
R0076		X		X	9	230(S)		11
R0077		X		X	12	230(S)		13
R0078		X		X	16	230(S)		15
R0079				X	16	230(S)		19
R0080	X			X	16	230(P)		19
R0081	X			X	18	230(P)		22
R0082	X			X	21	230(P)		25



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0083	X			X	22	230(P)		26
R0084	X			X	23	230(P)		27
R0085	X			X	25	230(P)		29
R0086				X	5	230(P)		9
R0087				X	8	230(P)		12
R0088				X	5	230(P)		9
R0089				X	8	230(P)		9
R0090				X	12	230(P)		14
R0091	X			X	12	230(P)		15
R0092				X	12	230(P)		14
R0093				X	14	230(P)		16
R0094	X			X	16	230(P)		20
R0095	X			X	19	230(P)		23
R0096	X			X	22	230(B)		23
R0097	X			X	17	230(B)		20
R0098	X			X	21	230(B)		27
R0099	X			X	24	230(B)		25
R0100				X	3	230(B)		3
R0101				X	6	230(B)	1	4
R0102				X	8	230(B)	1	6
R0103		X		X	11	230(B)		11
R0104				X	15	230(B)		16
R0105				X	17	230(B)		18

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0106	x			x	15	230(B)		21
R0107				x	14	230(B)		15
R0108				x	16	230(B)		17
R0109		x		x	12	230(B)	1	11
R0110		x		x	18	230(B)	1	16
R0111		x		x	20	230(B)	1	18
R0112				x	20	230(B)	1	18
R0113		x		x	21	230(B)		12
R0114				x	23	230(B)		13
R0115				x	3	230(B)		14
R0116	x			x	9	230(B)		17
R0117	x			x	8	230(B)		16
R0118				x	2	230(B)		20
R0119		x	x	x	3	230(B)		21
R0120				x	5	230(B)		22
R0121				x	6	230(B)		24
R0122				x	8	230(B)		24
R0123	x			x	11	230(B)		24
R0124	x			x	12	230(B)		25
R0125	x			x	12	230(B)		27
R0126	x			x	12	230(B)		28
R0127	x			x	12	230(B)		28
R0128				x	3	230(B)		19

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0129	X			X	8	230(B)		27
R0130				X	10	230(B)		23
R0131				X	14	230(B)		22
R0132	X			X	14	230(B)		22
R0133				X	13	230(B)		26
R0134	X			X	14	230(B)		26
R0135	X			X	16	230(B)		25
R0136	X			X	18	230(B)		27
R0137				X	2	230(B)		24
R0138				X	2	230(B)		27
R0139	X			X	6	230(B)		30
R0140	X			X	5	230(B)		31
R0141	X			X	2	230(B)		34
R0142	X	X		X	1	230(B)	1	33
R0143	X			X	11	230(B)	1	32
R0144					2	230(B)		39
R0145					4	230(B)		40
R0146	X				4	230(B)		38
R0147	X				6	230(B)		37
R0148	X				7	230(B)		36
R0149	X				9	230(B)		35
R0150	X				12	230(B)		34
R0151	X				7	230(B)		32

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0152	x				9	230(B)		36
R0153	x				12	230(B)		38
R0154	x				12	230(B)		34
R0155	x				5	230(B)		43
R0156	x				5	230(B)		43
R0157					7	230(B)		44
R0158					10	230(B)		45
R0159					11	230(B)		45
R0160					15	230(S)		44
R0161	x				5	230(S)		42
R0162	x				5	230(S)		40
R0163					10	230(S)		46
R0164					12	230(S)		48
R0165					13	230(S)		56
R0166					10	230(S)		52
R0167	x				6	230(S)		44
R0168					11	230(S)		45
R0169					7	230(S)		42
R0170	x				7	230(S)		49
R0171	x				11	230(S)		52
R0172	x				14	230(S)		54
R0173	x				16	230(S)		57
R0174	x				18	230(S)		58

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0175	x				13	230(S)		54
R0176	x				13	230(S)		55
R0177	x				13	230(S)		52
R0178					14	230(S)		50
R0179					14	230(S)		47
R0180					15	230(S)		52
R0181					14	230(S)		49
R0182					17	230(S)		54
R0183	x			x	21	230(S)		22
R0184				x	22	230(B)		12
Stillaguamish Riv. 01-022-000-000- 000-R0001		x	x	x	2	55(SNP)	1	8
R0002		x	x	x	2	55(SNP)	1	2
R0003				x	2	115(PS)	1	3
R0004		x		x	3	230(B)		9
R0005		x	x	x	4	230(S)		8
R0006		x	x	x	1	230(S)		12
R0007		x		x	1	230(S)		9
R0008		x	x	x	1	230(S)		6
R0009				x	4	230(S)		6

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0010				X	10	230(S)		11
R0011				X	6	230(S)		18
R0012				X	7	230(S)		16
R0013				X	9	230(S)		14
R0014				X	5	230(S)		11
R0015				X	6	230(S)		11
R0016				X	3	230(S)		9
R0017				X	6	230(S)		8
R0018				X	1	230(S)		8
R0019				X	4	230(S)	1	2
R0020		X	X	X	0	55(SNP)		1
R0021		X	X	X	1	115(PS)		6
R0022				X	7	115(PS)	1	4
R0023	X	X	X	X	14	115(PS)	1	10
R0024		X	X	X	14	230(S)	1	12
R0025				X	16	230(S)	1	14
R0026				X	18	230(S)	1	16
R0027				X	1	230(S)		4
R0028		X	X	X	7	230(S)	1	5
R0029				X	8	230(S)		10
R0030				X	11	230(S)	1	10
R0031				X	16	230(S)	1	15

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0032				X	15	230(S)	1	13
R0033				X	17	230(S)	1	15
Snohomish River 01-034-000-000- 000-R0001		X	X	X	1	55(PS)		1
R0002		X		X	2	55(PS)		9
R0003		X	X	X	1	55(PS)		2
R0004		X	X	X	2	115(SNP)		7
R0005		X		X	6	115(SNP)	1	7
R0006		X	X	X	1	115(PS)		2
R0007		X		X	1	115(PS)		4
R0008		X	X	X	1	115(PS)		1
R0009		X	X	X	1	115(PS)		4
R0010		X		X	1	115(PS)		11
R0011		X	X	X	1	115(PS)		1
R0012				X	3	345(B)		5
R0013					6	345(B)		9
R0014					8	345(B)		11
R0015					9	345(B)		13
R0016					11	345(B)		15
R0017					6	345(B)		10

TABLE II  
 FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
 Washington

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
R0018					11	345(B)		15
R0019					9	345(B)		14
R0020		X	X	X	1	115(PS)		4
R0021		X			1	345(B)		5
R0022					3	345(B)		5
R0023		X	X	X	2	345(B)		15
R0024		X		X	4	345(B)	1	16
R0025		X	X	X	5	345(B)	1	19
R0026		X	X	X	5	345(B)	1	22
R0027					7	345(B)	1	27
R0028					9	345(B)	1	28
R0029					4	345(B)	1	17
R0030					7	345(B)	1	18
R0031					7	345(B)	1	20
R0032					8	345(B)	1	25
R0033					9	345(B)	1	25
R0034		X		X	1	345(B)		15
R0035		X		X	1	345(B)		19
R0036		X		X	1	345(B)		21
R0037		X	X	X	1	345(B)		22
R0038		X	X	X	1	345(B)		24
R0039		X	X		1	345(B)	1	16
R0040					1	345(B)	1	21



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0041		X			1	345(B)	1	22
R0042		X			4	115(PS)		25
R0043	X				7	115(PS)	1	27
R0044					4	345(B)	1	22
R0045		X		X	1	345(B)		24
R0046				X	4	345(B)		24
R0047		X			8	345(B)		24
R0048					24	345(B)		29
R0049		X	X	X	3	115(PS)		27
R0050	X				6	115(PS)		27
R0051	X				6	115(PS)		28
R0052					8	115(PS)		29
R0053		X			1	115(PS)		27
R0054					1	115(PS)		30
R0055		X	X		1	115(PS)	1	32
R0056					1	115(PS)		30
R0057	X				2	345(B)		32
R0058		X		X	1	230(B)		4
R0059		X	X	X	1	55(PS)		10
R0060		X	X	X	1	55(PS)		3
R0061		X	X	X	1	55(PS)		3
R0062		X	X		1	115(PS)		1
R0063		X		X	1	500(B)		8

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0064				X	5	500(B)		8
R0065				X	8	500(B)		11
R0066				X	5	500(B)		8
R0067				X	8	500(B)		11
R0068		X	X	X	1	55(PS)		2
R0069				X	3	115(PS)		4
R0070		X	X		4	115(PS)		5
R0071		X			8	115(PS)		9
R0072		X			12	115(PS)		14
R0073					14	115(PS)		16
R0074					16	115(PS)		18
R0075					6	115(PS)		7
R0076					9	115(PS)		10
R0077	X				14	115(PS)		16
R0078		X			15	115(PS)		17
R0079		X	X		1	115(PS)		5
R0080		X			1	115(CM)		16
R0081		X	X		1	115(CM)		20
R0082		X	X		2	115(CM)		5
R0083	X	X			9	115(CM)		10
R0084	X				9	115(CM)		13
R0085	X				6	115(CM)		17
R0086	X				8	115(CM)		22

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0087					5	115(CM)		10
R0088					4	115(CM)		13
R0089	X	X			10	115(CM)		12
R0090	X	X			13	115(CM)		15
R0091	X				8	115(CM)		17
R0092	X				6	115(CM)		19
Sammamish River 01-020-000-000-								
000-R0001		X	X	X	0	115(PS)		0
R0002		X	X	X	0	115(PS)		0
R0003		X	X	X	1	55(PS)		1
Cedar River 01-021-000-000-								
000-R0001		X	X	X	0	230(B)		0
R0002		X	X	X	0	230(B)		0
R0003		X	X	X	0	230(B)	1	6
R0004		X	X	X	0	230(B)	1	6
R0005					8	115(P)	1	11
R0006				X	1	115(P)		9

TABLE II  
 FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
 Washington

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
R0007					2	115(P)		6
R0008					2	115(P)		7
Green River 01-028-000-000- 000-R0001		X	X	X	0	230(B)		0
R0002		X	X	X	1	230(B)		3
R0003		X	X	X	1	230(B)		2
R0004				X	0	230(B)		10
R0005		X	X		0	230(B)	1	16
R0006		X	X		0	230(B)	1	19
R0007		X	X		0	230(B)	1	23
R0008		X	X		0	230(B)	1	25
R0009					2	230(B)	1	27
R0010		X	X	X	1	230(B)		2
R0011					2	230(B)		14
R0012					2	230(B)		10
R0013					1	230(B)		13
R0014		X	X		0	230(B)		27

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Puyallup River 01-001-000-000- 000-R0001		X	X	X	1	55(PS)		2
R0002		X	X	X	1	55(PS)		5
R0003		X	X	X	1	55(PS)		1
R0004		X		X	5	55(PS)	1	18
R0005				X	11	55(PS)	1	16
R0006	X	X		X	13	55(PS)	1	18
R0007		X	X	X	1	55(PS)		2
R0008		X	X	X	6	55(PS)		6
R0009		X	X	X	3	55(PS)		3
R0010		X	X	X	10	55(PS)	1	10
R0011		X	X	X	19	55(PS)	1	19
R0012		X	X	X	20	55(PS)	1	20
R0013		X	X	X	24	55(PS)	1	24
R0014	X	X		X	28	55(PS)	1	28
R0015				X	12	55(PS)	1	12
R0016		X	X	X	25	55(PS)	1	25
R0017	X	X		X	18	55(PS)	1	18
R0018	X	X		X	22	55(PS)	1	22
R0019	X			X	29	55(PS)	1	29
R0020	X	X		X	23	55(PS)	1	23
R0021	X			X	25	55(PS)	1	25

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0022		X	X	X	2	55(PS)	1	1
R0023								
R0024		X	X	X	5	55(PS)	1	11
R0025	X	X		X	16	55(PS)	1	16
R0026		X	X	X	1	55(PS)		7
R0027		X	X	X	2	55(PS)	1	4
R0028		X	X	X	3	55(PS)		3
R0029		X	X	X	2	55(PS)	1	5
R0030	X			X	15	55(PS)	1	15
R0031				X	12	55(PS)	1	17
R0032	X			X	15	55(PS)	1	20
R0033	X			X	15	55(PS)	1	21
R0034	X			X	14	55(PS)	1	20
R0035	X			X	18	55(PS)	1	23
R0036	X			X	17	55(PS)	1	22
Nisqually River 01-029-000-000- 000-R0001	X	X		X	2	230(B)	1	7
R0002	X	X	X	X	2	230(B)		3
R0003				X	8	230(B)	1	18
R0004				X	1	115(T)		4

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0005				X	0	115(T)		4
R0006		X	X		7	115(T)	1	9
R0007		X	X		10	115(T)	1	12
R0008	X	X	X		17	115(T)	1	17
R0009	X	X			20	115(T)	1	20
R0010	X	X			21	115(T)	1	21
R0011	X	X	X		23	115(T)	1	23
R0012	X				25	115(T)	1	24
R0013	X	X	X	X	4	230(B)	1	6
R0014		X		X	0	115(T)		4
R0015				X	1	115(T)		2
R0016		X	X	X	1	115(T)		2
R0017		X		X	7	115(T)	1	6
R0018				X	8	115(T)	1	7
R0019		X	X	X	2	115(T)	1	1
R0020					6	115(T)	1	12
R0021		X	X		9	115(T)	1	11
R0022		X	X		9	115(T)	1	12
R0023		X			11	115(T)	1	14
R0024					15	115(T)	1	18
R0025		X			9	115(T)	1	12
R0026					13	115(T)	1	16
R0027		X			14	115(T)	1	15

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0028		X	X		16	115(T)	1	19
R0029					16	115(T)	1	18
R0030	X	X			20	115(T)	1	20
R0031					22	115(T)	1	22
R0032	X				22	115(T)	1	21
Chambers Creek 01-005-000-000- 000-R0001				X	1	115(T)	1	3
Deschutes River 01-006-000-000- 000-R0001	X	X	X	X	4	115(T)	1	6
R0002		X	X	X	9	115(T)	20	
Sherwood Creek 01-014-000-000- 000-R0001		X	X	X	1	230(B)	1	15



TABLE II  
 FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
 Washington

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
Gosnell Creek 01-015-000-000- 000-R0001		X	X	X	3	230(B)		2
Goldsborough Cr. 01-018-000-000- 000-R0001 R0002		X	X	X	1	230(B)		0
		X		X	2	230(B)		3
Tahaya River 01-007-000-000- 000-R0001		X	X	X	10	115(B)	1	16
Lilliwaup Creek 01-027-000-000- 000-R0001		X	X	X	0	230(B)		20

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Dosewallips River 01-030-000-000-000-R0001				x	1	230(B)		16
R0002		x		x	7	230(B)		22
R0003	x				15	230(B)		30
R0004	x				12	230(B)		27
R0005	x				14	230(B)		29
R0006	x				15	230(B)		30
R0007	x				18	230(B)		33
Duckabush River 01-031-000-000-000-R0001		x	x	x	2	230(B)		17
R0002				x	6	230(B)		21
R0003					8	230(B)		23
R0004	x				12	230(B)		27
R0005	x				16	230(B)		31
R0006	x				14	230(B)		29

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Hamma Hamma River 01-032-000-000- 000-R0001				x	2	230(B)		17
R0002					3	230(B)		18
R0003					4	230(B)		19
R0004					4	230(B)		19
R0005					5	230(B)		20
R0006					7	230(B)		22
R0007					9	230(B)		24
R0008					4	230(B)		19
R0009					5	230(B)		20
R0010					4	230(B)		19
Skokomish River 01-033-000-000- 000-R0001		x	x	x	0	230(B)		8
R0002				x	0	115(T)		12
R0003	x	x			7	115(T)		33
R0004	x	x			8	115(T)		35
R0005	x				9	115(T)		36
R0006	x				10	115(T)		36
R0007	x				11	115(T)		36

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0008	x				9	115(T)		36
R0009	x				13	230(B)		25
R0010				x	4	230(B)		12
R0011				x	6	230(B)		16
R0012				x	7	230(B)		18
R0013				x	9	230(B)		20
R0014				x	13	230(B)		24
R0015					13	230(B)		22
R0016					6	230(B)		15
R0017					6	230(B)		18
R0018					7	230(B)		19
R0019				x	4	230(B)		11
R0020				x	8	230(B)		15
Little Quilcene 01-019-000-000- 000-R0001		x	x	x	0	115(B)		12
R0002		x	x	x	0	115(B)		12

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Big Quilcene 01-063-000-000-								
000-R0001		X	X	X	0	115(B)		12
R0002			X	X	2	115(B)		12
R0003				X	3	115(B)		13
R0004				X	4	115(B)		14
R0005				X	5	115(B)		15
R0006				X	5	115(B)		15
Dungeness River 01-004-000-000-								
000-R0001				X	0	115(B)		
R0002				X	10	115(B)		18
R0003				X	12	115(B)		20
R0004				X	14	115(B)		20
R0005				X	16	115(B)		21
R0006	X			X	10	115(B)		15
R0007	X			X	12	115(B)		16
R0008	X			X	12	115(B)		15

TABLE II  
 FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
 Washington

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
Morse Creek 01-002-000-000- 000-R0001 R0002	x			x x	2 6	115(B) 115(B)		4 7
Elwha River 01-003-000-000- 000-R0001 R0002 R0003 R0004 R0005 R0006 R0007 R0008 R0009 R0010 R0011 R0012 R0013 R0014 R0015	x x x x x x x x x x x x x x x	x		x	0 4 10 11 12 16 17 20 23 23 10 12 12 9 15	115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B)		4 9 12 13 14 18 19 22 25 25 12 14 14 11 17

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0016	x				17	115(B)		19
R0017	x				20	115(B)		22
R0018	x				24	115(B)		26
R0019	x				24	115(B)		26
Sekiu River 01-008-000-000-								
000-R0001		x		x	2	69(CP)		23
R0002		x		x	2	69(CP)		23
Hoko River 01-009-000-000-								
000-R0001		x		x	1	69(CP)		22
R0002		x		x	4	69(CP)		18
R0003				x	9	69(CP)		13
R0004				x	1	69(CP)		21
R0005				x	7	69(CP)		15

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Clallam River 01-010-000-000- 000-R0001 R0002		x	x	x	1	69 (CP)		22
		x		x	2	69 (CP)		20
Pysht River 01-011-000-000- 000-R0001 R0002 R0003		x	x	x	1	69 (CP)		20
		x		x	1	69 (CP)		19
				x	1	69 (CP)		19
Deep Creek 01-012-000-000- 000-R0001				x	1	69 (CP)		22
Lyre River 01-013-000-000- 000-R0001 R0002				x	1	69 (CP)		20
	x		x	x	6	69 (CP)		21



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Sooes River 01-035-000-000- 000-R0001 R0002		x		x	20	69(C-P)	1	24
				x	20	69(C-P)	1	24
Ozette Creek 01-036-000-000- 000-R0001 R0002	x		x	x	18	69(C-P)		18
		x		x	10	69(C-P)		14
Dickey River 01-038-000-000 000-R0001 R0002 R0003 R0004 R0005 R0006	x	x		x	10	69(C-P)	1	10
				x	8	69(C-P)	1	8
		x		x	8	69(C-P)	1	8
				x	7	69(C-P)		7
				x	7	69(C-P)		9
				x	7	69(C-P)		11

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Quillayute River								
01-037-000-000-								
000-R0001	x	x		x	10	69(C-P)	1	10
R0002				x	5	69(C-P)		5
R0003		x		x	3	69(C-P)		3
R0004				x	3	69(C-P)		3
R0005		x	x	x	0	69(C-P)		5
R0006		x		x	1	69(C-P)		7
R0007				x	5	69(C-P)		8
R0008				x		69(C-P)		
R0009				x	11	69(C-P)		14
R0010	x	x		x	17	69(C-P)		19
R0011	x	x		x	20	69(C-P)		21
R0012	x	x		x	21	69(C-P)		21
R0013	x	x		x	22	69(C-P)		22
R0014				x	25	69(C-P)	1	25
R0015		x	x	x	0	69(C-P)		7
R0016		x		x	4	69(C-P)		10
R0017				x	8	69(C-P)		12
R0018				x	21	69(C-P)		21
R0019	x			x	23	69(C-P)		23
R0020				x	8	69(C-P)		8
R0021				x	7	69(C-P)		7

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0022				X	5	69 (C-P)		23
R0023		X	X	X	3	69 (C-P)		3
R0024		X		X	6	69 (C-P)		6
R0025	X			X	10	69 (C-P)		10
R0026	X			X	13	69 (C-P)		13
R0027	X			X	15	69 (C-P)		15
R0028	X			X	17	69 (C-P)		17
R0029	X			X	21	69 (C-P)		21
R0030				X	4	69 (C-P)		4
R0031	X			X	18	69 (C-P)		18
R0032				X	1	69 (C-P)		1
R0033				X	4	69 (C-P)		4
R0034		X		X	9	69 (C-P)		10
R0035		X		X	13	69 (C-P)		14
R0036		X		X	4	69 (C-P)		4
R0037				X	6	69 (C-P)		6
R0038	X			X	11	69 (C-P)		11
R0039				X	9	69 (C-P)		9
Goodman Creek 01-039-000-000- 000-R0001	X			X	10	69 (C-P)		10

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0002	x			x	9	69(C-P)		9
R0003				x	8	69(C-P)		8
R0004		x		x	7	69(C-P)		7
Mosquito Creek 01-040-000-000- 000-R0001	x			x	11	69(C-P)		11
R0002	x			x	10	69(C-P)		10
Hoh River 01-041-000-000- 000-R0001	x			x	14	69(C-P)		14
R0002		x		x	12	69(C-P)		12
R0003		x	x	x	14	69(C-P)		14
R0004				x	18	69(C-P)		18
R0005				x	19	69(C-P)		19
R0006	x	x		x	21	69(C-P)		21
R0007	x			x	23	69(C-P)		23
R0008	x			x	26	69(C-P)		26
R0009	x			x	29	69(C-P)		29
R0010	x			x	30	69(C-P)		30

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0011	X			X	32	69(C-P)		32
R0012	X			X	35	69(C-P)		35
R0013	X			X	36	69(C-P)		36
R0014		X		X	13	69(C-P)		13
R0015		X		X	19	69(C-P)		19
R0016	X			X	25	69(C-P)		25
R0017	X			X	31	69(C-P)		31
R0018	X			X	23	69(C-P)		23
R0019	X			X	27	69(C-P)		27
R0020	X			X	32	69(C-P)		32
Cedar Creek 01-042-000-000 000-R0001	X			X	16	69(C-P)		16
Queets River 01-043-000-000- 000-R0001	X		X	X	22	69(GH-P)	1	28
R0002	X			X	19	69(GH-P)	1	28
R0003	X	X		X	21	69(GH-P)	1	28
R0004	X	X		X	13	69(GH-P)	1	28

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0005	X			X	13	69 (GH-P)	1	29
R0006	X			X	15	69 (GH-P)	1	29
R0007	X			X	17	69 (GH-P)	1	32
R0008	X			X	20	69 (GH-P)	1	34
R0009	X			X	24	69 (GH-P)	1	36
R0010		X	X	X	21	69 (GH-P)	1	27
R0011		X	X	X	22	69 (GH-P)	1	23
R0012				X	22	69 (GH-P)	1	22
R0013				X	21	69 (GH-P)	1	23
R0014				X	20	69 (GH-P)	1	23
R0015				X	20	69 (GH-P)	1	22
R0016				X	21	69 (GH-P)	1	22
R0017				X	21	69 (GH-P)	1	26
R0018				X	22	69 (GH-P)	1	22
R0019				X	19	69 (GH-P)	1	21
R0020				X	21	69 (GH-P)	1	21
R0021				X	18	69 (GH-P)		24
R0022				X	17	69 (GH-P)		24
R0023	X			X	13	69 (GH-P)		31
R0024	X			X	10	69 (GH-P)		33
R0025	X			X	10	69 (GH-P)		31
R0026	X			X	14	69 (GH-P)		33
R0027	X			X	18	69 (GH-P)		35

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
<b>Raft River</b> 01-044-000-000-000-R0001	x			x	21	69 (GH-P)	1	34
R0002	x			x	21	69 (GH-P)	1	34
R0003	x			x	17	69 (GH-P)	1	35
R0004	x			x	21	69 (GH-P)	1	33
R0005	x			x	15	69 (GH-P)	1	34
R0006	x			x	14	69 (GH-P)	1	36
R0007	x			x	14	69 (GH-P)	1	36
<b>Quinault River</b> 01-045-000-000-000-R0001	x	x	x	x	16	69 (GH-P)	1	31
R0002	x			x	10	69 (GH-P)		30
R0003	x			x	8	69 (GH-P)		30
R0004	x			x	6	69 (GH-P)		31
R0005	x			x	4	69 (GH-P)		32
R0006	x			x	2	69 (GH-P)		33
R0007	x		x	x	1	69 (GH-P)		34
R0008	x	x	x	x	4	69 (GH-P)		37
R0009	x			x	6	69 (GH-P)		38
R0010	x	x		x	9	69 (GH-P)		40

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0011	X	X		X	15	69 (GH-P)		43
R0012	X			X	20	69 (GH-P)		47
R0013	X			X	26	69 (GH-P)		49
R0014	X			X	12	69 (GH-P)		30
R0015	X			X	8	69 (GH-P)		29
R0016	X			X	7	69 (GH-P)		28
R0017	X			X	8	69 (GH-P)		32
R0018	X			X	5	69 (GH-P)		33
R0019	X	X		X	2	69 (GH-P)		34
R0020	X	X		X	1	69 (GH-P)		33
R0021	X	X		X	3	69 (GH-P)		36
R0022	X			X	4	69 (GH-P)		37
R0023	X			X	7	69 (GH-P)		40
R0024	X			X	8	69 (GH-P)		39
R0025	X			X	12	69 (GH-P)		41
R0026	X			X	14	69 (GH-P)		43
R0027	X			X	17	69 (GH-P)		42
R0028	X			X	17	69 (GH-P)		40
R0029	X			X	19	69 (GH-P)		41
R0030	X			X	21	69 (GH-P)		41
R0031	X			X	22	69 (GH-P)		40
R0032	X			X	20	69 (GH-P)		45
R0033	X			X	18	69 (GH-P)		46



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0034	X			X	21	69 (GH-P)		42
R0035	X			X	22	69 (GH-P)		41
R0036	X			X	17	69 (GH-P)		45
R0037	X			X	19	69 (GH-P)		45
R0038	X			X	16	69 (GH-P)		43
R0039	X			X	22	69 (GH-P)		48
Moclips River 01-046-000-000- 000-R0001	X	X	X	X	0	69 (GH-P)	1,2	20
R0002	X	X		X		69 (GH-P)	1,2	20
Copalis River 01-047-000-000- 000-R0001		X	X	X	4	69 (GH-P)	1,2	17
R0002				X	4	69 (GH-P)	1,2	17
R0003				X	2	69 (GH-P)	1,2	17

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Humptulips River 01-048-000-000- 000-R0001		X	X	X	1	69 (GH-P)		10
R0002				X	1	69 (GH-P)		13
R0003				X	1	69 (GH-P)		16
R0004		X	X	X	1	69 (GH-P)		17
R0005				X	1	69 (GH-P)		18
R0006		X		X	2	69 (GH-P)		20
R0007				X	3	69 (GH-P)		25
R0008				X	5	69 (GH-P)		31
R0009				X	1	69 (GH-P)		11
R0010				X	3	69 (GH-P)		13
R0011		X		X	2	69 (GH-P)		19
R0012		X		X	5	69 (GH-P)		21
R0013				X	8	69 (GH-P)		28
R0014				X	3	69 (GH-P)		28
Hoquium River 01-049-000-000- 000-R0001		X	X	X	0	69 (GH-P)		0
R0002		X	X	X	0	69 (GH-P)		0
R0003		X	X	X	2	69 (GH-P)		2

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0004		X	X	X	3	69 (GH-P)		3
R0005		X	X	X	3	69 (GH-P)		3
R0006		X		X	3	69 (GH-P)		3
Wishkah River								
01-050-000-000-000-R0001		X	X	X	2	69 (GH-P)		4
R0002		X	X	X	2	69 (GH-P)		8
R0003				X	2	69 (GH-P)		11
R0004		X		X	3	69 (GH-P)		15
R0005		X		X	2	69 (GH-P)		18
R0006				X	3	69 (GH-P)		9
R0007				X	5	69 (GH-P)		12
R0008				X	2	69 (GH-P)		12
R0009				X	13	69 (GH-P)		15
Johns River								
01-052-000-000-000-R0001	X	X		X	8	69 (GH-P)		8

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Elk River 01-053-000-000-000-R0001		x	x	x	11	69 (GH-P)		11
Chehalis River 01-050-000-000-000-R0001		x	x	x	1	69 (GH-P)		5
R0002		x	x	x	0	69 (GH-P)		2
R0003		x	x	x	1	115 (B)		2
R0004		x	x	x	1	115 (B)		2
R0005		x	x	x	2	115 (B)		5
R0006		x	x	x	3	115 (B)		10
R0007		x	x	x	6	115 (B)		11
R0008	x	x	x	x	8	115 (B)		14
R0009	x	x		x	8	230 (B)		12
R0010	x	x	x	x	4	230 (B)		8
R0011	x	x		x	0	230 (B)		3
R0012		x	x	x	1	230 (B)		2
R0013		x	x	x	2	230 (B)		1
R0014		x		x	0	230 (B)		2
R0015		x	x	x	3	230 (B)		5
R0016		x		x	5	230 (B)		7

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0017		X	X	X	5	230(B)	1	10
R0018		X	X	X	3	230(B)	1	15
R0019		X		X	1	230(B)	1	17
R0020		X		X	15	230(B)	1	17
R0021				X	18	230(B)	1	20
R0022				X	19	230(B)	1	21
R0023		X	X	X	2	69(GH-P)		1
R0024		X	X	X	6	69(GH-P)		6
R0025		X	X	X	8	69(GH-P)		8
R0026		X		X	9	69(GH-P)		9
R0027				X	13	69(GH-P)		13
R0028				X	21	69(GH-P)	1	21
R0029				X	22	69(GH-P)	1	26
R0030		X		X	19	69(GH-P)	1	26
R0031				X	18	69(GH-P)	1	28
R0032		X		X	3	69(GH-P)		3
R0033				X	16	69(GH-P)	1	16
R0034		X		X	23	69(GH-P)	1	28
R0035				X	17	69(GH-P)	1	28
R0036				X	3	69(GH-P)		5
R0037		X		X	6	69(GH-P)		6
R0038				X	11	69(GH-P)		11
R0039				X	18	69(GH-P)	1	18

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0040				X	18	69 (GH-P)	1	23
R0041		X		X	16	69 (GH-P)	1	34
R0042		X		X	15	69 (GH-P)	1	20
R0043		X		X	6	69 (GH-P)		6
R0044		X		X	8	69 (GH-P)		9
R0045		X		X	9	69 (GH-P)		10
R0046		X		X	10	69 (GH-P)	1	9
R0047				X	12	69 (GH-P)	1	9
R0048		X		X	9	69 (GH-P)		9
R0049		X		X	13	69 (GH-P)		13
R0050				X	19	69 (GH-P)	1	17
R0051				X	15	69 (GH-P)	1	19
R0052				X	14	69 (GH-P)	1	18
R0053				X	11	69 (GH-P)		11
R0054				X	13	69 (GH-P)		13
R0055		X		X	12	69 (GH-P)	1	9
R0056				X	11	69 (GH-P)	1	11
R0057		X	X	X	2	69 (GH-P)	1	0
R0058		X	X	X	10	69 (GH-P)	1	5
R0059		X	X	X	3	69 (GH-P)	1	4
R0060		X	X	X	1	69 (GH-P)		5
R0061		X	X	X	2	69 (GH-P)		6
R0062				X	8	69 (GH-P)		2

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0063		X		X	10	69(GH-P)	1	12
R0064			X	X	6	69(GH-P)	1	10
R0065		X	X	X	12	69(GH-P)	1	14
R0066		X	X	X	7	115(B)	1	17
R0067		X	X	X	1	115(B)		10
R0068				X	1	115(B)		9
R0069				X	9	115(B)	1	11
R0070	X	X	X	X	4	115(B)		8
R0071		X	X	X	6	115(B)		7
R0072		X	X	X	0	115(B)		0
R0073		X	X	X	5	115(B)	1	4
R0074				X	13	115(B)	1	13
R0075		X		X	19	115(B)	1	19
R0076		X		X	7	115(B)	1	7
R0077		X	X	X	0	115(B)		2
R0078		X	X	X	9	115(B)	1	11
R0079		X	X	X	12	115(B)	1	16
R0080		X	X	X	4	115(B)	1	7
R0081		X	X	X	5	115(B)	1	7
R0082		X	X	X	5	115(B)		9
R0083		X	X	X	5	115(B)		7
R0084		X	X	X	3	115(B)	1	8
R0085		X	X	X	1	115(B)		10

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0086		X		X	5	115(B)		14
R0087				X	7	115(B)		18
R0088		X		X	2	115(B)	1	12
R0089		X		X	4	115(B)		14
R0090		X	X	X	6	115(B)	1	18
R0091		X	X	X	1	115(B)	1	18
R0092		X		X	12	69(GH-P)	1	12
R0093		X		X	0	115(B)		4
North River 01-054-000-000- 000-R0001		X		X	6	115(B)		9
R0002		X	X	X	2	115(B)		10
R0003		X	X	X	4	115(B)		9
R0004		X	X	X	9	115(B)	1	14
R0005		X	X	X	12	115(B)	1	14
R0006				X	4	115(B)		8
R0007		X	X	X	9	115(B)		7
R0008		X		X	8	115(B)		10
R0009		X	X	X	12	115(B)	1	18



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Smith River								
01-055-000-000-000-R0001				X	3	115(B)		7
R0002				X	0	115(B)		5
R0003		X		X	0	115(B)		3
R0004		X		X	0	115(B)		5
Willapa River								
01-056-000-000-000-R0001		X	X	X	0	12.5 (P-P)		0
R0002		X	X	X	0	12.5 (P-P)		0
R0003		X	X	X	1	115(B)		4
R0004		X	X	X	1	115(B)		7
R0005		X	X	X	1	115(B)		12
R0006		X	X	X	4	115(B)	1	2
R0007				X	4	115(B)	1	5
R0008		X	X	X	0	115(B)		3
R0009		X	X	X	0	115(B)		3
R0010		X		X	2	115(B)		4
R0011		X	X	X	1	115(B)		6
R0012		X	X	X	2	115(B)		13

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Bear River 01-059-000-000-000-R0001		x		x	1	115(B)		5
Palix River 01-062-000-000-000-R0001				x	1	12.5(P-P)		5
R0002				x	1	12.5(P-P)		5
R0003				x	1	12.5(P-P)		5
Nemah River 01-057-000-000-000-R0001		x		x	0	12.5(P-P)		13
R0002		x		x	1	12.5(P-P)		14
R0003		x		x	2	12.5(P-P)		15
Naselle River 01-058-000-000-000-R0001		x	x	x	2	115(B)	1	12
R0002		x	x	x	2	115(B)	1	12

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0003		X	X	X	1	115(B)	1	16
R0004				X	1	115(B)		20
R0005				X	2	115(B)		12
R0006		X	X	X	2	115(B)		16
R0007		X	X	X	2	115(B)		21
R0008				X	1	115(B)		20
R0009				X	1	115(B)		21
Grays River 01-500-002-000- 000-R0001		X	X	X	2	12.5(W-P)		15
R0002		X	X	X	1	12.5(W-P)		15
R0003		X		X	5	12.5(W-P)		15
R0004		X		X	9	12.5(W-P)		15
R0005				X	10	12.5(W-P)		15
R0006				X	0	12.5(W-P)		15
R0007				X	4	12.5(W-P)		15
R0008				X	8	12.5(W-P)		15
R0009				X	10	12.5(W-P)		15

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Skamokawa River 01-500-004-000- 000-R0001		X		X	0	12.5(W-P)		25
R0002		X		X	0	12.5(W-P)		25
R0003		X	X	X	2	12.5(W-P)		25
R0004		X	X	X	0	12.5(W-P)		25
R0005		X	X	X	2	12.5(W-P)		25
Elochoman River 01-500-006-000- 000-R0001		X	X	X	1	12.5(W-P)		22
R0002		X	X	X	7	12.5(W-P)		19
R0003		X		X	11	12.5(W-P)		21
Mill Creek 01-500-008-000- 000-R0001				X	10	12.5(W-P)	1	12

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Abernathy Creek 01-500-010-000- 000-R0001 R0002		x	x	x	10	12.5(W-P)	1	12
				x	11	12.5(W-P)	1	12
German Creek 01-500-012-000- 000-R0001				x	10	12.5(W-P)	1	10
Coal Creek 01-500-014-000- 000-R0001		x	x	x	17	12.5(W-P)	1	6
Cowlitz River 01-500-020-000- 000-R0001 R0002 R0003 R0004 R0005		x	x	x	0	230(B)		0
		x	x	x	2	230(B)		2
		x	x	x	1	69(CZ-P)		1
		x	x	x	5	69(CZ-P)		5
		x	x	x	8	69(CZ-P)	1	8

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0006		X	X	X	9	69(CZ-P)	1	9
R0007		X	X	X	17	69(L-P)	1	6
R0008								
R0009								
R0010								
R0011								
R0012								
R0013								
R0014				X	3	69(L-P)		12
R0015				X	1	69(L-P)		14
R0016		X	X	X	1	69(L-P)		11
R0017		X	X	X	0	69(L-P)		7
R0018		X	X	X	1	69(L-P)		3
R0019		X	X	X	1	69(L-P)		1
R0020		X	X	X	1	69(L-P)		1
R0021		X	X	X	3	69(L-P)		3
R0022				X	5	69(L-P)		5
R0023		X	X	X	1	230(B)		1
R0024		X	X	X	7	230(B)		7
R0025		X		X	12	230(B)		12
R0026		X	X	X	16	230(B)		16
R0027		X	X	X	1	230(B)		2
R0028		X	X	X	1	69(L-P)		1

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0029		X	X	X	3	69(L-P)		3
R0030		X		X	2	69(L-P)		2
R0031		X	X	X	7	69(L-P)		7
R0032		X		X	10	69(L-P)	1	10
R0033		X	X	X	9	69(L-P)	1	9
R0034		X		X	11	69(L-P)	1	11
R0035		X		X	15	69(L-P)	1	15
R0036				X	22	69(L-P)		23
R0037				X	23	69(L-P)		24
R0038				X	21	69(L-P)		22
R0039				X	23	69(L-P)		24
R0040		X		X	10	69(L-P)		10
R0041		X	X	X	14	69(L-P)		14
R0042		X		X	13	69(L-P)		18
R0043		X		X	14	69(L-P)		19
R0044		X		X	16	69(L-P)		19
R0045		X		X	18	69(L-P)		19
R0046		X		X	18	69(L-P)		18
R0047		X	X	X	16	69(L-P)		20
R0048				X	14	69(L-P)	1	19
R0049				X	15	69(L-P)	1	18
R0050		X		X	16	69(L-P)		19
R0051				X	15	69(L-P)		18

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0052				X	14	69 (L-P)		18
R0053		X		X	12	69 (L-P)	1	18
R0054				X	11	69 (L-P)		14
R0055				X	10	69 (L-P)		12
R0056				X	9	69 (L-P)		12
R0057				X	9	69 (L-P)		13
R0058				X	10	69 (L-P)		12
R0059				X	8	69 (L-P)	1	8
R0060		X	X	X	12	69 (L-P)	1	12
R0061		X		X	9	69 (L-P)	1	9
R0062		X	X	X	11	69 (L-P)	1	11
R0063				X	11	69 (L-P)	1	11
R0064				X	11	69 (L-P)	1	11
R0065				X	10	69 (L-P)	1	10
R0066				X	2	69 (L-P)	1	16
R0067		X	X	X	5	69 (L-P)	1	13
R0068				X	1	69 (L-P)		11
R0069		X	X	X	3	69 (L-P)		7
R0070		X	X	X	2	69 (L-P)		2
R0071		X	X	X	1	69 (L-P)		0
R0072		X	X	X	2	69 (L-P)		2
R0073		X	X	X	3	69 (L-P)		3
R0074		X	X	X	4	69 (L-P)		4



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS

Washington

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
R0075				X	3	69(L-P)		5
R0076				X	6	69(L-P)		8
R0077		X		X	3	69(L-P)		3
R0078				X	5	69(L-P)		5
R0079		X		X	4	69(L-P)		4
R0080				X	5	69(L-P)		5
R0081				X	4	69(L-P)		5
R0082		X	X	X	0	69(L-P)		7
R0083		X		X	5	69(L-P)		12
R0084		X		X	5	69(L-P)		14
R0085		X		X	7	69(L-P)		15
R0086		X		X	18	69(L-P)		18
R0087		X	X	X	14	69(L-P)		14
R0088		X		X	13	69(L-P)		13
R0089		X		X	15	69(L-P)		15
R0090				X	18	69(L-P)		18
R0091				X	18	69(L-P)		18
R0092		X		X	17	69(L-P)		17
R0093				X	15	69(L-P)		15
R0094				X	14	69(L-P)		8
R0095				X	21	69(L-P)		21
R0096				X	23	69(L-P)		23
R0097				X	16	69(L-P)		16

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0098		X	X	X	14	69(L-P)		14
R0099				X	18	69(L-P)		18
R0100				X	21	69(L-P)		21
R0101				X	18	69(L-P)		18
R0102				X	20	69(L-P)		20
R0103				X	11	69(L-P)		11
R0104				X	12	69(L-P)		12
R0105		X		X	20	69(L-P)		20
R0106				X	20	69(L-P)		20
R0107				X	19	69(L-P)		19
R0108		X	X	X	2	69(L-P)		12
R0109				X	5	69(L-P)		10
R0110				X	5	69(L-P)		13
R0111				X	0	69(L-P)		9
R0112				X	1	69(L-P)		4
R0113				X	3	69(L-P)		3
R0114				X	2	69(L-P)		4
R0115				X	2	69(L-P)		3
R0116				X	5	69(L-P)		6
R0117				X	6	69(L-P)		7
R0118				X	7	69(L-P)		8
R0119		X		X	4	69(L-P)		4
R0120		X	X	X	5	69(L-P)		5

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0121				X	3	69(L-P)		3
R0122				X	4	69(L-P)		4
R0123				X	7	69(L-P)		7
R0124	X			X	9	69(L-P)		9
R0125	X			X	11	69(L-P)		11
R0126	X			X	12	69(L-P)		12
R0127	X			X	13	69(L-P)		13
R0128	X			X	10	69(L-P)		10
R0129				X	7	69(L-P)		7
R0130				X	8	69(L-P)		8
R0131				X	10	69(L-P)		10
R0132				X	12	69(L-P)		12
R0133	X			X	9	69(L-P)		9
R0134	X	X		X	13	69(L-P)		13
R0135	X	X		X	14	69(L-P)		14
R0136	X			X	15	69(L-P)		15
R0137	X			X	15	69(L-P)		15
R0138				X	16	69(L-P)		16
R0139		X		X	10	69(L-P)		10
R0140				X	6	69(L-P)		6
R0141				X	7	69(L-P)		7
R0142				X	8	69(L-P)		8
R0143				X	10	69(L-P)		10
R0144	X			X	1	69(L-P)		10

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Kalama River								
01-500-038-000-								
000-R0001		X	X	X	0	115(PPL)		2
R0002		X	X	X	2	115(PPL)		4
R0003		X		X	2	115(PPL)		9
R0004		X		X	4	115(PPL)		11
R0005		X		X	7	115(PPL)		14
R0006				X	12	115(PPL)		20
R0007					17	115(PPL)		24
R0008					20	115(PPL)		27
R0009		X			5	115(PPL)		12
R0010					16	115(PPL)		23
R0011					18	115(PPL)		25
Lewis River								
01-500-040-000-								
000-R0001				X	1	230(PPL)		2
R0002		X	X	X	2	230(PPL)		3
R0003				X	1	230(PPL)		8
R0004					9	230(PPL)		36
R0005					11	230(PPL)		33
R0006					18	230(PPL)		38

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS

Washington

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
R0007					25	230(PPL)		47
R0008		X		X	2	230(PPL)		4
R0009				X	4	230(PPL)		6
R0010		X	X	X	9	230(PPL)	1	4
R0011				X	10	230(PPL)	1	8
R0012		X		X	11	230(PPL)	1	11
R0013		X			11	230(PPL)		16
R0014		X			10	230(PPL)	1	8
R0015					11	230(PPL)	1	9
R0016		X			11	230(PPL)		14
R0017		X		X	3	230(PPL)		9
R0018		X	X	X	5	230(PPL)		10
R0019					0	230(PPL)		17
R0020					2	230(PPL)		19
R0021		X			3	230(PPL)		16
R0022					9	230(PPL)		19
R0023					4	230(PPL)		14
R0024					4	230(PPL)		18
R0025					8	230(PPL)		21
R0026					6	230(PPL)		20
R0027					1	230(PPL)		27
R0028					7	230(PPL)		32
R0029					9	230(PPL)		33

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0030		X			10	230 (PPL)		35
R0031		X			10	230 (PPL)		36
R0032					15	230 (PPL)		38
R0033					12	230 (PPL)		38
R0034					15	230 (PPL)		41
R0035		X			10	230 (PPL)		36
R0036					23	230 (PPL)		45
Salmon Creek 01-500-042-000- 000-R0001		X	X	X	3	500 (B)	1	4
R0002			X	X	5	500 (B)	1	8
LaCumas Creek 01-500-044-000- 000-R0001				X	1	230 (B)		0
R0002				X	0	115 (B)		6
R0003			X	X	1	115 (B)		7

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Washougal River 01-500-046-000-000-R0001		X	X	X	1	500(B)		1
R0002		X	X	X	1	500(B)		7
R0003			X	X	2	500(B)		6
R0004				X	1	500(B)		9
R0005		X		X	1	500(B)		11
R0006		X		X	4	500(B)		14
R0007				X	5	115(PPL)		16
R0008		X	X	X	0	500(B)		3
R0009				X	0	500(B)		7
R0010				X	0	500(B)		7
R0011					3	500(B)		9
Hamilton Creek 01-500-048-000-000-R0001				X	1	500(B)		6

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS

Washington

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
Rock Creek 01-500-096-000- 000-R0001 R0002		X	X	X X	0 4	500(B) 500(B)		1 5
	Wind River 01-500-100-000- 000-R0001 R0002 R0003 R0004 R0005 R0006 R0007 R0008 R0009 R0010 R0011 R0012 R0013			X	X X X X	0 1 2 8 11 14 1 5 7 9 12 12 12	500(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B) 115(B)	



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Little White Salmon River 01-500-106-000- 000-R0001		X	X	X	0	500(B)		6
		X	X	X	5	500(B)	1	10
		X	X		3	500(B)	1	8
White Salmon Riv. 01-500-120-000- 000-R0001				X	1	500(B)		1
			X		1	110(PPL)		2
			X		1	110(PPL)	1	4
					5	110(PPL)		11
		X			7	110(PPL)		15
					13	110(PPL)		18
					17	110(PPL)		24
					19	110(PPL)		26
					3	110(PPL)	1	5
		X			1	110(PPL)		6
		X		X	9	110(PPL)	1	15
					15	110(PPL)		23
					16	110(PPL)		25

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0014					18	110(PPL)		25
R0015					17	110(PPL)		24
R0016					19	110(PPL)		27
Klickitat River 01-500-160-000- 000-R0001		X	X	X	3	230(B)		11
R0002		X	X	X	1	230(B)		14
R0003		X		X	1	230(B)		12
R0004		X		X	3	230(B)		14
R0005		X		X	9	230(B)		16
R0006	X	X		X	4	110(PPL)		20
R0007	X			X	1	110(PPL)		25
R0008	X			X	6	110(PPL)		33
R0009	X			X	9	110(PPL)		35
R0010	X			X	11	110(PPL)		38
R0011	X			X	16	110(PPL)		43
R0012	X			X	23	110(PPL)		50
R0013		X		X	0	110(PPL)		11
R0014				X	1	110(PPL)		10
R0015				X	3	110(PPL)		7
R0016	X			X	3	110(PPL)		22

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0017	X			X	3	110(PPL)		22
R0018	X			X	2	110(PPL)		25
R0019				X	2	110(PPL)		22
R0020		X		X	0	110(PPL)		23
R0021		X		X	0	110(PPL)		24
R0022	X			X	8	110(PPL)		32
R0023	X			X	10	110(PPL)		33
R0024	X	X		X	13	110(PPL)		39
R0025	X			X	22	110(PPL)		48
R0026	X			X	17	110(PPL)		43
R0027	X			X	17	110(PPL)		43
R0028	X			X	17	110(PPL)		43
R0029	X			X	20	110(PPL)		45
Walla Walla River 01-500-238-000- 000-R0001		X		X	3	69(PPL)		18
R0002		X	X	X	5	69(PPL)	1	14
R0003		X		X	4	69(PPL)	1	12
R0004		X		X	3	69(PPL)	1	10
R0005		X	X	X	3	69(PPL)		7
R0006		X	X	X	0	69(B)		2

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0007		X	X	X	1	69 (PPL)		14
R0008		X		X	8	230 (PPL)		13
R0009		X		X	6	115 (B)	1	13
R0010		X	X	X	6	115 (B)	1	6
R0011		X	X	X	2	69 (PPL)		2
R0012		X	X	X	1	69 (PPL)		0
R0013		X	X	X	4	69 (PPL)		5
R0014		X	X	X	2	69 (PPL)		1
R0015		X	X	X	1	69 (PPL)		0
R0016		X	X	X	1	230 (PPL)		2
R0017		X	X	X	0	115 (B)		4
R0018		X	X	X	1	115 (B)		1
R0019		X	X	X	4	115 (B)		4
R0020		X	X	X	8	115 (B)	1	8
Palouse River 01-500-240-020- 000-R0001		X	X		7	69 (IPL)		35
R0002		X	X		10	115 (W)		10
R0003		X	X		2	115 (W)		8

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Asotin Creek 01-500-240-050- 000-R0001 R0002		X	X	X	1	110(WWP)		2
		X		X	2	110(WWP)		3
Tucannon River 01-500-240-010- 000-R0001 R0002 R0003		X	X	X	5	500(B)		34
		X		X	8	500(B)		30
		X		X	5	500(B)		34
Grande Ronde R. 01-500-240-060- 000-R0001 R0002 R0003 R0004 R0005 R0006	X	X		X	12	34.5(CW)		22
		X		X	12	34.5(CW)		24
		X		X	4	34.5(CW)		25
		X		X	1	34.5(CW)		26
		X		X	13	34.5(CW)		23
		X		X	18	34.5(CW)		24

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Yakima River								
01-500-260-000-000-R0001	x	x	x	x	1	34.5 (USBI)		5
R0002		x	x	x	1	115 (B)		7
R0003		x	x	x	2	115 (B)		3
R0004		x	x	x	1	115 (CM)		3
R0005		x	x	x	1	115 (CM)		2
R0006		x		x	2	230 (B)		4
R0007		x	x	x	3	230 (B)		4
R0008		x	x	x	2	230 (B)		6
R0009	x	x		x	1	230 (B)		10
R0010		x			1	230 (B)		14
R0011	x			x	1	230 (B)		5
R0012	x				1	230 (B)		12
R0013	x	x			2	230 (B)		4
R0014	x	x			5	230 (B)		7
R0015	x	x	x	x	5	230 (B)	1	6
R0016	x	x		x	7	230 (B)	1	11
R0017		x	x	x	2	115 (PPL)		2
R0018		x	x	x	2	115 (PPL)	1	7
R0019		x	x	x	9	115 (PPL)	1	18
R0020		x	x	x	13	115 (PPL)	1	22
R0021		x	x	x	17	230 (B)	1	22

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0022		X	X	X	12	230(B)	1	17
R0023		X		X	10	230(B)	1	15
R0024				X	10	230(B)	1	15
R0025				X	10	230(B)	1	15
R0026				X	10	230(B)	1	16
R0027		X		X	4	230(B)	1	13
R0028		X	X	X	2	34.5(B-R)		20
R0029		X			6	34.5(B-R)	1	20
R0030		X			12	34.5(B-R)	1	20
R0031		X	X		7	34.5(B-R)	1	15
R0032	X	X			10	115(B-R)	1	14
R0033		X	X	X	13	115(PPL)	1	22
R0034				X	15	115(PPL)	1	25
R0035		X	X	X	13	230(B)	1	18
R0036		X	X	X	18	230(B)	1	23
R0037					27	230(B)	1	32
R0038					28	230(B)	1	35
R0039		X	X	X	16	230(B)	1	21
R0040		X		X	20	230(B)	1	25
R0041		X	X	X	23	230(B)	1	29
R0042				X	12	230(B)	1	18
R0043				X	16	230(B)	1	22
R0044		X	X	X	4	230(B)		6

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0045		X		X	6	230(B)	1	5
R0046		X	X	X	7	230(B)	1	4
R0047		X		X	10	230(B)	1	9
R0048		X		X	2	115(CM)	1	2
R0049		X			9	230(B)	1	11
R0050		X			10	230(B)	1	12
R0051		X	X		13	230(B)	1	13
R0052		X	X		15	230(B)	1	16
R0053	X	X			19	230(B)	1	21
R0054					12	230(B)	1	16
R0055	X				14	230(B)	1	18
R0056		X	X	X	2	230(B)	1	7
R0057	X	X			2	230(B)		10
R0058		X	X		1	230(B)		10
Columbia River 01-500-000-000- 000-R0001	X			X	1	115(B)		28



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Crab Creek 01-500-280-000- 000-R0001 R0002	x	x		x	1 1	230(W) 230(B)		20 2
Wenatchee River 01-500-300-000- 000-R0001		x	x	x	0	115(CC-P)		4
R0002		x	x	x	1	115(CC-P)		5
R0003		x	x	x	1	115(CC-P)		2
R0004		x	x	x	3	115(CC-P)	1	1
R0005		x	x	x	3	115(CC-P)		3
R0006		x	x	x	2	115(CC-P)		8
R0007		x	x	x	3	115(CC-P)		14
R0008		x	x	x	3	115(CC-P)	1	5
R0009		x		x	7	115(CC-P)	1	8
R0010		x	x	x	0	115(CC-P)		2
R0011		x	x	x	3	115(CC-P)		3
R0012		x		x	7	115(CC-P)	1	5
R0013		x		x	8	115(CC-P)	1	7
R0014		x		x	11	115(CC-P)	1	10
R0015		x		x	11	115(CC-P)		13

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0016	X			X	6	115(CC-P)		
R0017				X	8	115(CC-P)	1	6
R0018				X	13	115(CC-P)	1	12
R0019	X			X	8	115(CC-P)		15
R0020				X	2	115(CC-P)		6
R0021		X		X	3	115(CC-P)		9
R0022		X	X	X	6	115(CC-P)		17
R0023		X		X	11	115(CC-P)		24
R0024		X		X	16	115(CC-P)		30
R0025	X			X	21	115(CC-P)		35
R0026				X	10	115(CC-P)		21
R0027		X		X	0	115(CC-P)		10
R0028		X		X	0	115(CC-P)		16
R0029		X		X	0	115(CC-P)		18
R0030				X	1	115(CC-P)		17
R0031		X		X	6	115(CC-P)		22
R0032		X	X	X	10	115(CC-P)		26
R0033		X		X	13	115(CC-P)		29
R0034	X			X	17	115(CC-P)		33
R0035	X			X	17	115(CC-P)		34
R0036	X	X	X	X	10	115(CC-P)		25
R0037	X			X	15	115(CC-P)		30
R0038	X			X	11	115(CC-P)		27

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0039	x			x	15	115(CC-P)		31
R0040		x		x	3	115(CC-P)		19
R0041		x		x	6	115(CC-P)		23
R0042				x	8	115(CC-P)		26
R0043				x	9	115(CC-P)		28
R0044				x	4	115(CC-P)		22
Entiat River 01-500-320-000-								
000-R0001		x	x	x	3	230(B)		15
R0002		x	x	x	0	230(B)		13
R0003		x	x	x	2	230(B)	1	13
R0004		x	x	x	4	230(B)	1	12
R0005		x	x	x	7	230(B)	1	13
R0006		x	x	x	13	230(B)	1	14
R0007		x		x	18	230(B)	1	18
R0008		x	x	x	20	230(B)	1	20
R0009		x		x	26	230(B)	1	28
R0010		x	x	x	2	230(B)	1	14

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Chelan River								
01-500-340-000-000-R0001					1	115(CCP)		1
R0002	X	X	X		33	230(S)	1	42
R0003	X	X	X		32	230(S)	1	41
R0004	X	X	X		30	230(S)	1	39
R0005	X	X	X		27	230(S)	1	39
R0006	X	X			24	230(S)	1	37
R0007	X	X			22	230(S)	1	34
R0008	X				22	230(S)	1	33
R0009					22	230(S)	1	32
R0010	X	X			20	230(S)	1	33
R0011	X				30	230(S)	1	38
R0012	X	X			33	230(S)	1	41
R0013	X	X			36	230(S)	1	43
R0014	X	X	X		37	230(S)	1	45
R0015	X				28	230(S)	1	45
R0016	X				33	230(S)	1	39
R0017	X				27	230(S)	1	34
R0018	X				27	230(S)	1	33
R0019	X				29	230(S)	1	32
R0020	X				29	230(S)	1	31
R0021	X				29	230(S)	1	31

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0022	X				22	230(S)	1	36
R0023	X				22	230(S)	1	37
R0024	X				23	230(S)	1	38
R0025	X				24	230(S)	1	39
R0026	X				20	230(S)	1	38
Pasayten River 01-064-000-000- 000-R0001	X			X	30	230(S)	1	70
R0002	X			X	26	230(S)	1	66
Methow River 01-500-360-000- 000-R0001		X	X		10	230(B)	1	10
R0002		X	X		7	115(OC-P)		7
R0003		X	X		1	115(OC-P)		1
R0004		X	X		3	115(OC-P)		3
R0005		X	X		9	115(OC-P)	1	9
R0006		X	X		13	115(OC-P)	1	13
R0007		X	X		20	115(OC-P)	1	20
R0008		X	X		24	115(OC-P)	1	24

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0009		X			28	115(OC-P)	1	28
R0010		X	X		6	115(OC-P)		6
R0011					11	115(OC-P)		11
R0012		X	X		11	115(OC-P)	1	11
R0013	X	X	X		15	115(OC-P)	1	15
R0014	X	X			18	115(OC-P)	1	18
R0015		X			21	115(OC-P)	1	21
R0016		X			25	115(OC-P)	1	25
R0017		X			27	115(OC-P)	1	27
R0018		X			30	115(OC-P)	1	30
R0019		X	X		23	115(OC-P)	1	23
R0020	X				28	115(OC-P)	1	28
R0021	X				30	115(OC-P)	1	30
R0022		X			36	115(OC-P)	1	36
Okanogan River 01-500-380-000-								
000-R0001	X	X	X	X	3	115(B)		11
R0002	X	X	X	X	2	115(B)		3
R0003	X	X	X	X	1	115(B)		1
R0004	X	X	X	X	1	115(B)		2
R0005	X	X	X	X	1	115(B)		3

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0006		X		X	1	115(B)		12
R0007		X		X	1	115(B)		8
R0008		X	X	X	0	115(B)		2
R0009		X	X	X	0	34.5(OC-P)		7
R0010		X	X	X	0	34.5(OC-P)		1
R0011		X	X	X	1	115(B)		1
R0012		X	X		7	115(B)		7
R0013		X			12	115(B)		12
Nespelem River								
01-500-390-000-000-R0001	X				0	115(NVE)		10
R0002	X	X	X		0	115(NVE)		12
Sanpoil River								
01-500-400-000-000-R0001	X	X	X		9	115(NVE)		9
R0002	X	X			15	115(NVE)		17
R0003	X	X			10	34.5(F-P)		10
R0004	X	X	X		13	34.5(F-P)		13
R0005	X	X			13	34.5(F-P)		13

TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
Spokane River 01-500-420-000-000-R0001	X	X	X		1	230(B)		1
R0002		X	X		1	230(B)		1
R0003		X	X		3	230(B)		1
R0004					8	230(B)		18
R0005	X	X	X		4	115(W)		4
R0006		X	X		8	115(W)		8
R0007		X	X		10	115(W)		10
R0008		X	X		8	115(W)		8
R0009		X	X		8	115(W)		8
R0010		X	X		9	115(W)		9
R0011		X			5	115(W)		5
R0012		X	X		8	115(W)		8
Colville River 01-500-440-000-000-R0001					1	115(W)		8
R0002		X	X		1	115(W)		5
R0003		X	X		1	115(W)		2
R0004		X	X		1	115(B)		8
R0005		X			1	115(B)		4



TABLE II  
FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS  
Washington

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
R0006		X			1	115(B)		5
Kettle River 01-500-460-000- 000-R0001		X			8	34.5(W)	1	15
R0002		X	X		10	34.5(W)	1	22
R0003		X			20	34.5(W)	1	27
R0004		X	X		21	115(B)	1	22
R0005		X	X		17	115(B)	1	17
R0006		X			22	115(B)	1	22
Big Sheep Creek 01-500-470-000- 000-R0001					2	34.5(W)	1	23
R0002	X	X			2	34.5(W)	1	23
Pend Oreille Riv. 01-500-480-000- 000-R0001		X			4	115(S)		12
R0002			X		8	115(S)		12

## TRANSMISSION LINE OWNERSHIP CODE

AEC	Atomic Energy Commission
B or BPA	Bonneville Power Administration
BC	Benton County PUD
B-R	Benton REA
C	Centralia Municipal Hydro Electric
CB-C	Columbia Basin Electric Cooperative Inc.
CC	City of Cheney
CC-P	Chelan County PUD
CK-P	Clark County PUD
CM	Chicago Milwaukee St. Paul & Pacific RR
C-P	Clallam County PUD
CR	Columbia Rural Electric Association, Inc.
CZ	Crown Zellerbach Co.
CZ-P	Cowlitz County PUD
DC-P	Douglas County PUD
F-P	Ferry County PUD
FC-P	Franklin County PUD
G-P	Grant County PUD
GH-P	Grays Harbor County PUD
IPL	Inland Power and Light Co.
K-P	Klickitat County PUD
L-P	Lewis County PUD
LC	Lincoln County Coop, Inc.
NVE	Nespelem Valley Electric Cooperative, Inc.
O	Oreas Power and Light Co. (Coop.)
OC-P	Okanogan County PUD
P-P	Pacific County PUD No. 2
PPL	Pacific Power & Light Co.
PRID	Priest Rapids Irrigation District
PS	Puget Sound Power & Light Co.
Q	Quinault Light Co. (Coop.)
S or SCL	Seattle City Light
SNP	Snohomish County PUD
T	Tacoma City Light

USA	U.S. Corps of Army Engineers
USBI	U.S. Bureau of Indian Affairs
USBR	U.S. Bureau of Reclamation
USN	United States Navy
W or WWP	Washington Water Power
WHP	Whatcom County PUD
W-P	Wahkiakum County PUD
WPPS	Washington Public Power Supply Co.

## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R3E</u>
D. Latitude, Longitude	<u>48°37' 122°26'</u>
E. Stream Name	<u>Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/36.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

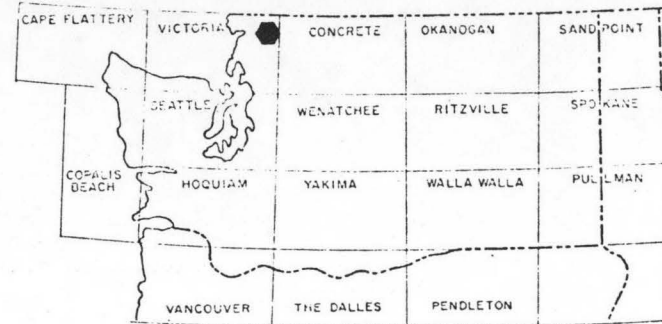
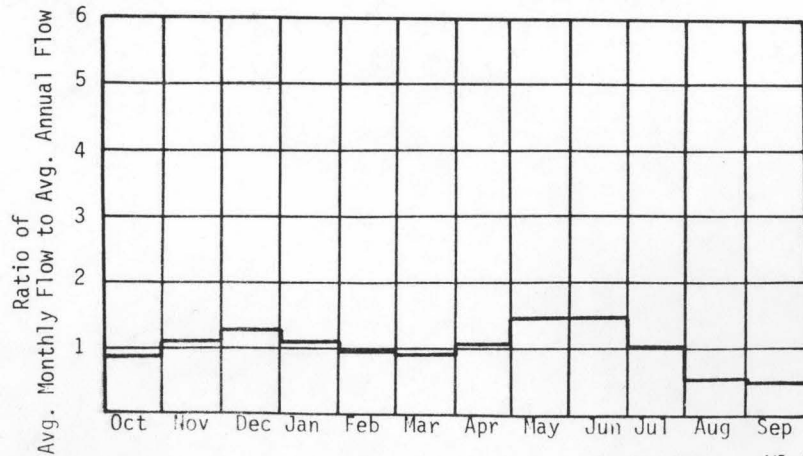
A. Upstream Elevation of Reach	<u>215</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>0</u>	Ft. MSL
C. Total Available Head in Reach	<u>215</u>	Ft.
D. Average Slope in Reach	<u>6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>807.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

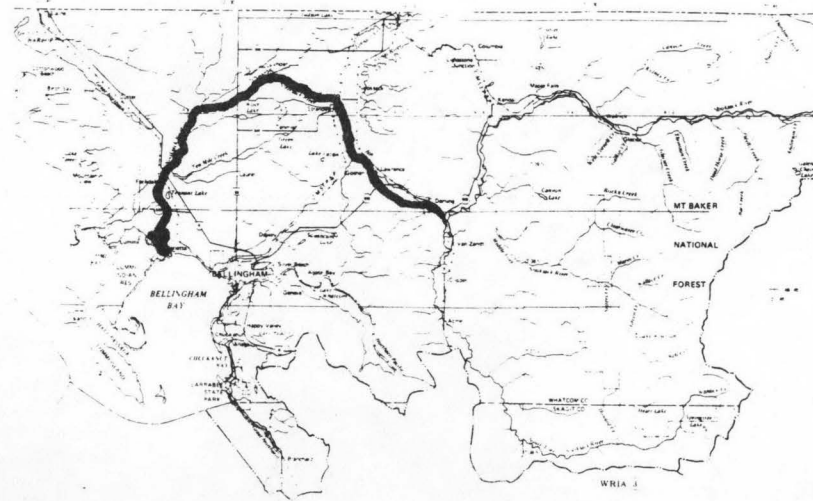
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1130	20.6	181	1.00
80	1790	32.6	274	0.96
50	3030	55.2	401	0.83
30	4170	75.8	471	0.71
10	6580	120	545	0.52

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3657 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R5E</u>
D. Latitude, Longitude	<u>48°50' 122°10'</u>
E. Stream Name	<u>Nooksack River</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>36.0/39.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

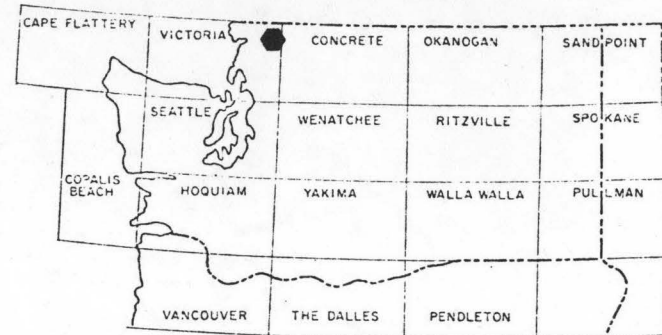
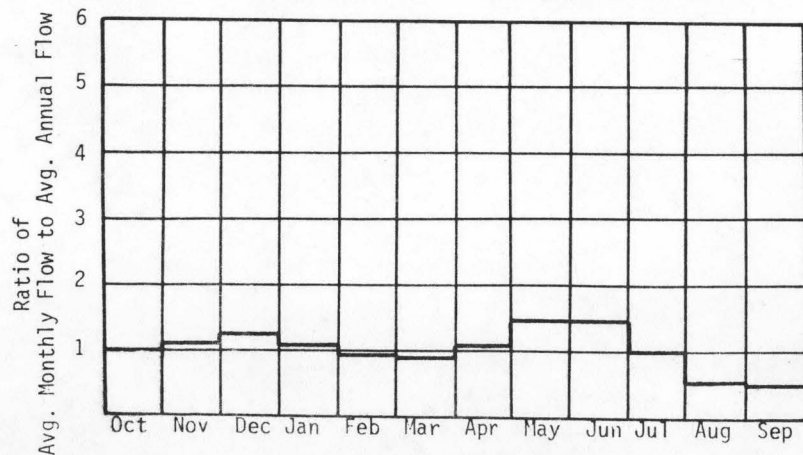
A. Upstream Elevation of Reach	<u>280</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>215</u>	Ft. MSL
C. Total Available Head in Reach	<u>65</u>	Ft.
D. Average Slope in Reach	<u>18.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>596.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

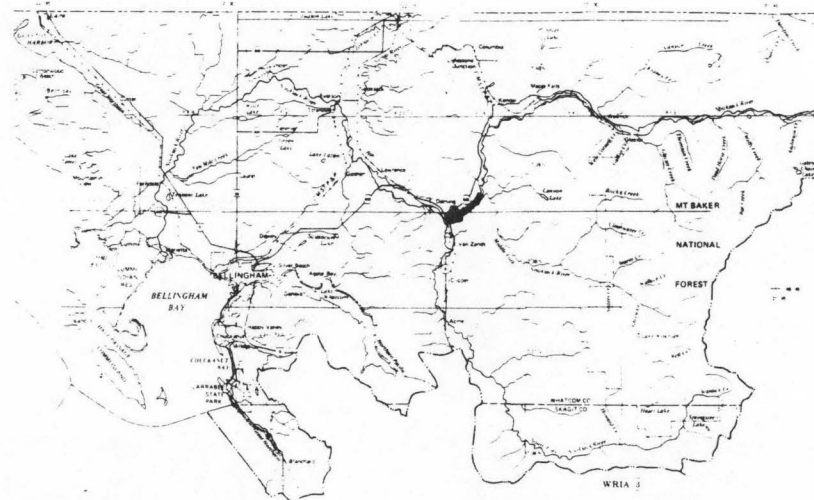
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	885	4.87	42.6	1.00
80	1380	7.61	63.9	0.96
50	2320	12.8	92.9	0.83
30	3180	17.5	110	0.72
10	4950	27.2	126	0.53

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2765 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R5E</u>
D. Latitude, Longitude	<u>48°45' 122°13'</u>
E. Stream Name	<u>S.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/10.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

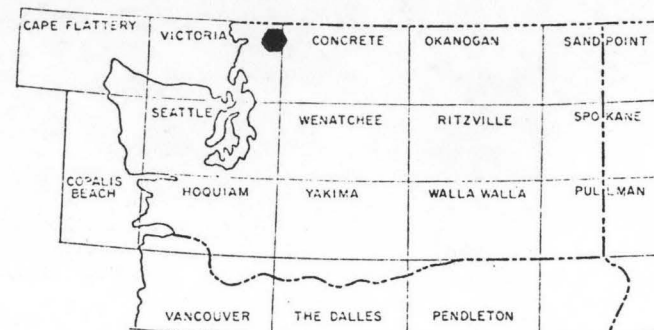
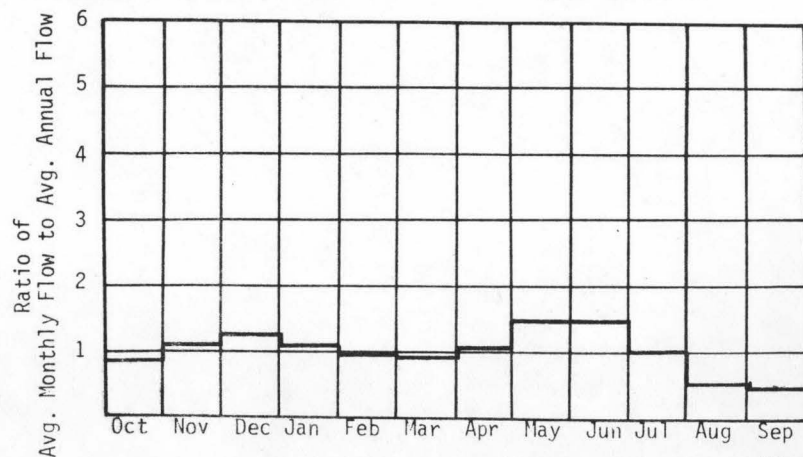
A. Upstream Elevation of Reach	<u>305</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>215</u>	Ft. MSL
C. Total Available Head in Reach	<u>90</u>	Ft.
D. Average Slope in Reach	<u>8.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>184.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

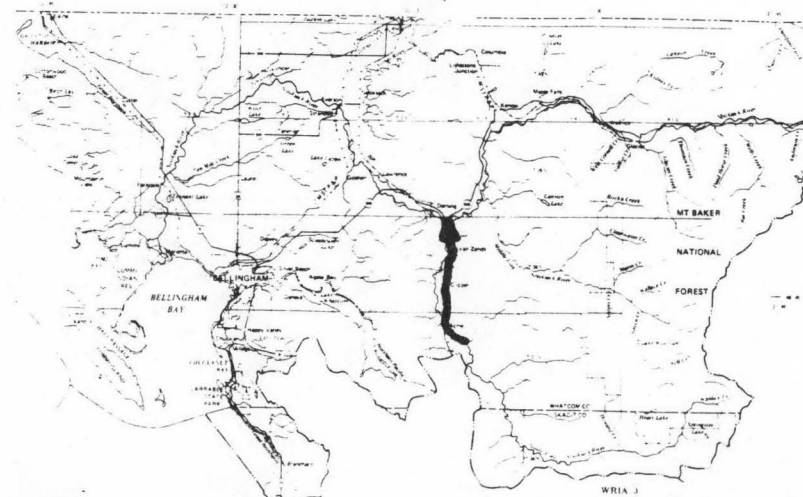
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	318	2.42	21.2	1.00
80	477	3.63	30.6	0.96
50	815	6.21	45.1	0.83
30	1140	8.71	54.1	0.71
10	1840	14.0	62.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 994 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R5E</u>
D. Latitude, Longitude	<u>48°41' 122°11'</u>
E. Stream Name	<u>S.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>10.1/14.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

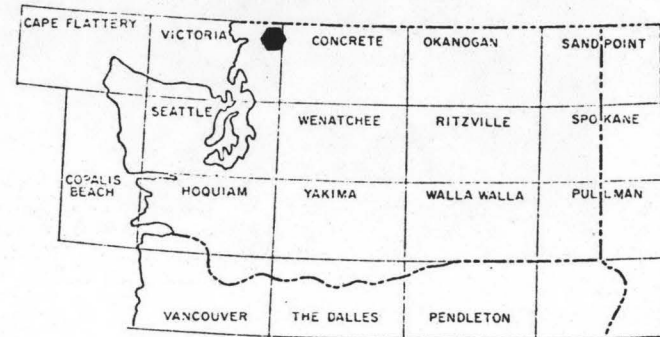
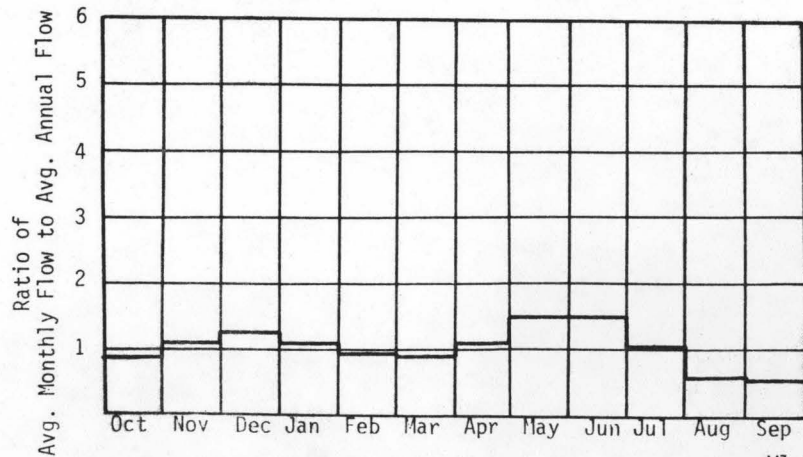
A. Upstream Elevation of Reach	<u>370</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>305</u>	Ft. MSL
C. Total Available Head in Reach	<u>65</u>	Ft.
D. Average Slope in Reach	<u>15.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>134.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

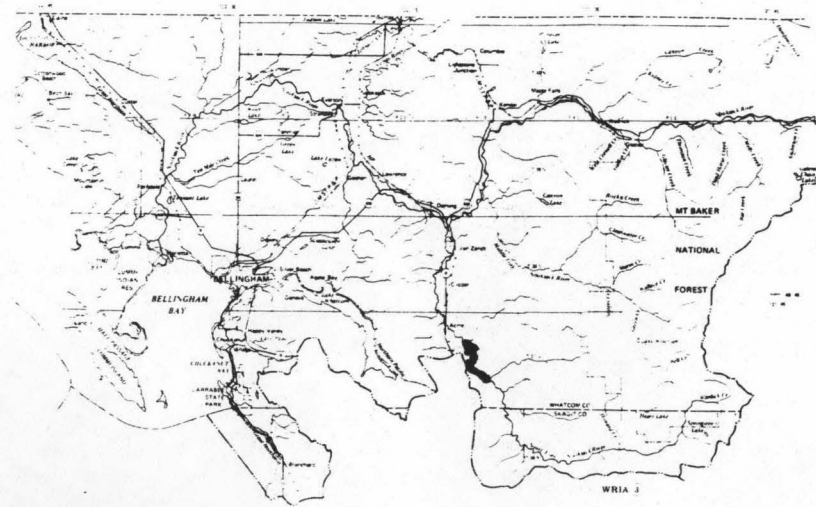
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	273	1.50	1.31	1.00
80	409	2.25	18.9	0.96
50	698	3.84	27.9	0.83
30	979	5.39	33.5	0.71
10	1580	8.67	38.7	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 852 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R5E</u>
D. Latitude, Longitude	<u>48°39' 122°07'</u>
E. Stream Name	<u>S.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>14.3/16.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

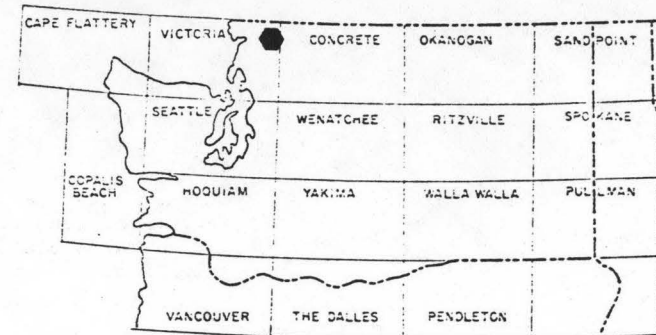
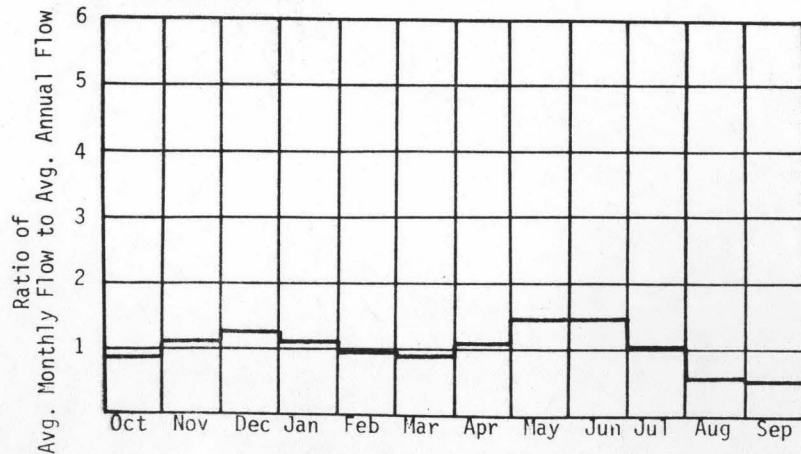
A. Upstream Elevation of Reach	<u>425</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>370</u>	Ft. MSL
C. Total Available Head in Reach	<u>55</u>	Ft.
D. Average Slope in Reach	<u>23.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>105.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

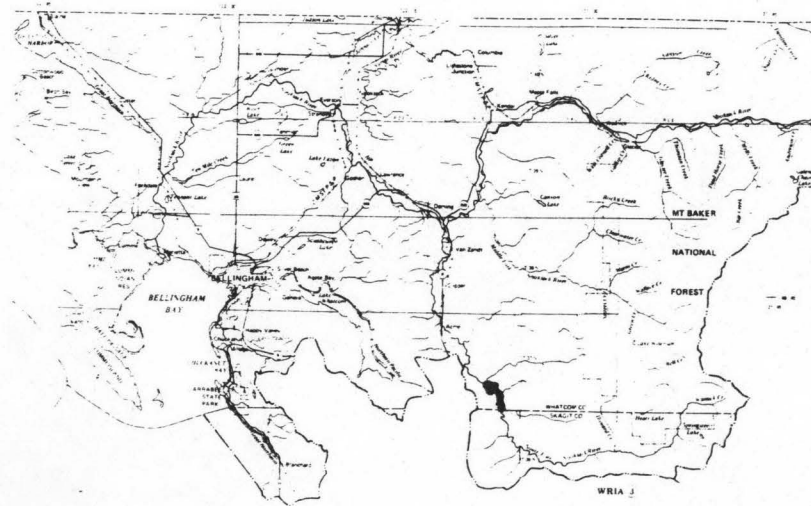
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	224	1.05	9.16	1.00
80	337	1.57	13.2	0.96
50	575	2.68	19.5	0.83
30	807	3.76	23.4	0.71
10	1300	6.05	27.0	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 702 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0006

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T36N R6E
D. Latitude, Longitude	48°36' 122°04'
E. Stream Name	S.F. Nooksack
F. Major Basin Name	Nooksack
G. River Mile	16.6/28.6

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

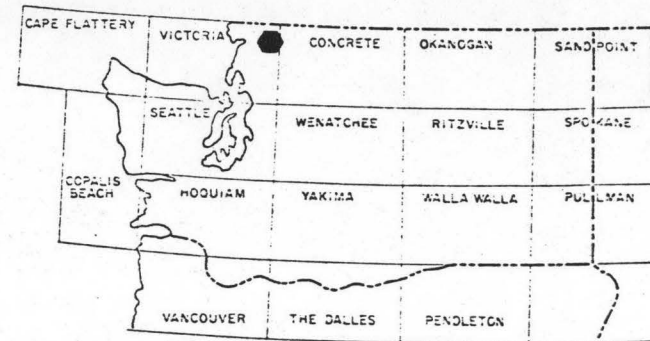
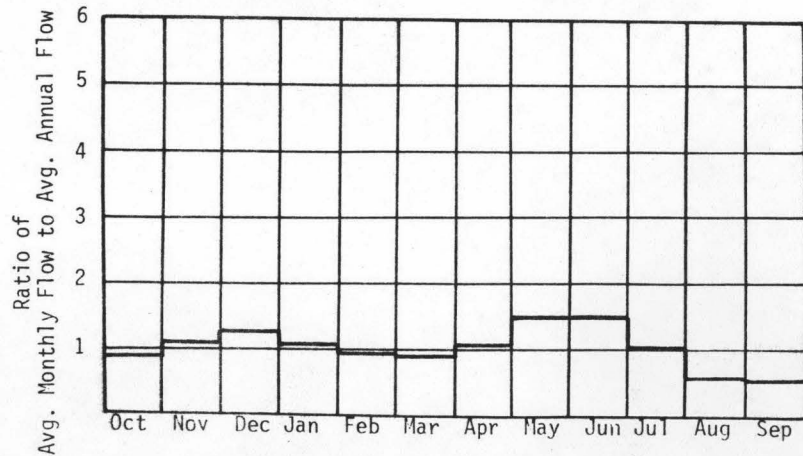
A. Upstream Elevation of Reach	1040	Ft. MSL
B. Downstream Elevation of Reach	425	Ft. MSL
C. Total Available Head in Reach	615	Ft.
D. Average Slope in Reach	51.3	Ft./Mi.
E. Drainage Area above Reach Mouth	90.0	Sq.Mi.
F. Inflow Classification	Natural	

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

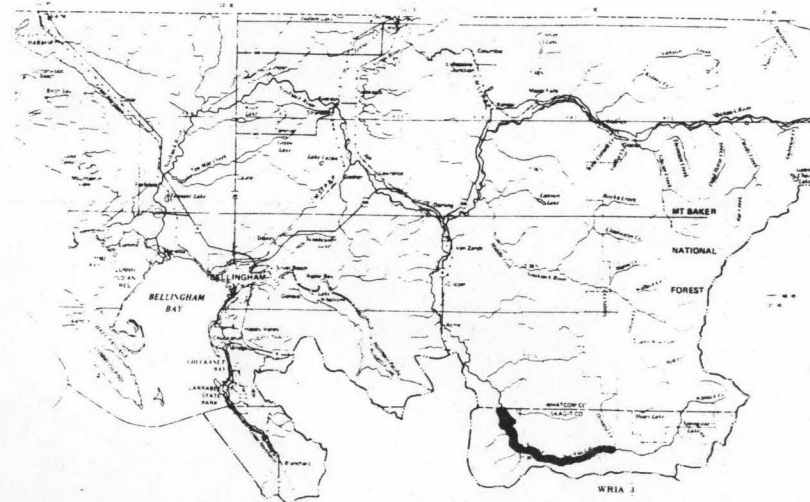
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	174	9.04	79.2	1.00
80	261	13.5	114.1	0.96
50	445	23.1	168.5	0.83
30	624	32.5	202.1	0.71
10	1000	52.2	233	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 543 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0007

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skaagit</u>
C. Township, Range	<u>T36N R7E</u>
D. Latitude, Longitude	<u>48°37' 121°55'</u>
E. Stream Name	<u>S.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>28.6/38.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

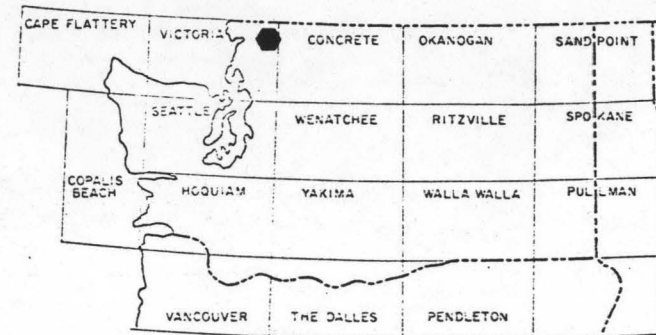
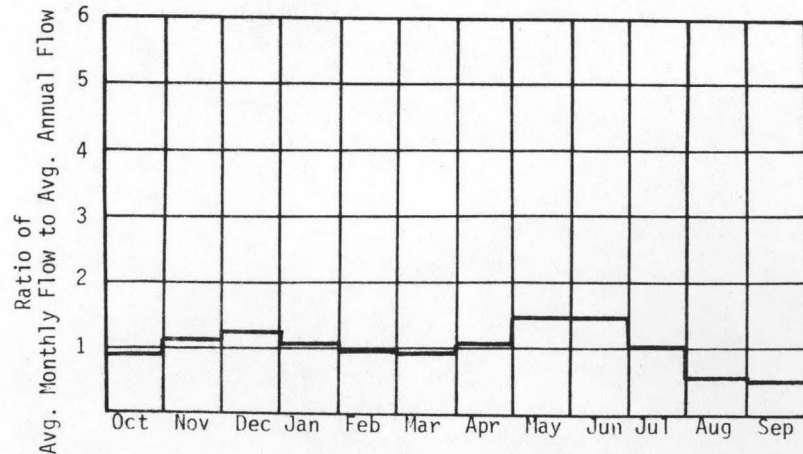
A. Upstream Elevation of Reach	<u>1850</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1040</u>	Ft. MSL
C. Total Available Head in Reach	<u>810</u>	Ft.
D. Average Slope in Reach	<u>120.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>50.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

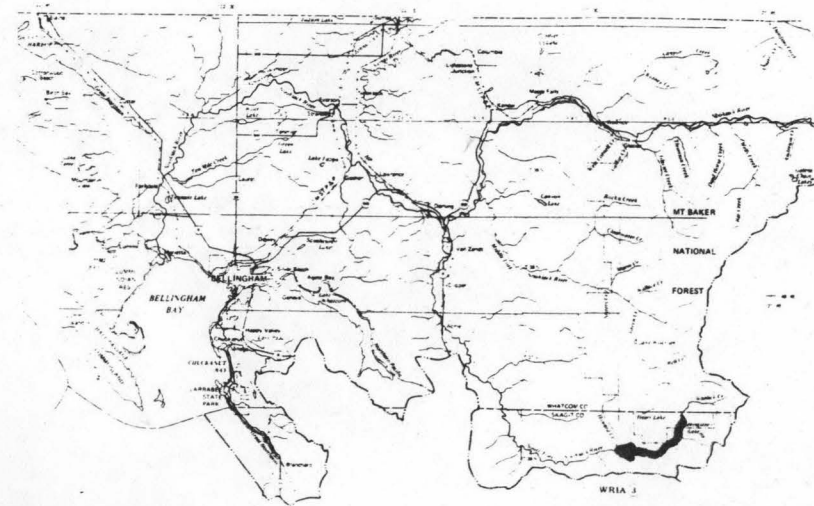
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	462	31.7	278	1.00
80	694	47.6	400	0.96
50	1180	81.2	590	0.83
30	1660	114	708	0.71
10	2670	183	819	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1445 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0008

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R7E</u>
D. Latitude, Longitude	<u>48°50' 121°53'</u>
E. Stream Name	<u>S.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>35.3/38.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

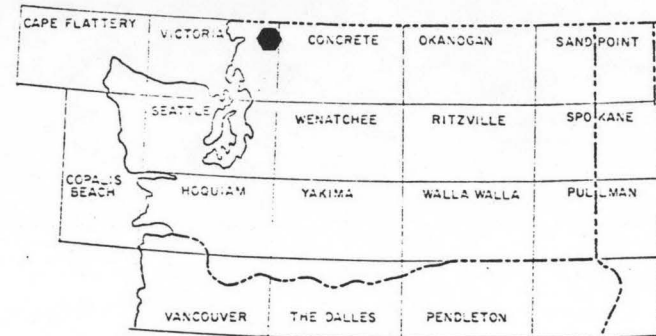
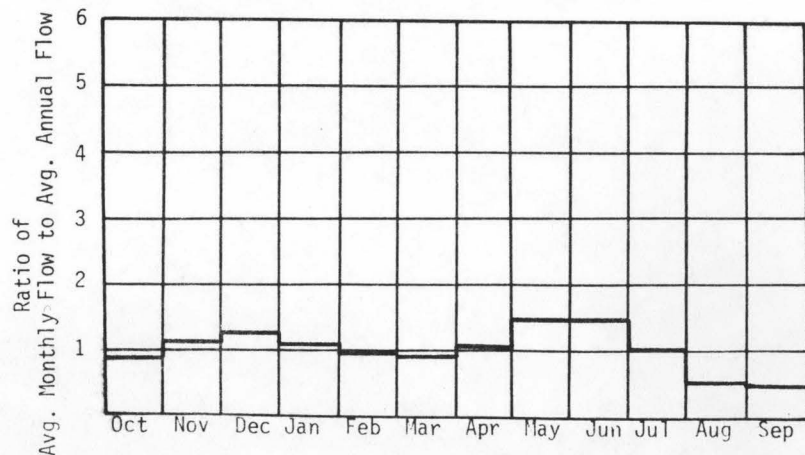
A. Upstream Elevation of Reach	<u>2090</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1850</u>	Ft. MSL
C. Total Available Head in Reach	<u>240 + 66 = 306</u>	Ft.
D. Average Slope in Reach	<u>80.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>21.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

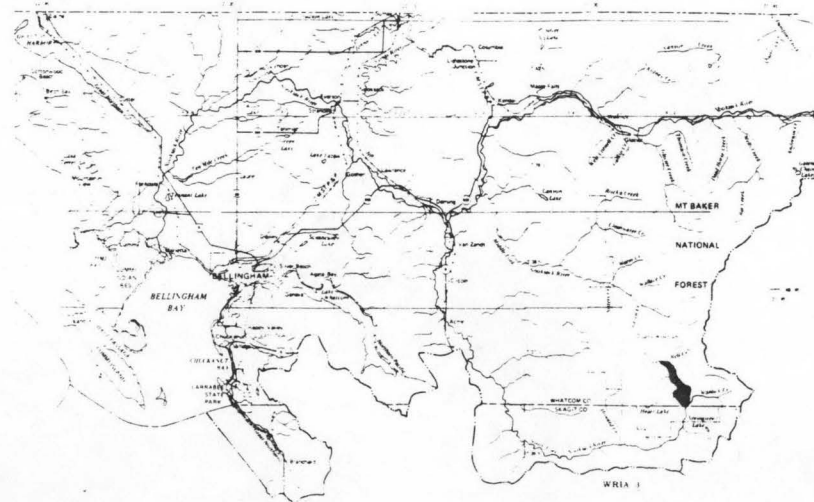
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	35.5	0.92	8.06	1.00
80	53.3	1.38	11.6	0.96
50	91.0	2.36	17.1	0.83
30	128	3.31	20.6	0.71
10	205	5.32	23.8	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 111 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0009

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R5E</u>
D. Latitude, Longitude	<u>48°44' 122°08'</u>
E. Stream Name	<u>Hutchinson Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/4.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

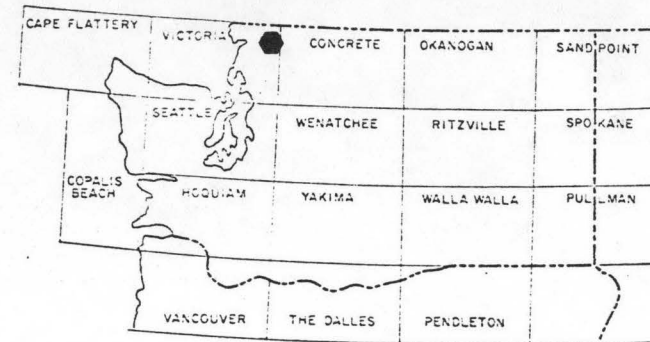
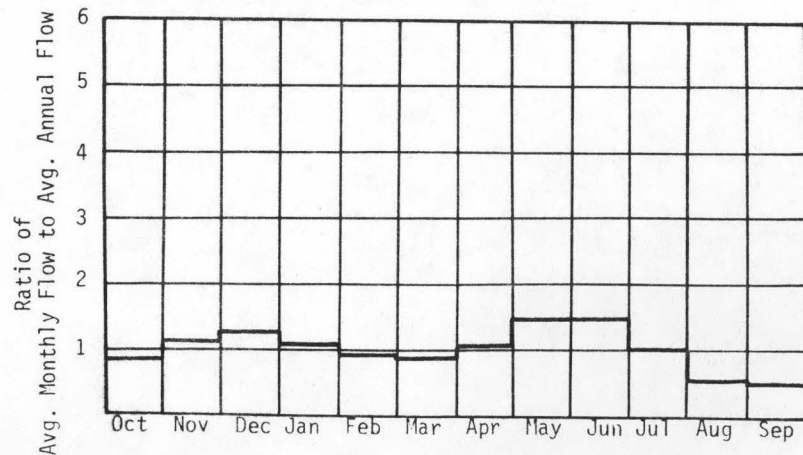
A. Upstream Elevation of Reach	<u>650</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>600</u>	Ft. MSL
C. Total Available Head in Reach	<u>50 + 66 = 116</u>	Ft.
D. Average Slope in Reach	<u>11.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

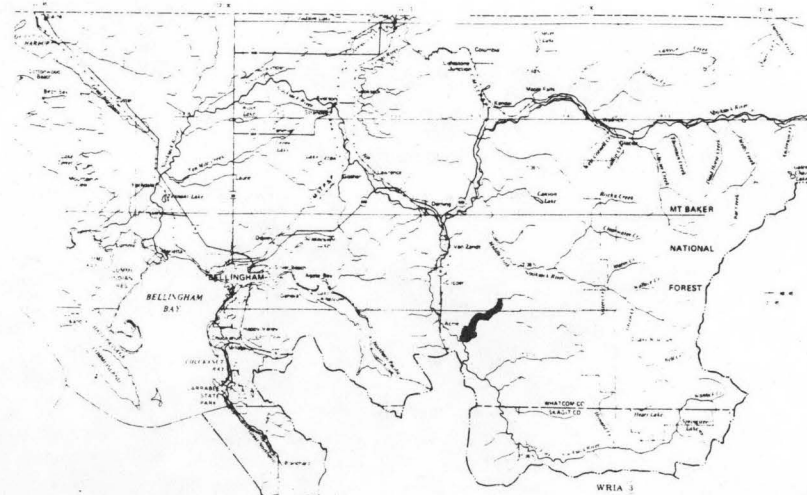
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.3	0.17	1.49	1.00
80	25.9	0.25	2.14	0.96
50	44.3	0.43	3.16	0.83
30	62.1	0.61	3.79	0.71
10	99.9	0.98	4.38	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 54 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0010

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T37N R6E  
 D. Latitude, Longitude 48°41' 122°05'  
 E. Stream Name Skookum Creek  
 F. Major Basin Name Nooksack  
 G. River Mile 0.0/5.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

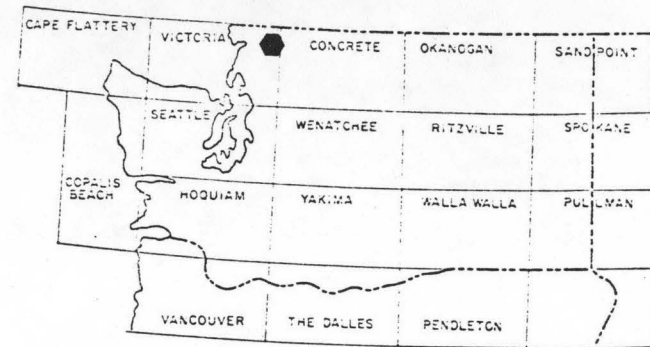
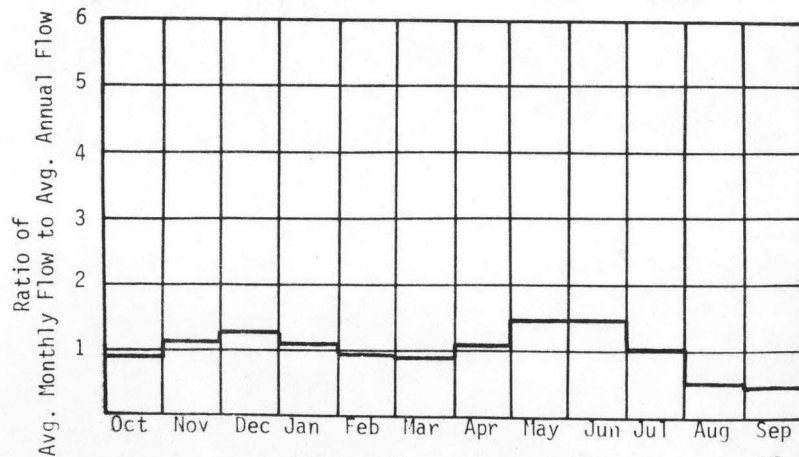
A. Upstream Elevation of Reach 1900 Ft. MSL  
 B. Downstream Elevation of Reach 370 Ft. MSL  
 C. Total Available Head in Reach 1530 + 66 = 1596 Ft.  
 D. Average Slope in Reach 259.3 Ft./Mi.  
 E. Drainage Area above Reach Mouth 23.3 Sq.Mi.  
 F. Inflow Classification Natural

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

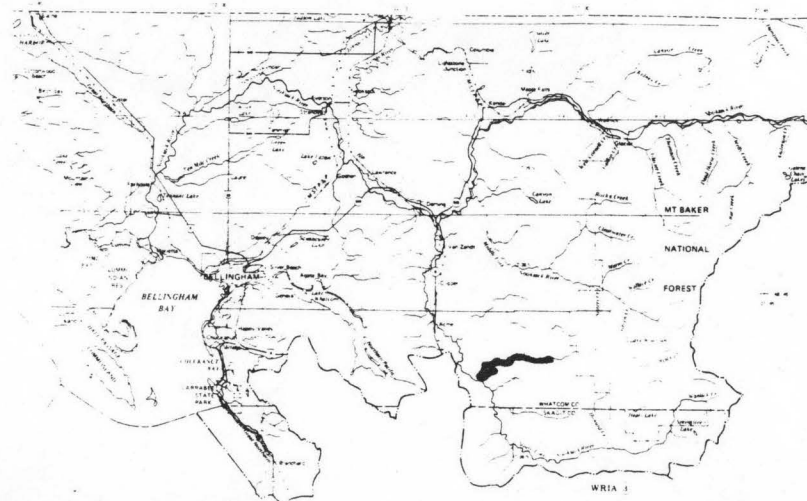
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	31.8	4.30	37.7	1.00
80	47.8	6.45	54.3	0.96
50	81.6	11.0	80.1	0.83
30	114	15.5	96.1	0.71
10	184	24.9	111	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 99.5 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0011

### I. LOCATION

A. State Washington  
 B. County Skagit  
 C. Township, Range T36N R5E  
 D. Latitude, Longitude 48°38' 122°05'  
 E. Stream Name Cavanaugh Creek  
 F. Major Basin Name Nooksack  
 G. River Mile 0.0/2.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

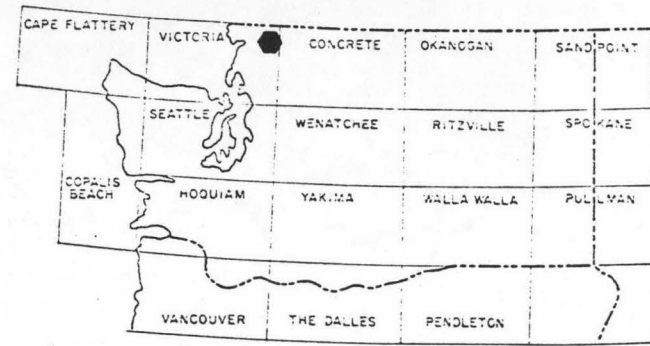
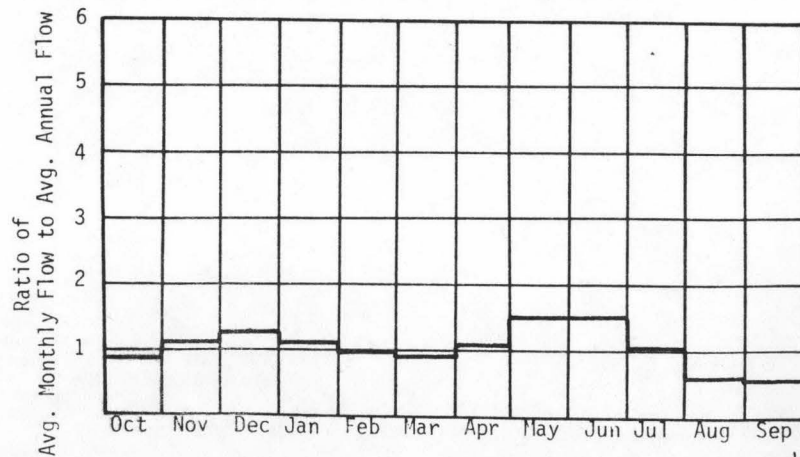
A. Upstream Elevation of Reach 1400 Ft. MSL  
 B. Downstream Elevation of Reach 425 Ft. MSL  
 C. Total Available Head in Reach 975 + 66 = 1041 Ft.  
 D. Average Slope in Reach 423.9 Ft./Mi.  
 E. Drainage Area above Reach Mouth 9.8 Sq.Mi.  
 F. Inflow Classification Natural

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

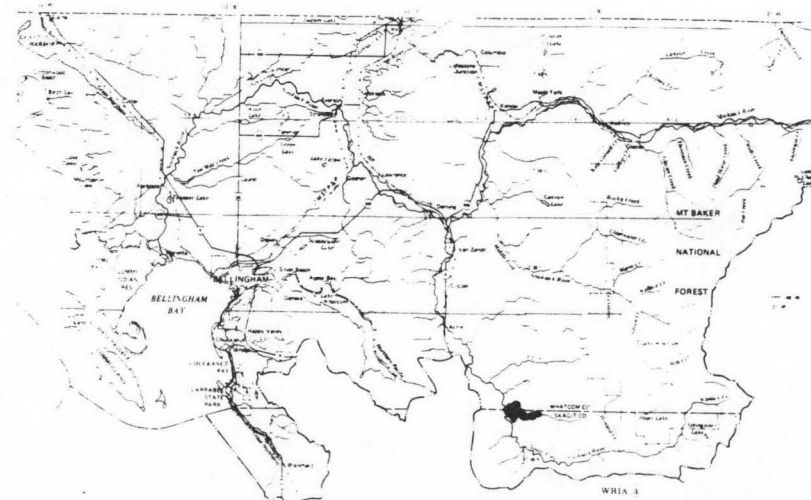
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.5	1.45	12.7	1.00
80	24.7	2.18	18.3	0.96
50	42.2	3.72	27.1	0.83
30	59.2	5.22	32.5	0.71
10	95.3	8.39	27.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 51.5 cfs



LOCAT. CNS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0012

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R6E</u>
D. Latitude, Longitude	<u>48°37' 121°58'</u>
E. Stream Name	<u>Howard Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/2.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

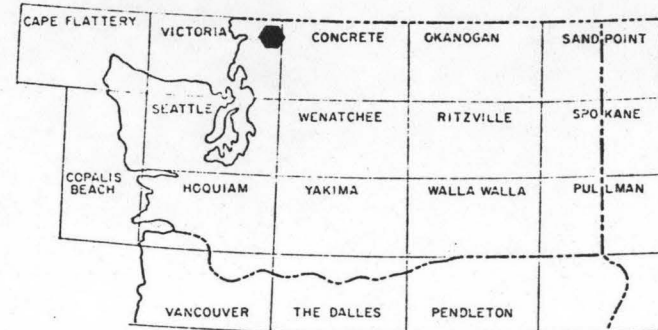
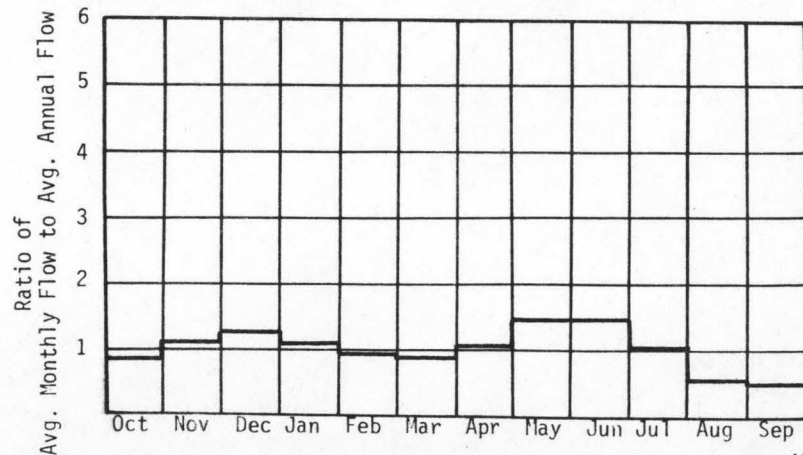
A. Upstream Elevation of Reach	<u>2100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1040</u>	Ft. MSL
C. Total Available Head in Reach	<u>1060 + 66 = 1126</u>	Ft.
D. Average Slope in Reach	<u>460.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

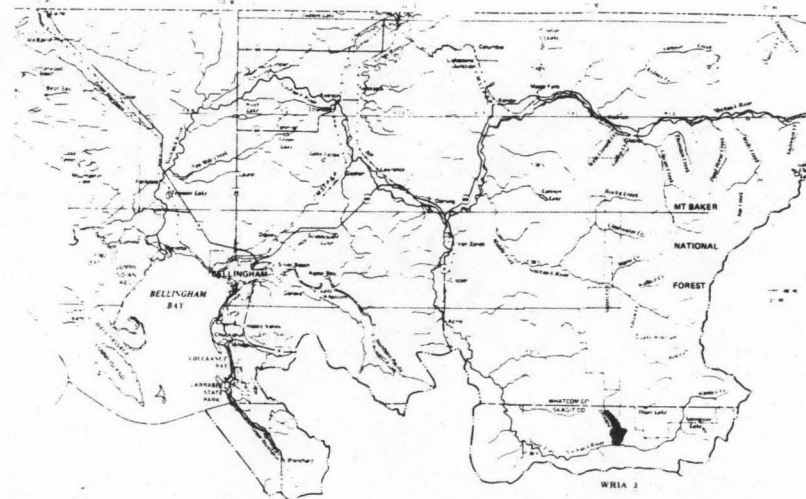
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.3	1.65	14.4	1.00
80	25.9	2.47	20.8	0.96
50	44.3	4.22	30.7	0.83
30	62.1	5.92	36.8	0.71
10	99.9	9.52	42.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 54 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0013

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R7E</u>
D. Latitude, Longitude	<u>48°39' 121°51'</u>
E. Stream Name	<u>Wanlick Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/2.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

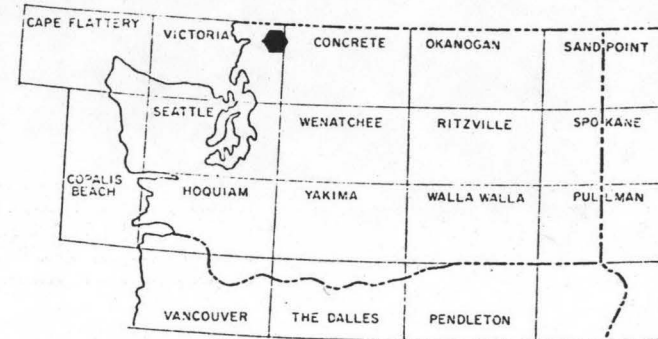
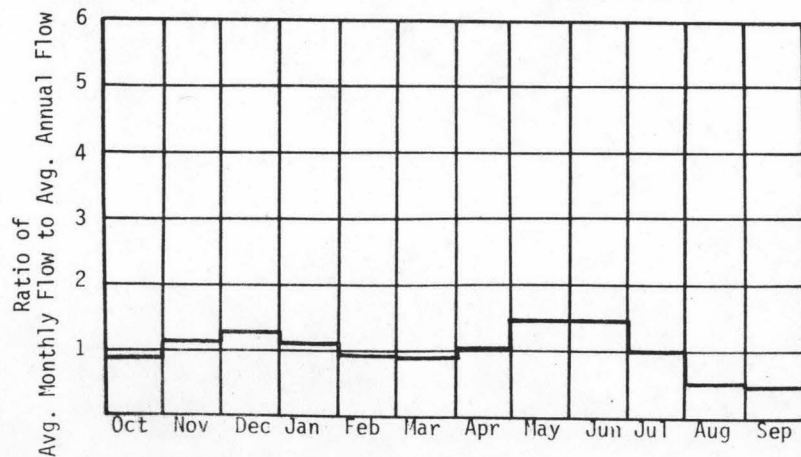
A. Upstream Elevation of Reach	<u>2280</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1850</u>	Ft. MSL
C. Total Available Head in Reach	<u>430 + 66 = 496</u>	Ft.
D. Average Slope in Reach	<u>165.38</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

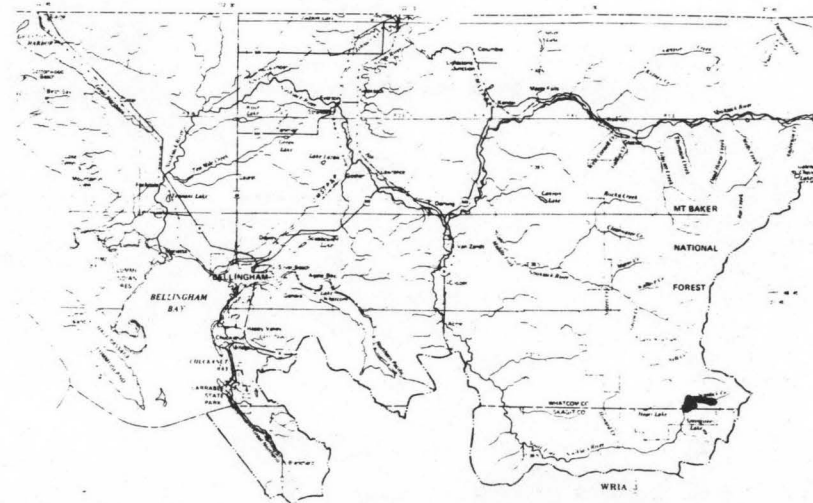
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.4	0.94	8.24	1.00
80	33.6	1.41	11.9	0.96
50	57.4	2.41	17.5	0.83
30	80.5	3.38	21.0	0.71
10	129	5.44	24.3	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 70 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0014

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R5E</u>
D. Latitude, Longitude	<u>48°47' 121°55'</u>
E. Stream Name	<u>M.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/9.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

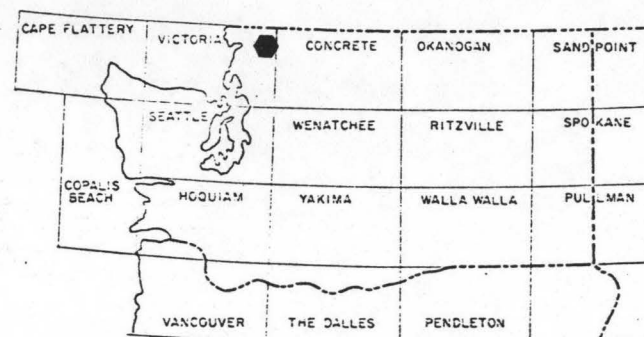
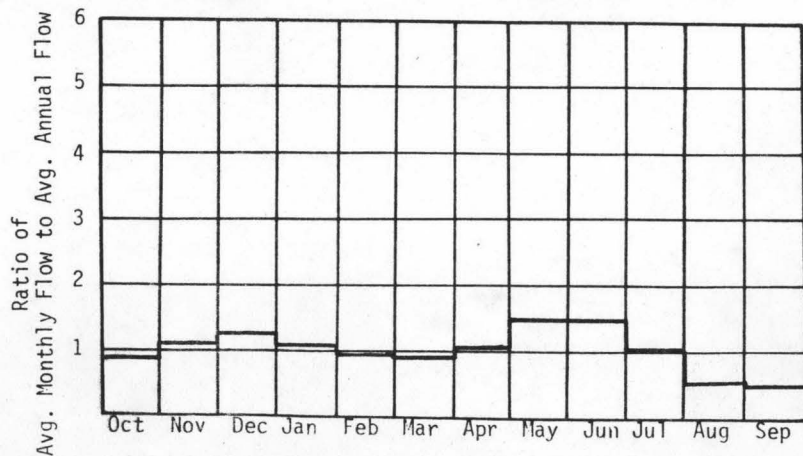
A. Upstream Elevation of Reach	<u>1150</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>280</u>	Ft. MSL
C. Total Available Head in Reach	<u>870</u>	Ft.
D. Average Slope in Reach	<u>91.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>70.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

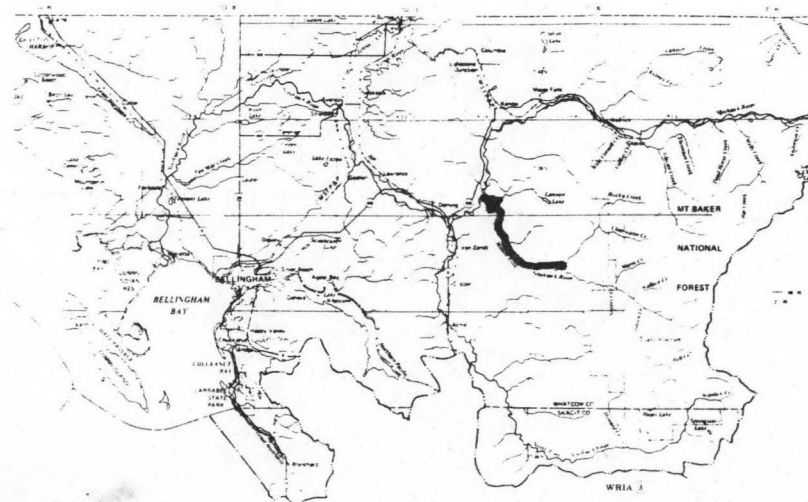
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	147	10.9	95.1	1.00
80	260	19.1	159	0.95
50	442	32.6	234	0.82
30	631	46.5	285	0.70
10	1120	82.5	347	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 590 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0015

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R6E</u>
D. Latitude, Longitude	<u>48°45' 121°59'</u>
E. Stream Name	<u>M.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>9.5/14.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

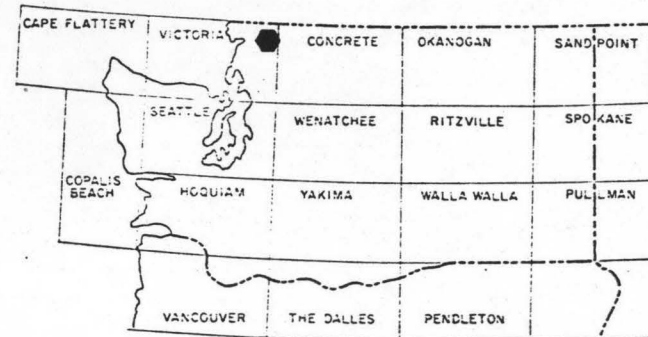
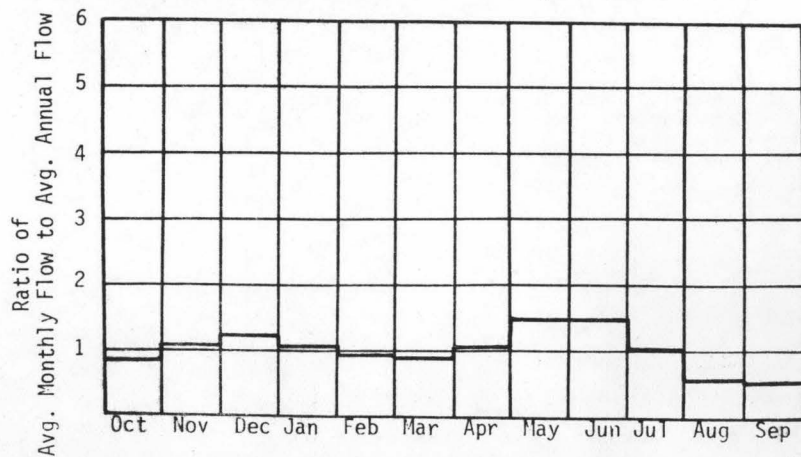
A. Upstream Elevation of Reach	<u>1845</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1150</u>	Ft. MSL
C. Total Available Head in Reach	<u>695</u>	Ft.
D. Average Slope in Reach	<u>128.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>49.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

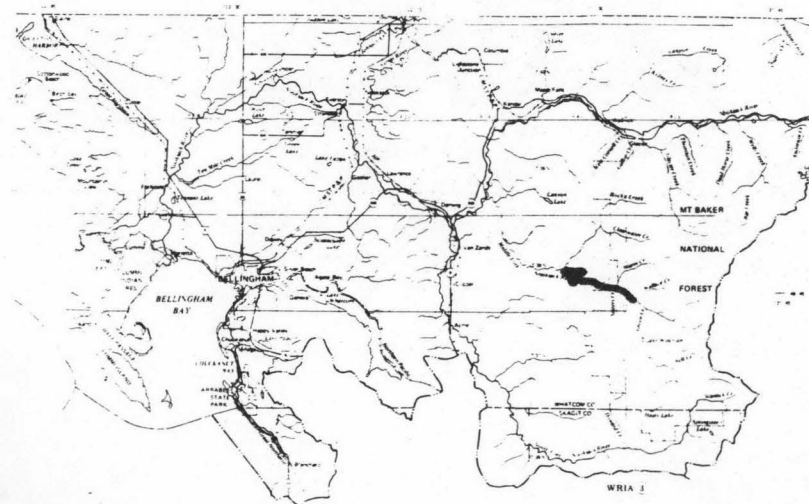
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	67.0	3.94	34.5	1.00
80	118	6.93	57.7	0.95
50	201	11.8	84.9	0.82
30	287	16.9	103	0.70
10	509	29.9	126	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 268 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0016

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R7E</u>
D. Latitude, Longitude	<u>48°44' 121°55'</u>
E. Stream Name	<u>M.F. Nooksack</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>14.9/17.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

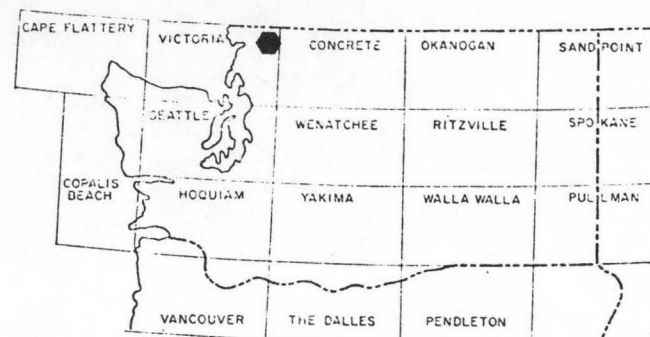
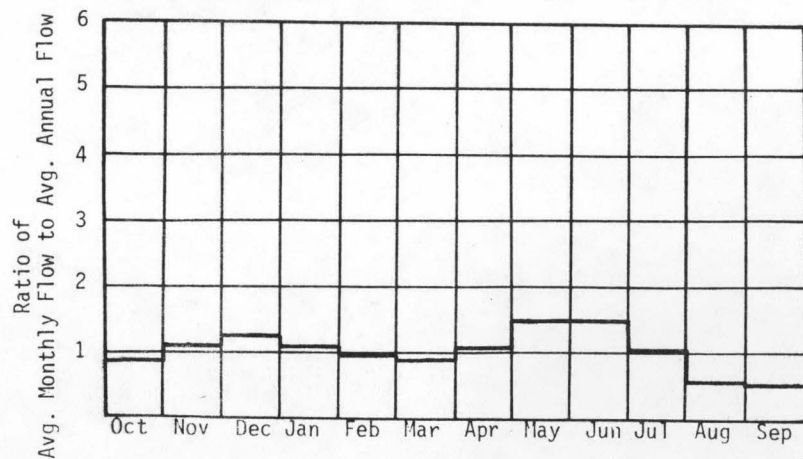
A. Upstream Elevation of Reach	<u>2550</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1845</u>	Ft. MSL
C. Total Available Head in Reach	<u>705</u>	Ft.
D. Average Slope in Reach	<u>218.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>18.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

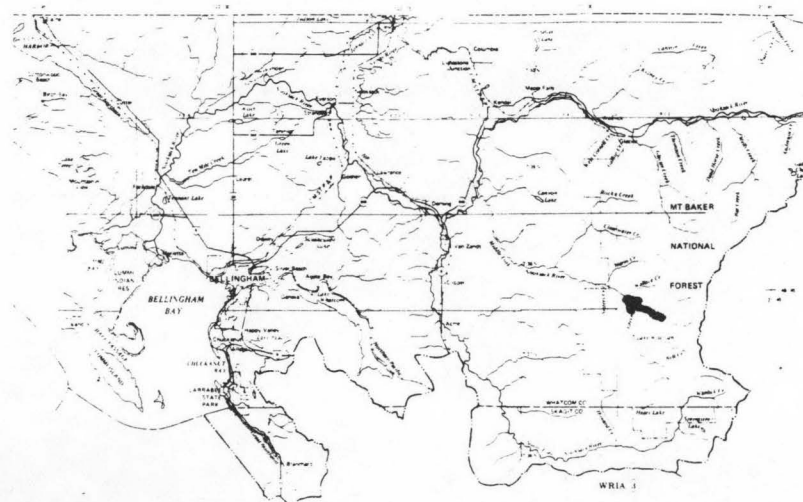
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	26.5	1.59	13.9	1.00
80	46.8	2.80	23.3	0.95
50	80.0	4.80	34.2	0.82
30	114	6.80	41.7	0.70
10	202	12.1	50.8	0.78

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 107 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0017

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R5E</u>
D. Latitude, Longitude	<u>48°50' 121°08'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/1.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

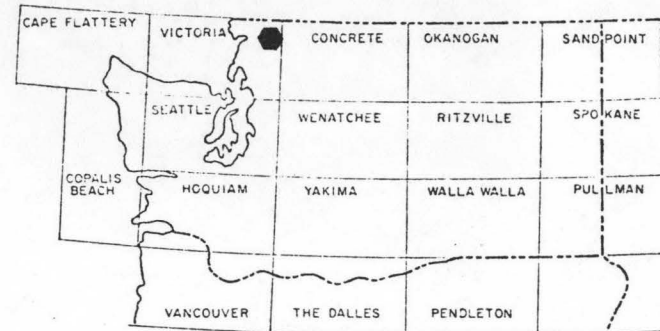
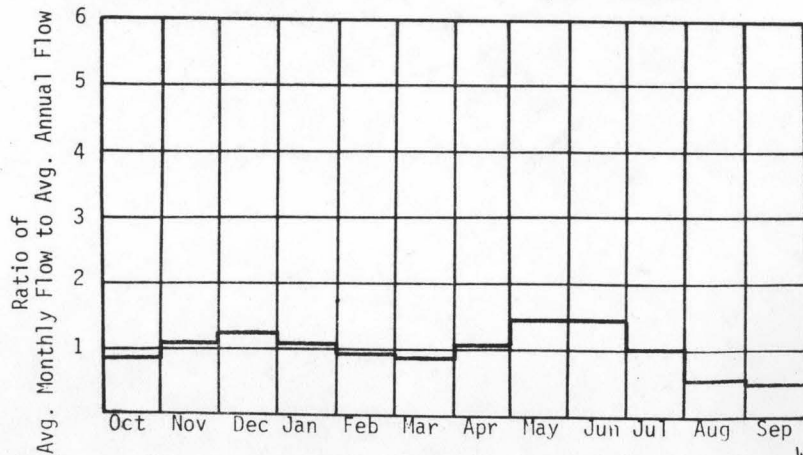
A. Upstream Elevation of Reach	<u>375</u>	Ft.	MSL
B. Downstream Elevation of Reach	<u>310</u>	Ft.	MSL
C. Total Available Head in Reach	<u>65 + 66 = 131</u>	Ft.	
D. Average Slope in Reach	<u>43.3</u>	Ft./Mi.	
E. Drainage Area above Reach Mouth	<u>8.7</u>	Sq.Mi.	
F. Inflow Classification	<u>Natural</u>		

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

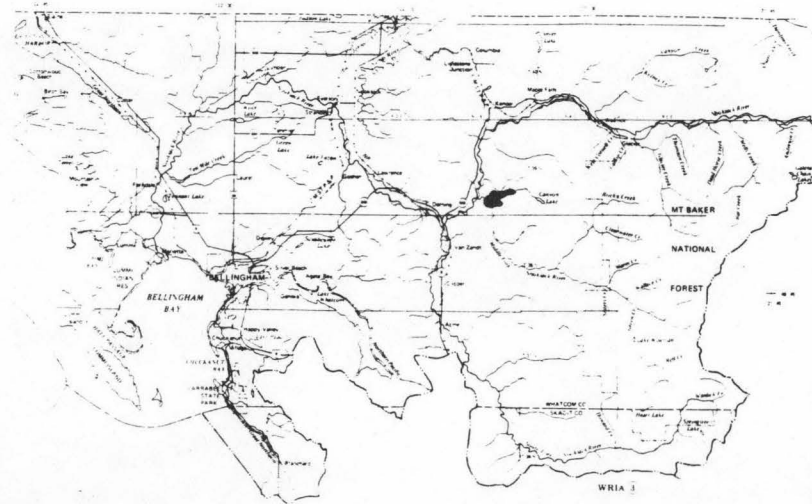
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.4	0.14	1.20	1.00
80	21.8	0.24	2.01	0.95
50	37.1	0.41	2.96	0.82
30	53.0	0.59	3.60	0.70
10	94.1	1.04	4.38	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 50 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0018

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R6E</u>
D. Latitude, Longitude	<u>48°47' 121°55'</u>
E. Stream Name	<u>Clearwater Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/4.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

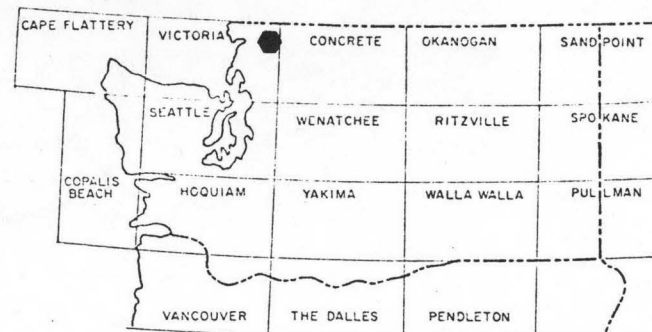
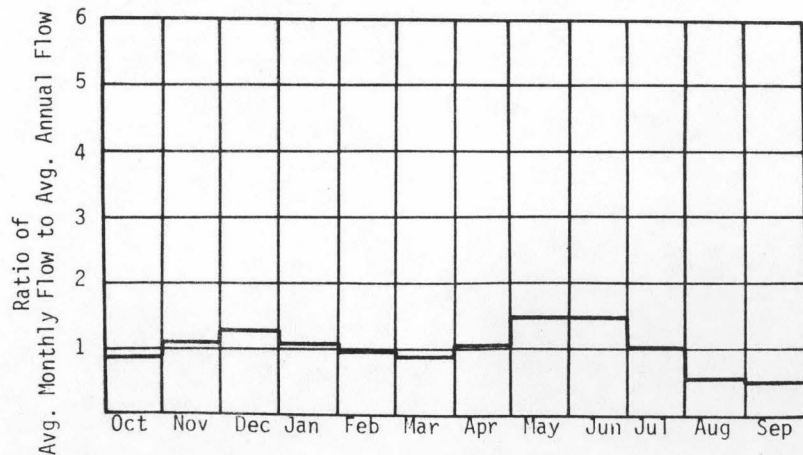
A. Upstream Elevation of Reach	<u>2050</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1150</u>	Ft. MSL
C. Total Available Head in Reach	<u>900</u>	Ft.
D. Average Slope in Reach	<u>225</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>21.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

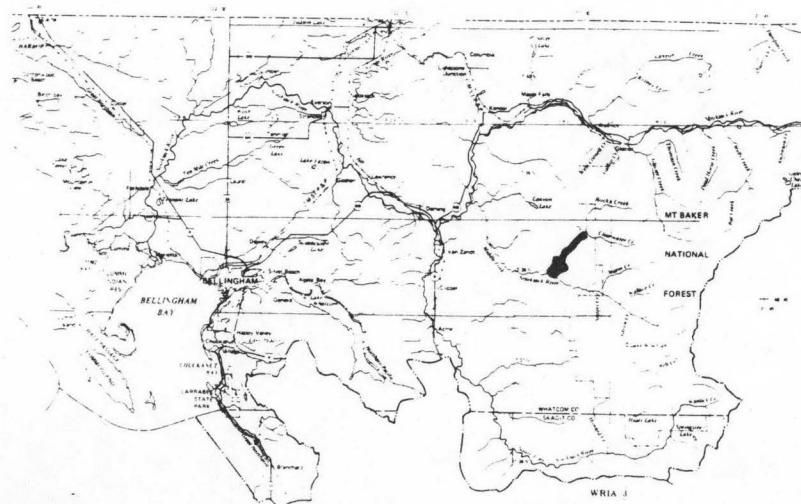
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	33.8	2.57	22.5	1.00
80	59.4	4.52	37.7	0.95
50	101	7.71	55.4	0.82
30	144	11.0	67.5	0.70
10	256	19.5	82.2	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 135 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0019

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R6E</u>
D. Latitude, Longitude	<u>48°48' 121°59'</u>
E. Stream Name	<u>Clearwater Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>4.0/4.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

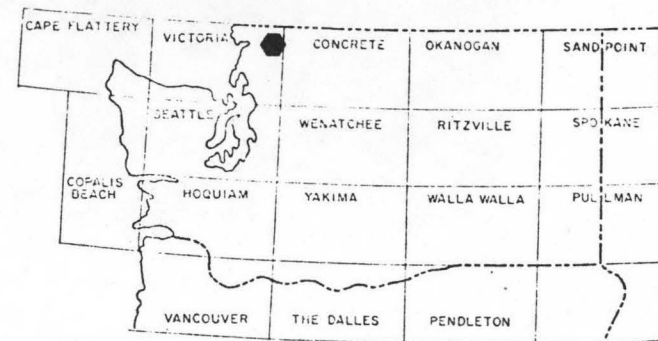
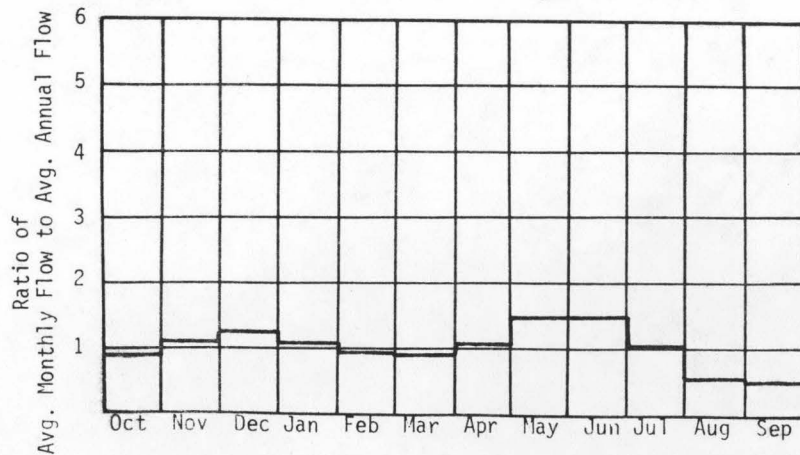
A. Upstream Elevation of Reach	<u>2300</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2100</u>	Ft. MSL
C. Total Available Head in Reach	<u>200 + 66 = 266</u>	Ft.
D. Average Slope in Reach	<u>400</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

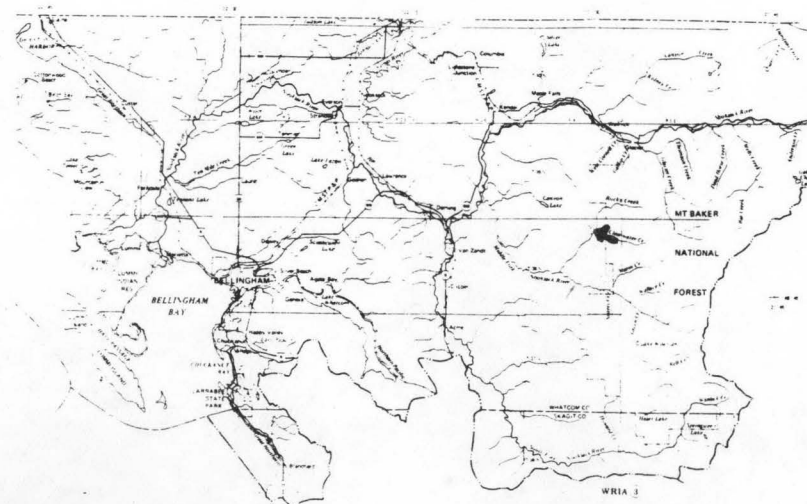
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.8	0.26	2.32	1.00
80	20.1	0.47	3.87	0.95
50	35.3	0.79	5.70	0.82
30	50.3	1.13	6.94	0.70
10	89.3	2.01	8.48	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 47 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0020

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T38N R6E  
 D. Latitude, Longitude 48°49' 121°59'  
 E. Stream Name Rocky Creek  
 F. Major Basin Name Nooksack  
 G. River Mile 0.0/0.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

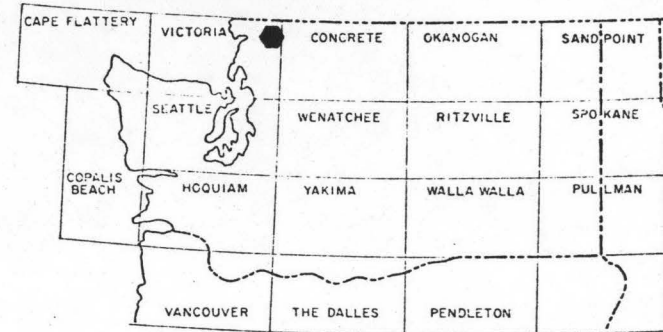
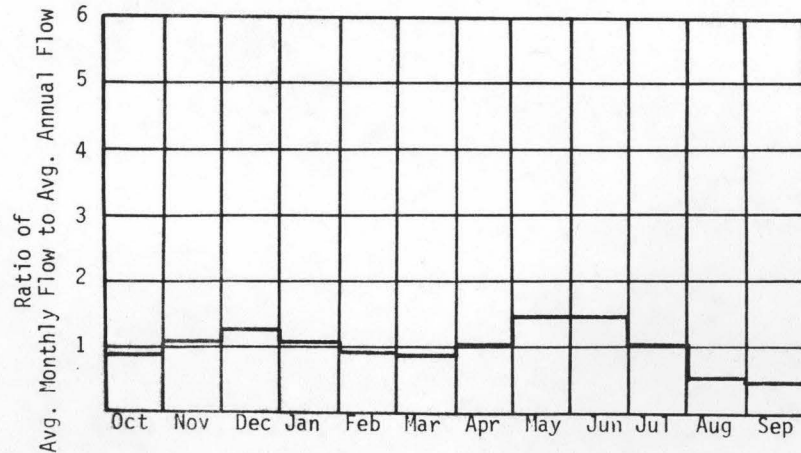
A. Upstream Elevation of Reach 2300 Ft. MSL  
 B. Downstream Elevation of Reach 2100 Ft. MSL  
 C. Total Available Head in Reach 200 + 66 = 266 Ft.  
 D. Average Slope in Reach 222 Ft./Mi.  
 E. Drainage Area above Reach Mouth 13.8 Sq.Mi.  
 F. Inflow Classification Natural

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

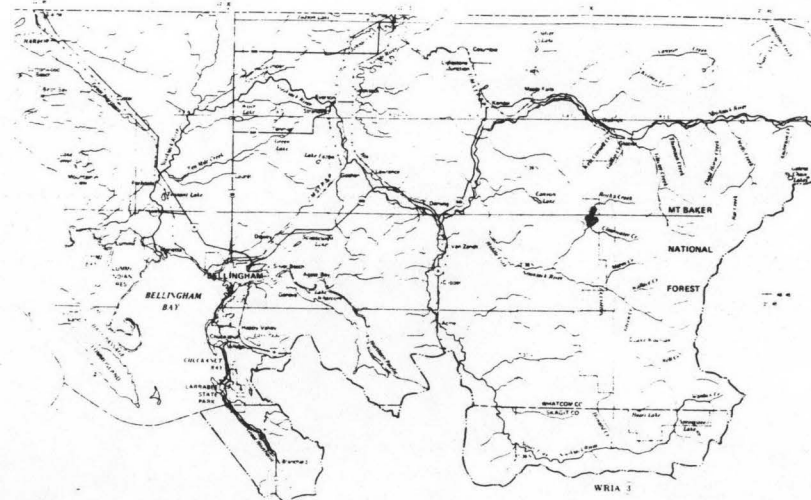
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.0	0.29	2.56	1.00
80	22.9	0.51	4.28	0.95
50	39.0	0.88	6.30	0.82
30	55.6	1.25	7.68	0.70
10	98.8	2.22	9.35	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 52 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0021

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T38N R6E  
 D. Latitude, Longitude 48°45' 121°58'  
 E. Stream Name Wallace Creek  
 F. Major Basin Name Nooksack  
 G. River Mile 0.0/0.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

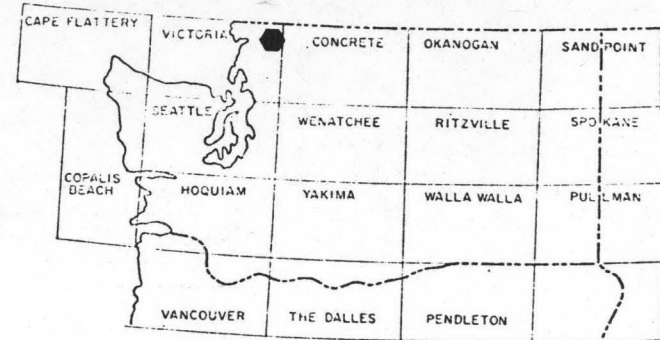
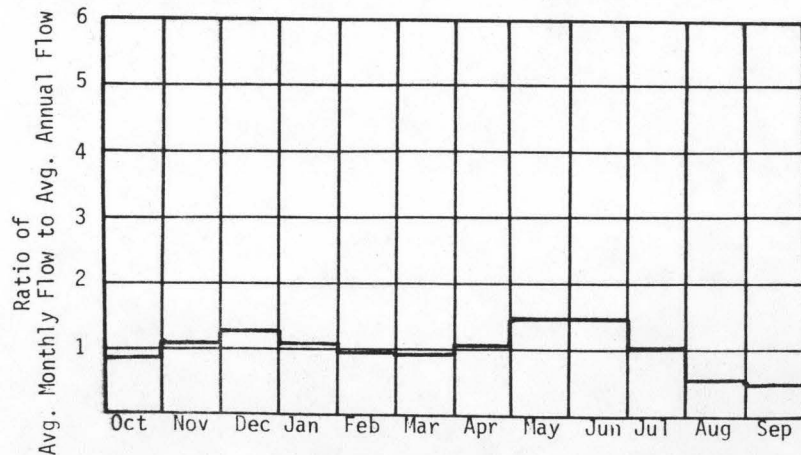
A. Upstream Elevation of Reach 2250 Ft. MSL  
 B. Downstream Elevation of Reach 1845 Ft. MSL  
 C. Total Available Head in Reach 405 + 66 = 471 Ft.  
 D. Average Slope in Reach 589 Ft./Mi.  
 E. Drainage Area above Reach Mouth 6.9 Sq.Mi.  
 F. Inflow Classification Natural

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

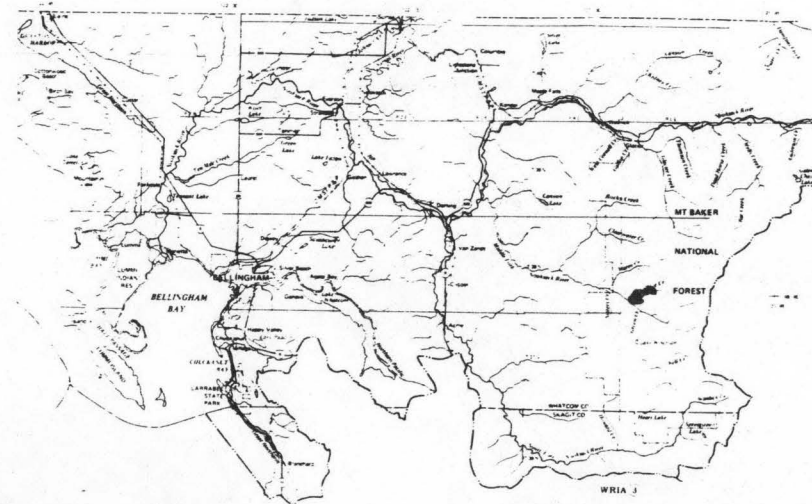
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.5	0.50	4.36	1.00
80	22.0	0.88	7.30	0.95
50	37.5	1.49	10.7	0.82
30	53.5	2.13	13.1	0.70
10	95.0	3.79	15.9	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 50 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0021

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R6E</u>
D. Latitude, Longitude	<u>48°45' 121°58'</u>
E. Stream Name	<u>Wallace Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/0.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

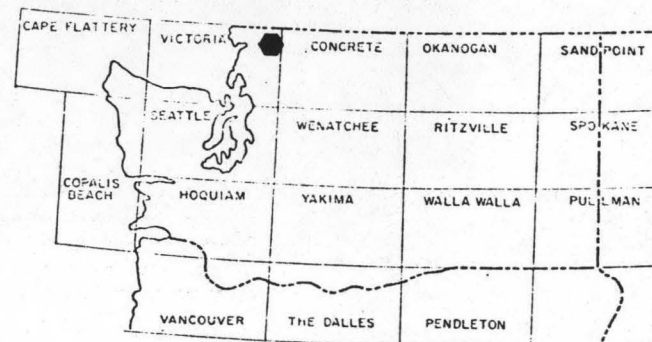
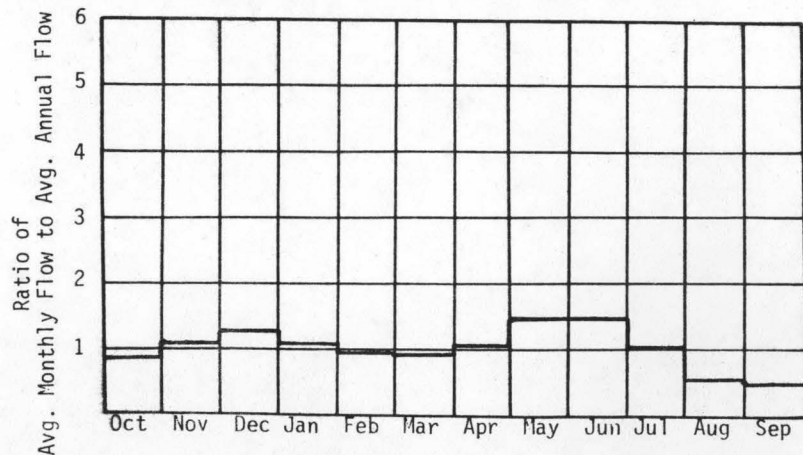
A. Upstream Elevation of Reach	<u>2250</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1845</u>	Ft. MSL
C. Total Available Head in Reach	<u>405 + 66 = 471</u>	Ft.
D. Average Slope in Reach	<u>589</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>6.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

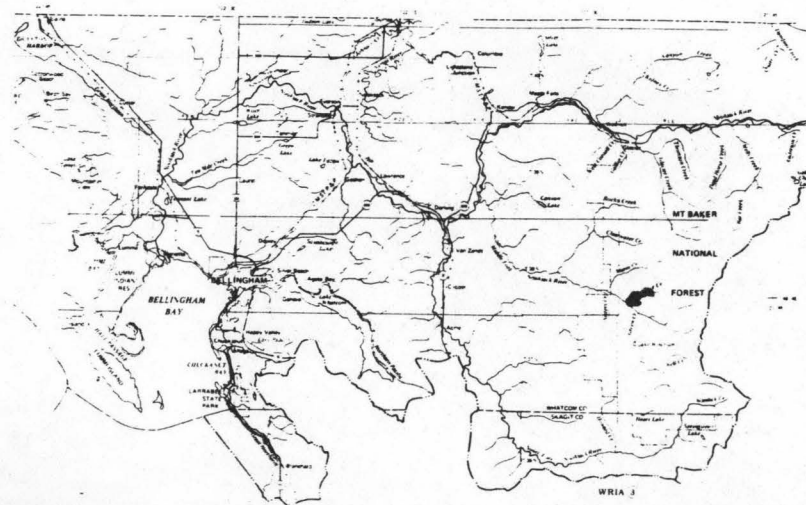
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.5	0.50	4.36	1.00
80	22.0	0.88	7.30	0.95
50	37.5	1.49	10.7	0.82
30	53.5	2.13	13.1	0.70
10	95.0	3.79	15.9	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 50 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0022

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R5E</u>
D. Latitude, Longitude	<u>48°55' 122°10'</u>
E. Stream Name	<u>N.F. Nooksack River</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>39.6/54.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

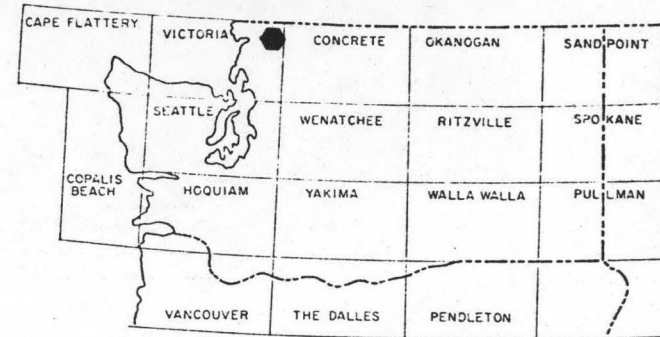
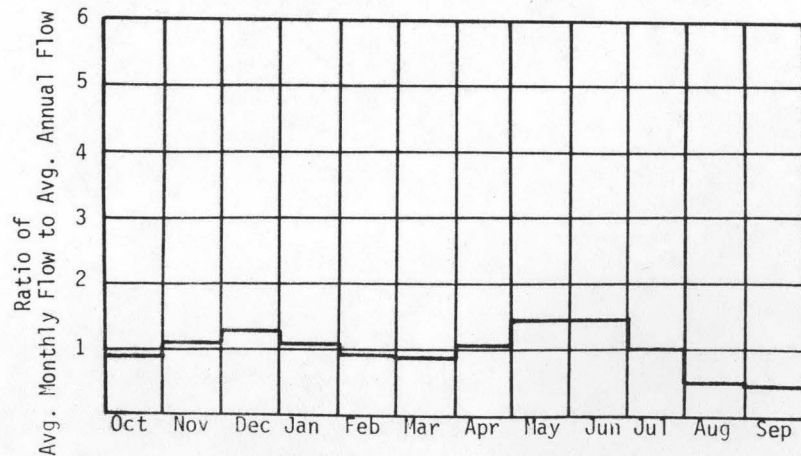
A. Upstream Elevation of Reach	<u>725</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>280</u>	Ft. MSL
C. Total Available Head in Reach	<u>445</u>	Ft.
D. Average Slope in Reach	<u>30</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>302</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

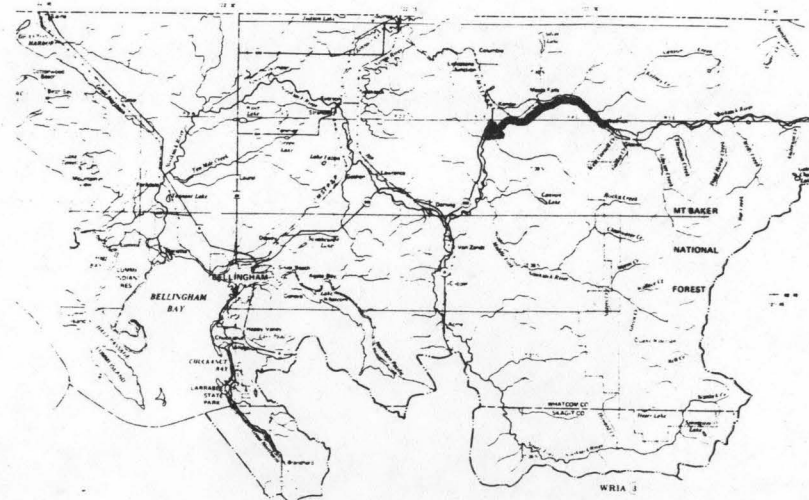
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	462	17.4	153	1.00
80	680	25.6	215	0.96
50	1160	43.5	317	0.83
30	1590	59.9	378	0.72
10	2560	96.3	430	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1360 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0023

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T39N R6E  
 D. Latitude, Longitude 48°54' 121°58'  
 E. Stream Name N.E. Nooksack River  
 F. Major Basin Name Nooksack  
 G. River Mile 54.2/56.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

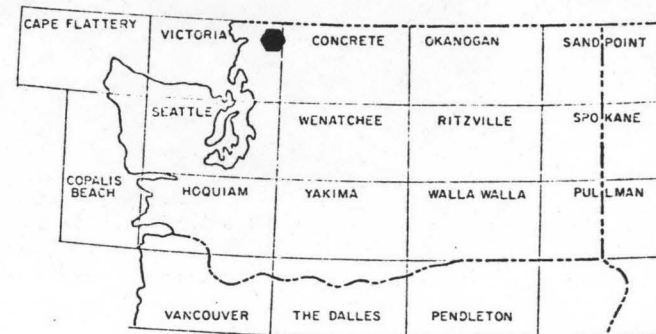
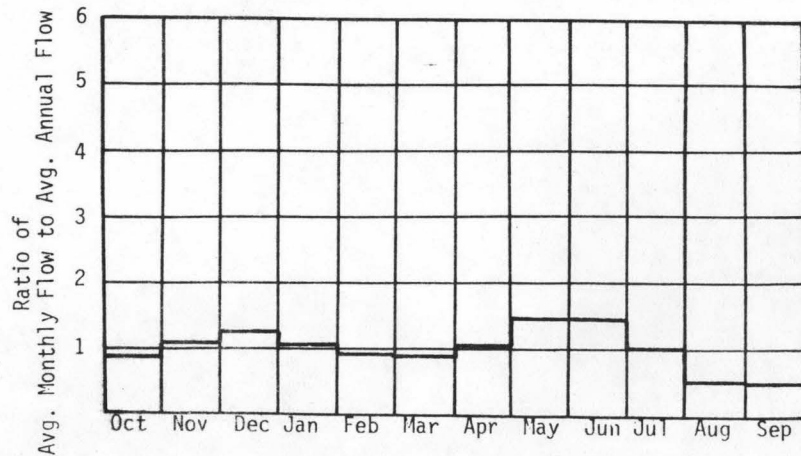
A. Upstream Elevation of Reach 870 Ft. MSL  
 B. Downstream Elevation of Reach 725 Ft. MSL  
 C. Total Available Head in Reach 145 Ft.  
 D. Average Slope in Reach 56 Ft./Mi.  
 E. Drainage Area above Reach Mouth 165.5 Sq.Mi.  
 F. Inflow Classification Natural

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

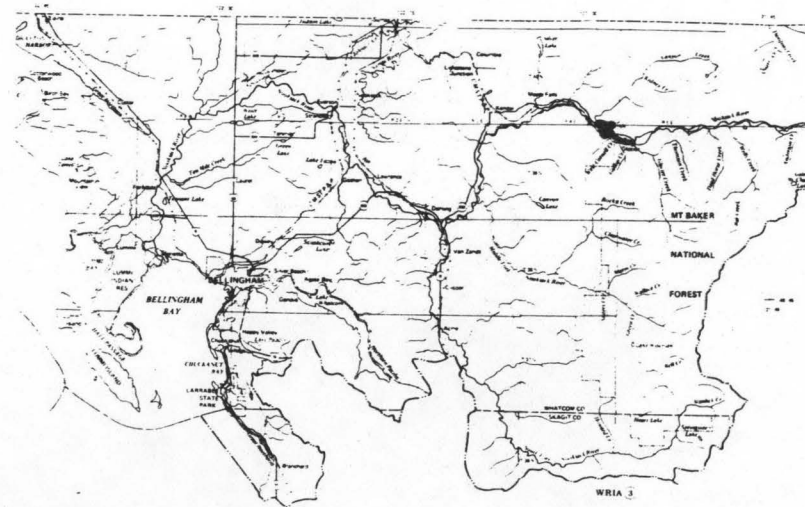
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	339	4.16	36.4	1.00
80	498	6.12	51.4	0.96
50	847	10.4	75.6	0.83
30	1140	14.0	88.0	0.72
10	1870	23.0	103	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 997 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0024

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T39.5N R7E  
 D. Latitude, Longitude 48°54' 121°58'  
 E. Stream Name N.F. Nooksack  
 F. Major Basin Name Nooksack  
 G. River Mile 56.9/64.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

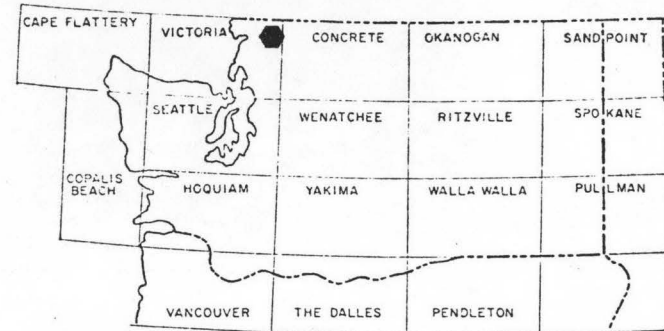
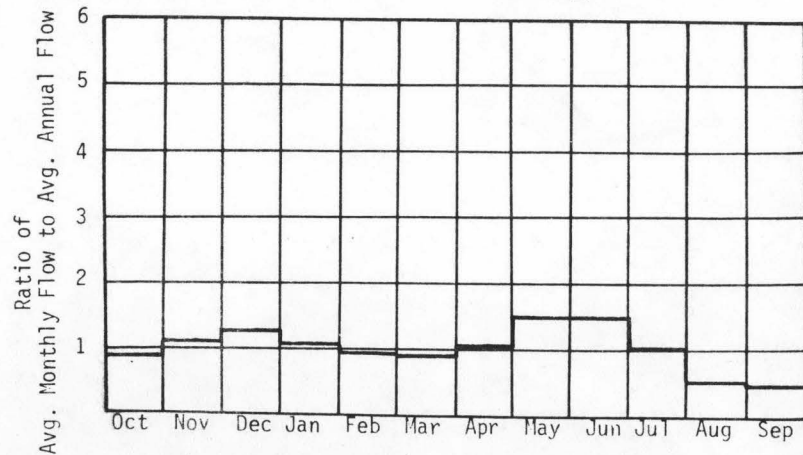
A. Upstream Elevation of Reach 1400 Ft. MSL  
 B. Downstream Elevation of Reach 870 Ft. MSL  
 C. Total Available Head in Reach 530 Ft.  
 D. Average Slope in Reach 73 Ft./Mi.  
 E. Drainage Area above Reach Mouth 119.1 Sq.Mi.  
 F. Inflow Classification Natural

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

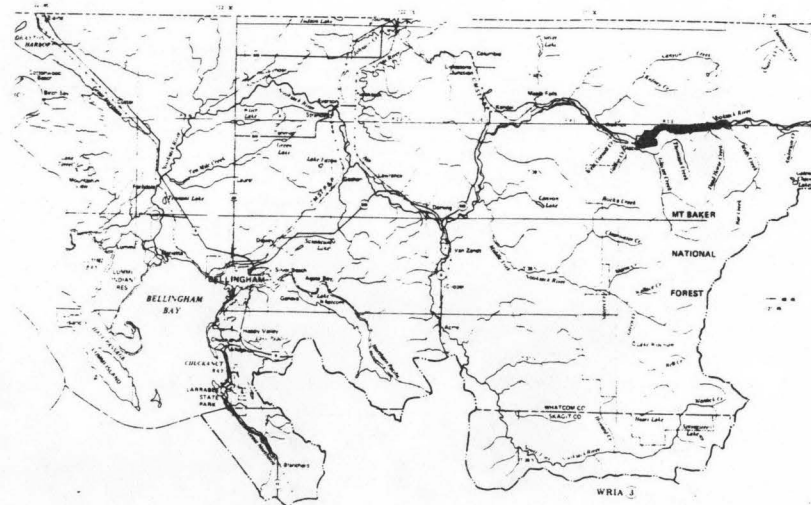
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	248	11.1	97.5	1.00
80	365	16.4	137	0.96
50	620	27.8	207	0.83
30	832	37.3	235	0.72
10	1370	61.6	275	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR\_ 730 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0025

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39.5N R8E</u>
D. Latitude, Longitude	<u>48°54' 121°45'</u>
E. Stream Name	<u>N.F. Nooksack River</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>64.2/71.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

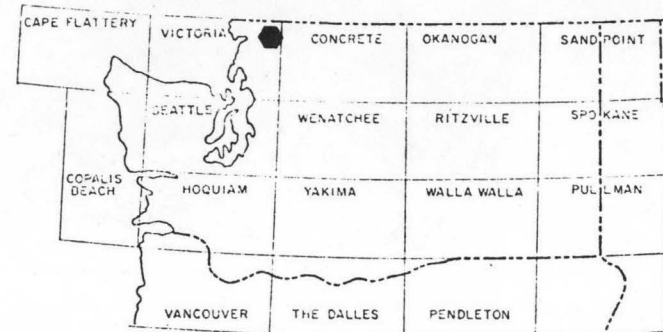
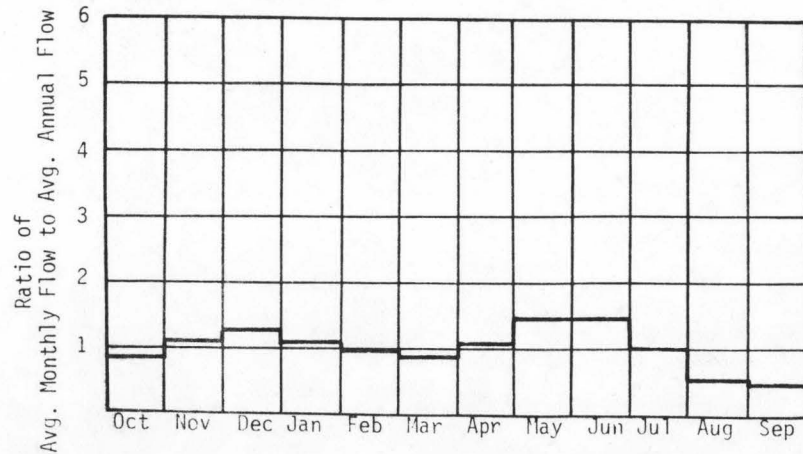
A. Upstream Elevation of Reach	<u>2010</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1400</u>	Ft. MSL
C. Total Available Head in Reach	<u>610</u>	Ft.
D. Average Slope in Reach	<u>87</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>71.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

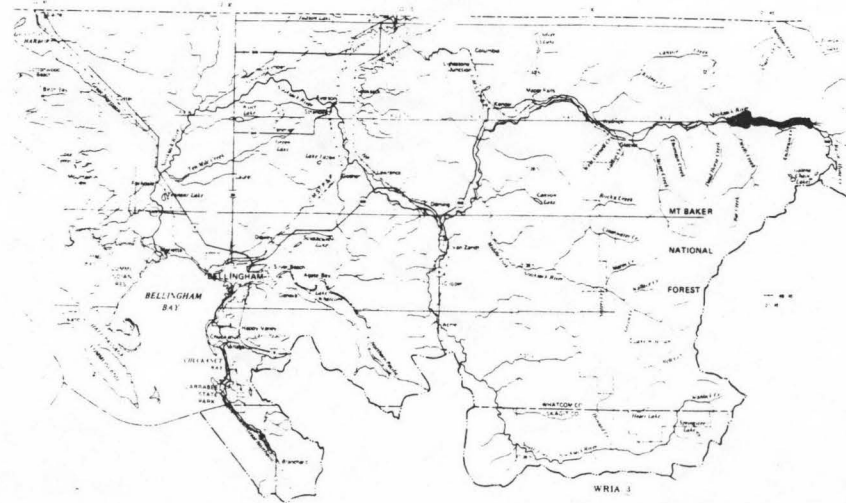
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	112	5.80	50.8	1.00
80	179	9.24	76.9	0.95
50	320	16.5	119	0.82
30	482	24.9	148	0.68
10	848	43.8	180	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 416 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0026

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R9E</u>
D. Latitude, Longitude	<u>48°54' 121°40'</u>
E. Stream Name	<u>N.F. Nooksack River</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>71.2/72.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

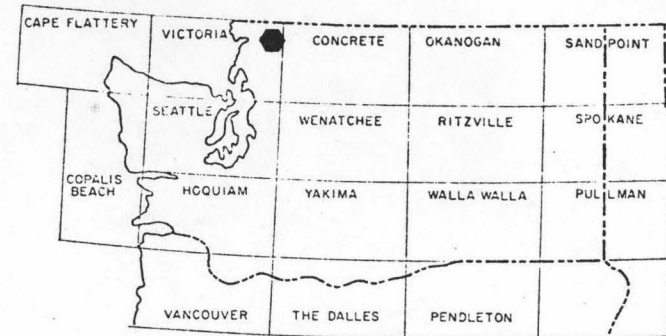
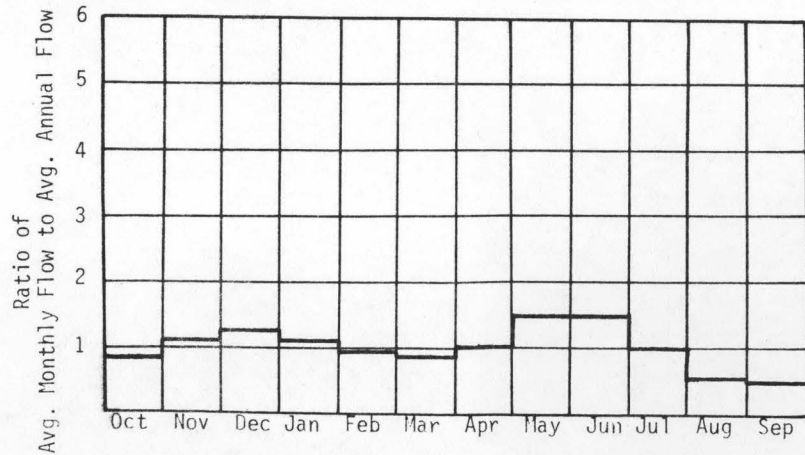
A. Upstream Elevation of Reach	<u>2070</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2010</u>	Ft. MSL
C. Total Available Head in Reach	<u>60</u>	Ft.
D. Average Slope in Reach	<u>43</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>39.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

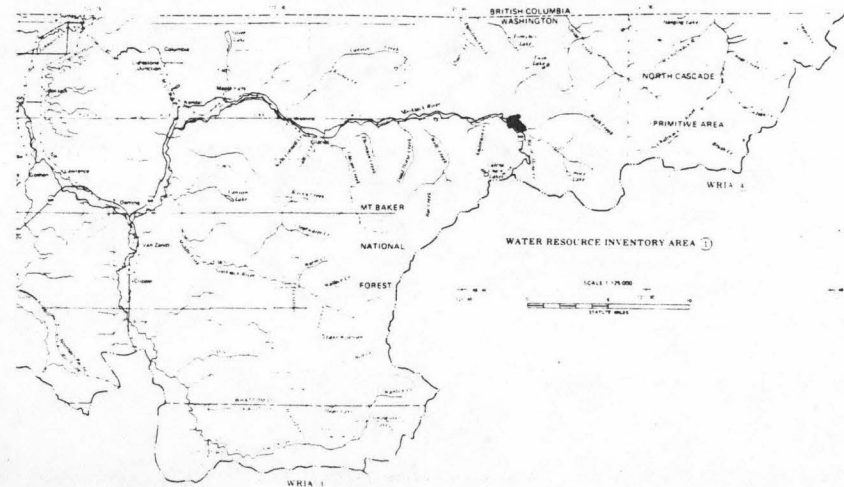
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	81.3	0.41	3.62	1.00
80	123	0.63	5.22	0.95
50	189	0.96	6.92	0.82
30	234	1.19	7.10	0.68
10	285	1.45	5.98	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 301 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0027

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R9E</u>
D. Latitude, Longitude	<u>48°52' 121°38'</u>
E. Stream Name	<u>N.F. Nooksack River</u>
F. Major Basin Name	<u>Nooksack River</u>
G. River Mile	<u>72.9/74.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

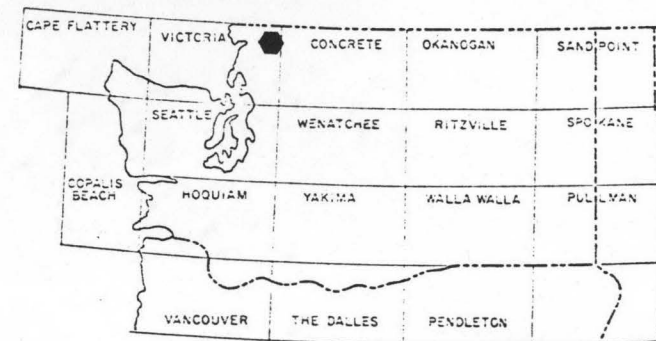
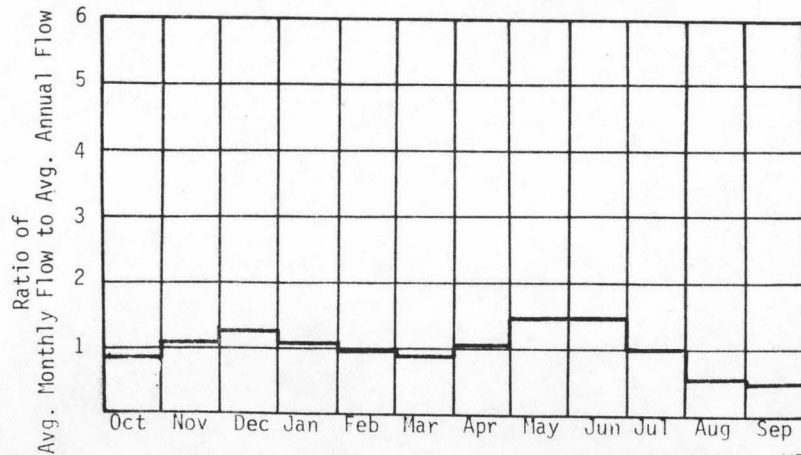
A. Upstream Elevation of Reach	<u>2225</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2090</u>	Ft. MSL
C. Total Available Head in Reach	<u>135</u>	Ft.
D. Average Slope in Reach	<u>123</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>20.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

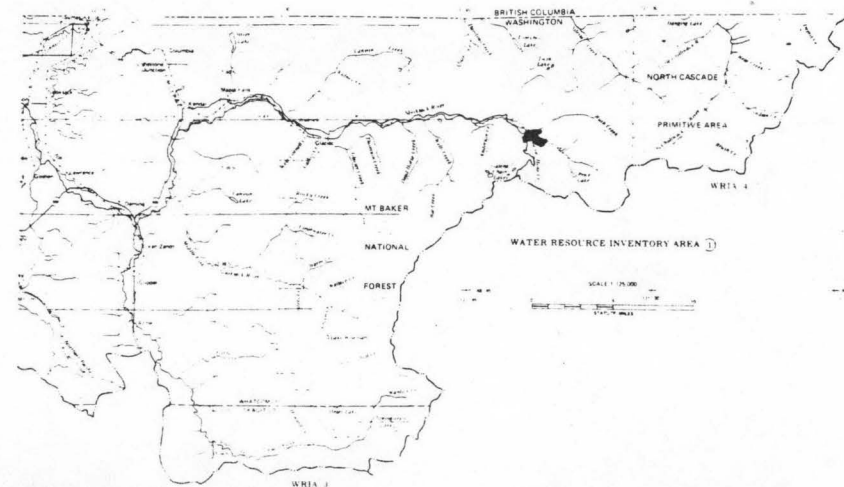
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	44.8	0.51	4.5	1.00
80	71.4	0.82	6.8	0.95
50	127.8	1.46	10.5	0.82
30	192	2.20	13.1	0.68
10	338	3.87	15.9	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 166 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0028

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R9E</u>
D. Latitude, Longitude	<u>48°52' 121°37'</u>
E. Stream Name	<u>N.F. Nooksack River</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>74.0/78.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

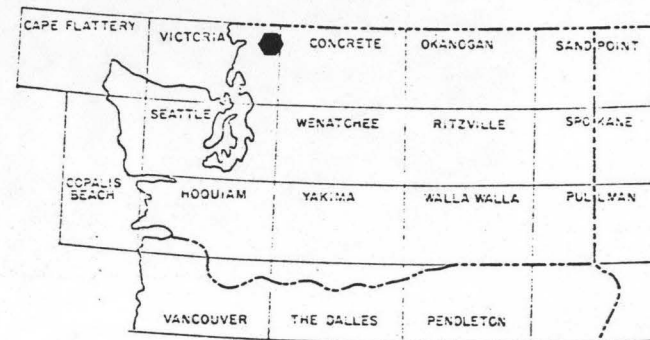
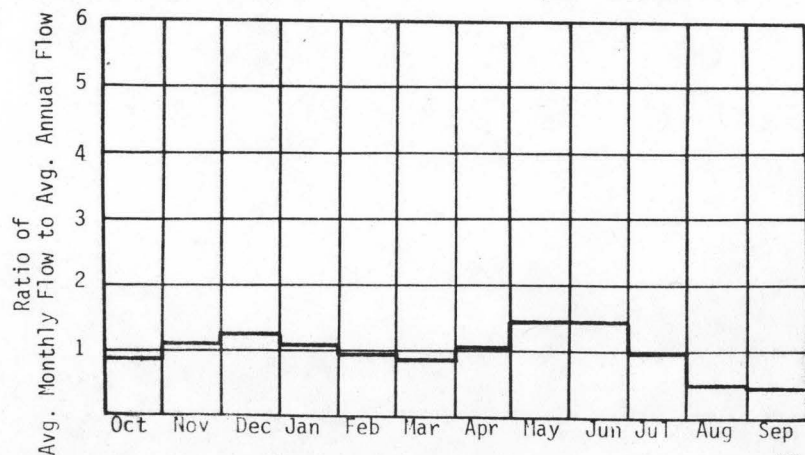
A. Upstream Elevation of Reach	<u>2960</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2225</u>	Ft. MSL
C. Total Available Head in Reach	<u>735 + 66 = 801</u>	Ft.
D. Average Slope in Reach	<u>171</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>5.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

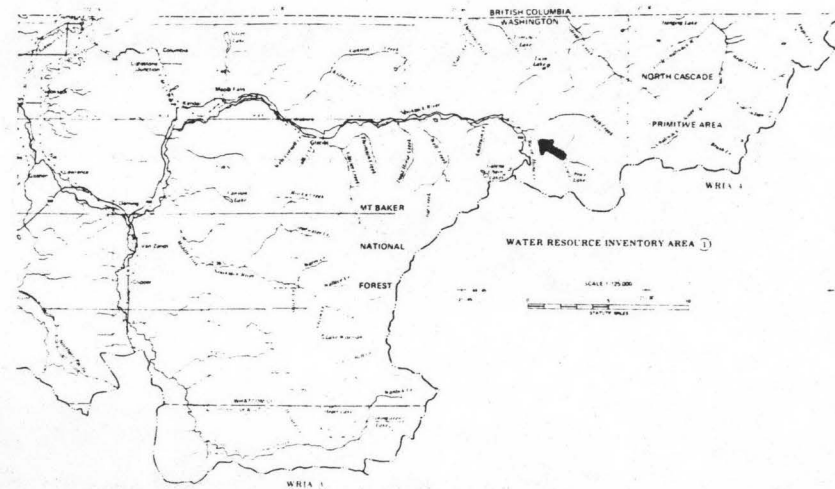
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.1	1.57	13.7	1.00
80	36.8	2.49	20.7	0.95
50	65.8	4.46	32.0	0.82
30	99.2	6.72	40.0	0.68
10	174	11.8	48.6	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 86 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0029

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R5E</u>
D. Latitude, Longitude	<u>48°53' 122°07'</u>
E. Stream Name	<u>Racehorse Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/2.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

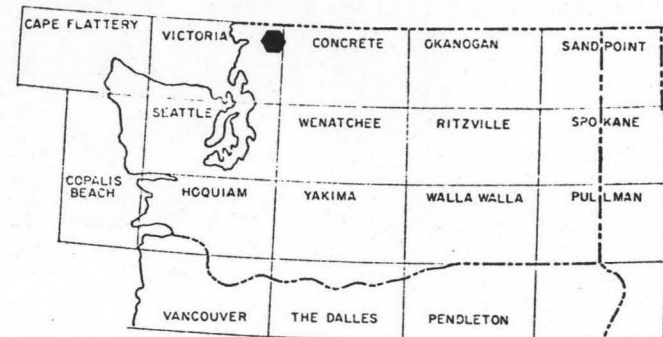
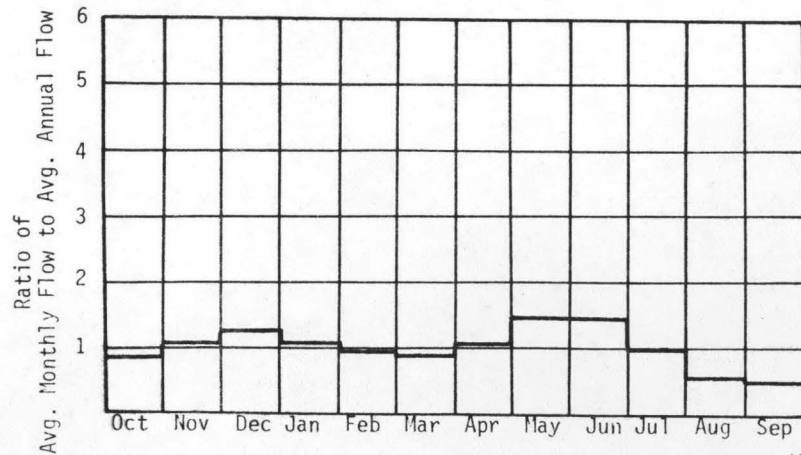
A. Upstream Elevation of Reach	<u>1100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>400</u>	Ft. MSL
C. Total Available Head in Reach	<u>766</u>	Ft.
D. Average Slope in Reach	<u>269</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

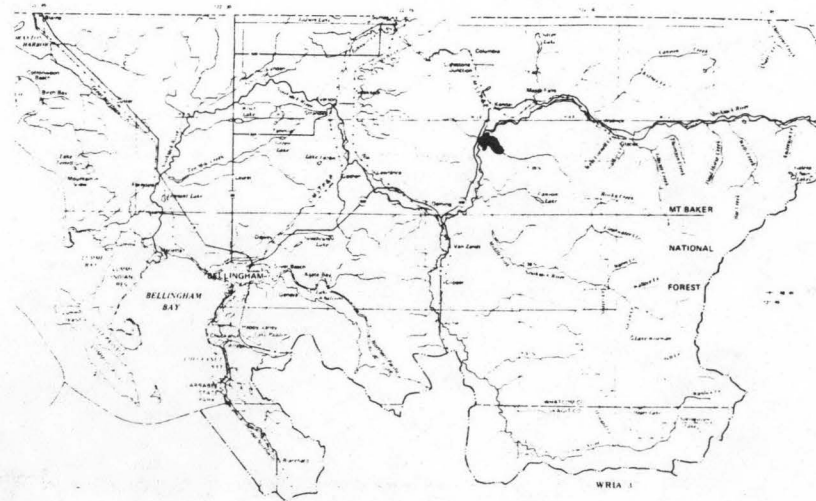
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.5	0.75	6.53	1.00
80	20.2	1.31	10.9	0.95
50	34.5	2.24	16.1	0.82
30	49.2	3.19	19.6	0.70
10	87.4	5.67	23.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 46 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0030

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T40N R5E  
 D. Latitude, Longitude 48°55' 122°08'  
 E. Stream Name Kendall Creek  
 F. Major Basin Name Nooksack  
 G. River Mile 0.0/2.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

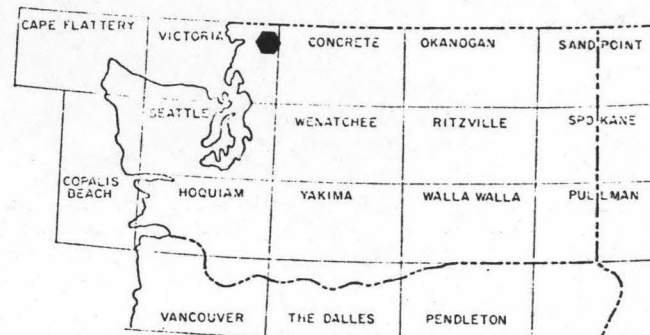
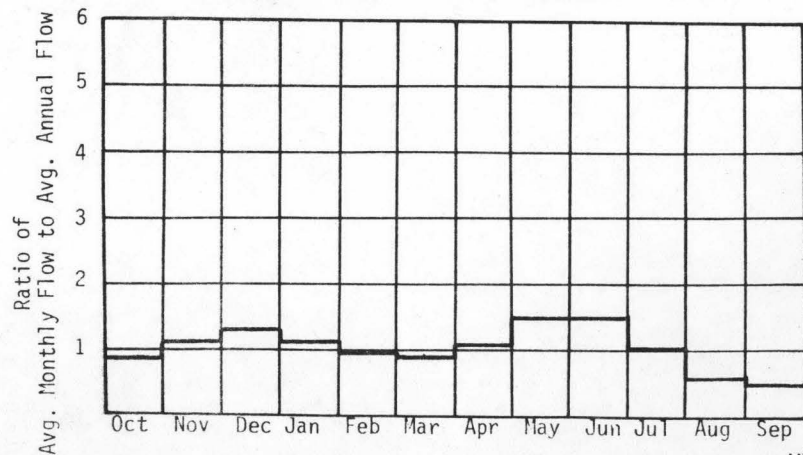
A. Upstream Elevation of Reach 450 Ft. MSL  
 B. Downstream Elevation of Reach 400 Ft. MSL  
 C. Total Available Head in Reach 116 Ft.  
 D. Average Slope in Reach 13.8 Ft./Mi.  
 E. Drainage Area above Reach Mouth 43.0 Sq.Mi.  
 F. Inflow Classification Natural

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

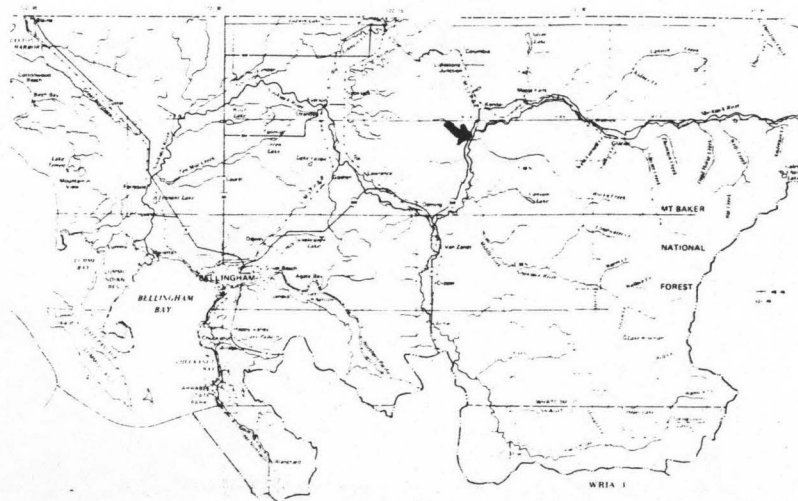
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.3	0.18	1.57	1.00
80	32.1	0.32	2.62	0.95
50	54.8	0.54	3.86	0.82
30	78.1	0.77	4.70	0.70
10	138.7	1.36	5.73	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 73 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0031

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T40N R7E  
 D. Latitude, Longitude 48°57' 121°55'  
 E. Stream Name Canyon Creek  
 F. Major Basin Name Nooksack  
 G. River Mile 0.0/9.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

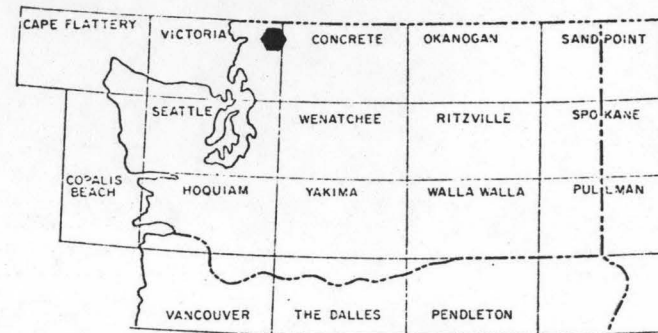
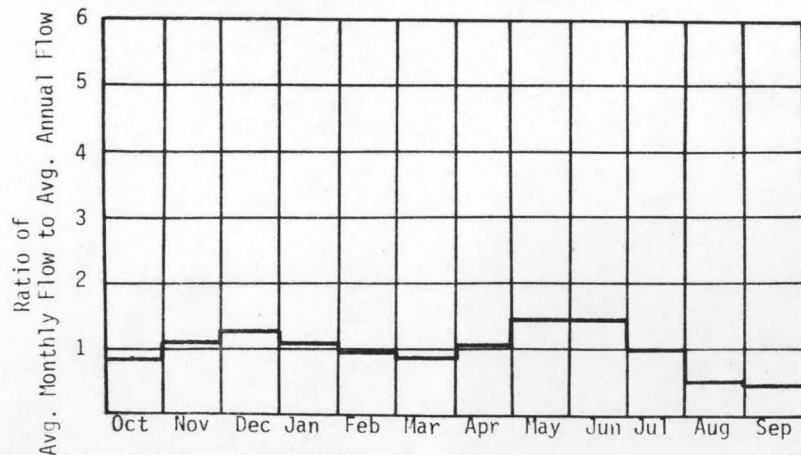
A. Upstream Elevation of Reach 3000 Ft. MSL  
 B. Downstream Elevation of Reach 725 Ft. MSL  
 C. Total Available Head in Reach 2275 + 66 = 2341 Ft.  
 D. Average Slope in Reach 249 Ft./Mi.  
 E. Drainage Area above Reach Mouth 8.1 Sq.Mi.  
 F. Inflow Classification Natural

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

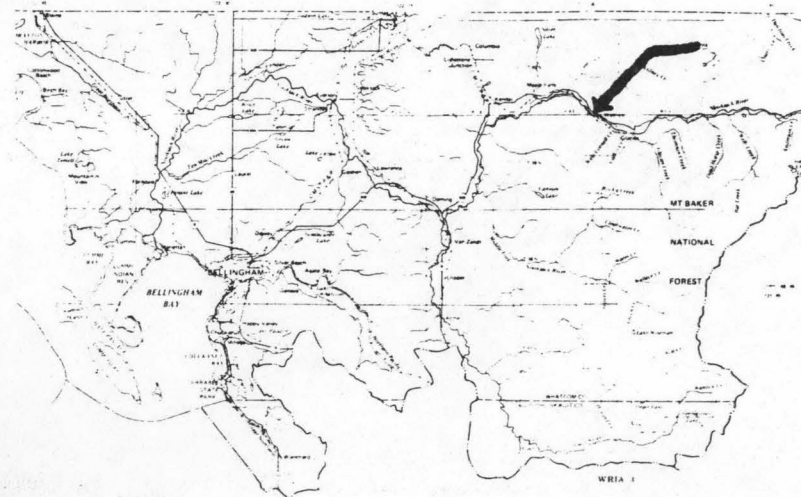
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	29.9	5.93	51.9	1.00
80	44.0	8.72	73.3	0.96
50	74.8	14.8	107	0.83
30	100	19.8	125	0.72
10	163	32.7	146	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 88 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0032

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R7E</u>
D. Latitude, Longitude	<u>48°52' 121°55'</u>
E. Stream Name	<u>Glacier Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/7.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

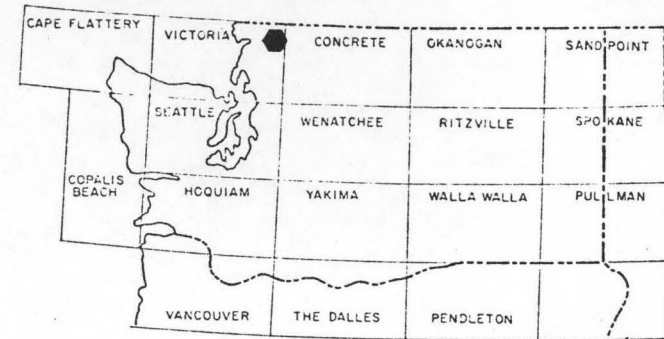
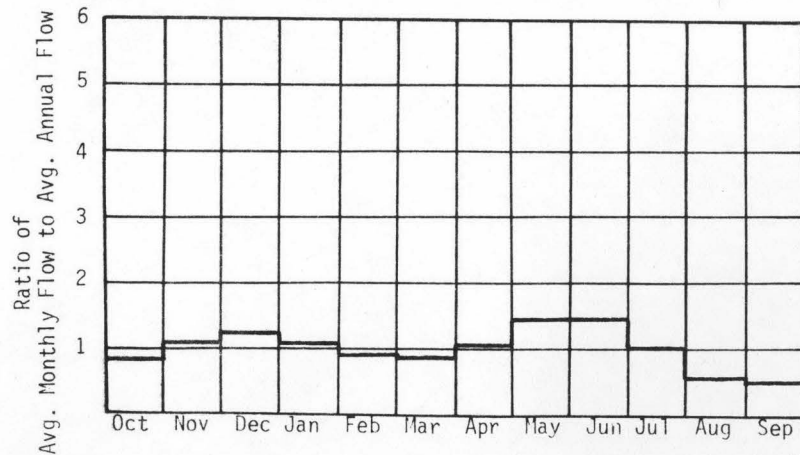
A. Upstream Elevation of Reach	<u>3100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>870</u>	Ft. MSL
C. Total Available Head in Reach	<u>2230 + 66 = 2296</u>	Ft.
D. Average Slope in Reach	<u>309</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>32.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

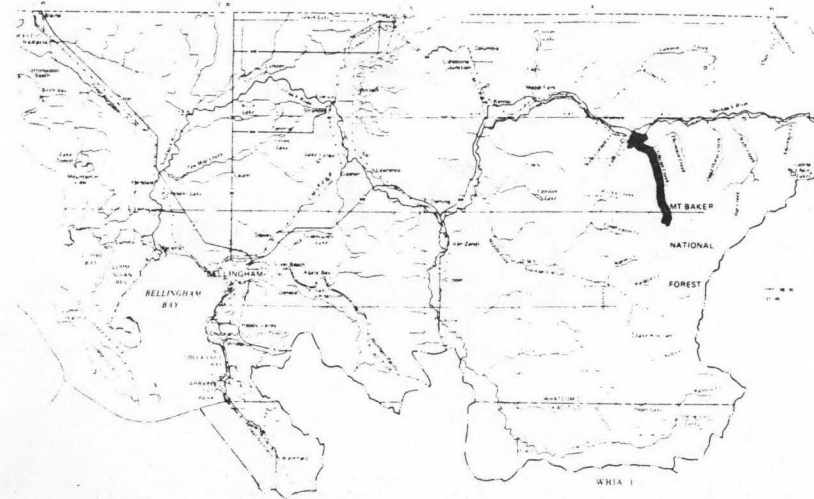
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	38.1	7.40	64.8	1.00
80	56.0	10.9	91.5	0.96
50	95.2	18.5	134	0.83
30	127	24.8	156	0.72
10	210	40.9	182	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 112 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0033

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R8E</u>
D. Latitude, Longitude	<u>48°52' 121°45'</u>
E. Stream Name	<u>Wells Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/5.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

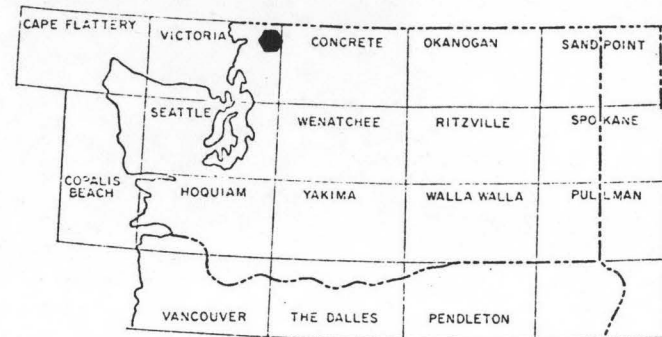
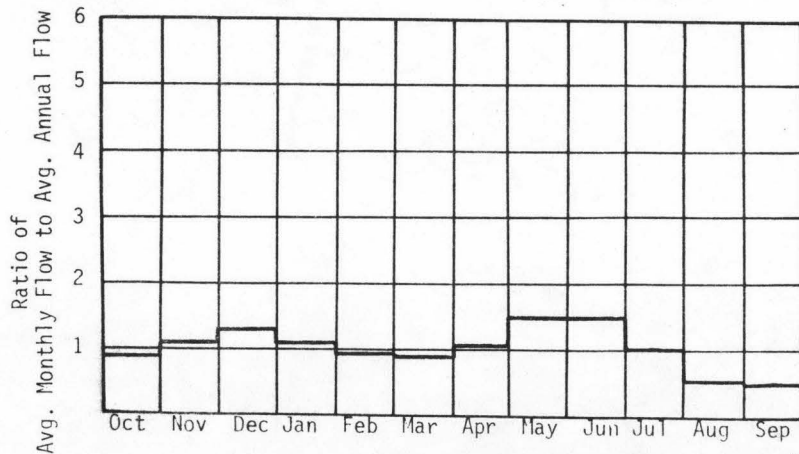
A. Upstream Elevation of Reach	<u>2890</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1500</u>	Ft. MSL
C. Total Available Head in Reach	<u>1390 + 66 = 1456</u>	Ft.
D. Average Slope in Reach	<u>243</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

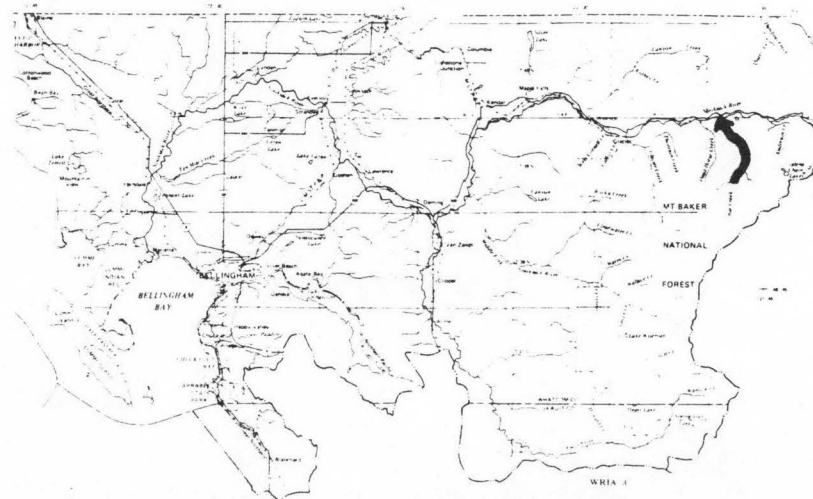
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	32.7	4.03	35.3	1.00
80	52.0	6.4	53.4	0.95
50	93.2	11.4	82.5	0.82
30	140	17.3	103	0.68
10	240	30.4	125	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 121 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0034

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R8E</u>
D. Latitude, Longitude	<u>48°54' 121°44'</u>
E. Stream Name	<u>Swamp Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/1.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

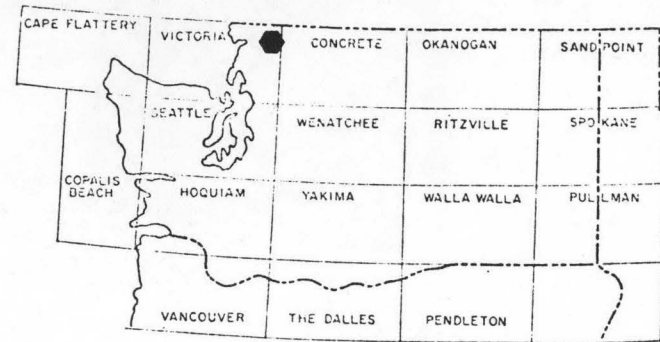
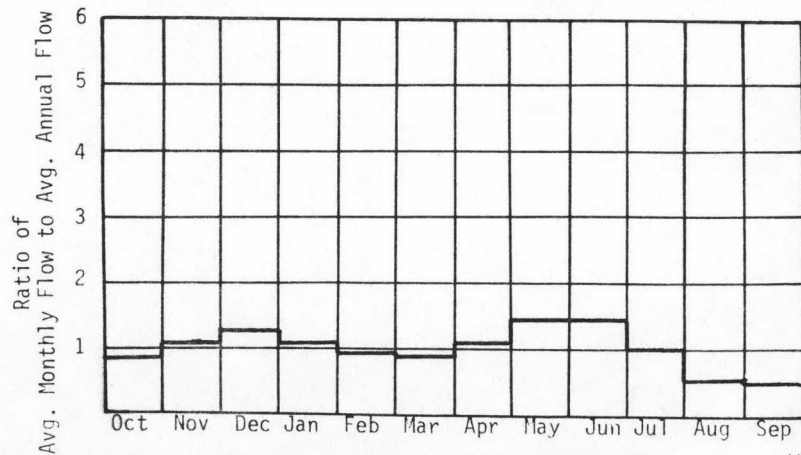
A. Upstream Elevation of Reach	<u>2800</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2010</u>	Ft. MSL
C. Total Available Head in Reach	<u>790 + 66 = 856</u>	Ft.
D. Average Slope in Reach	<u>718</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

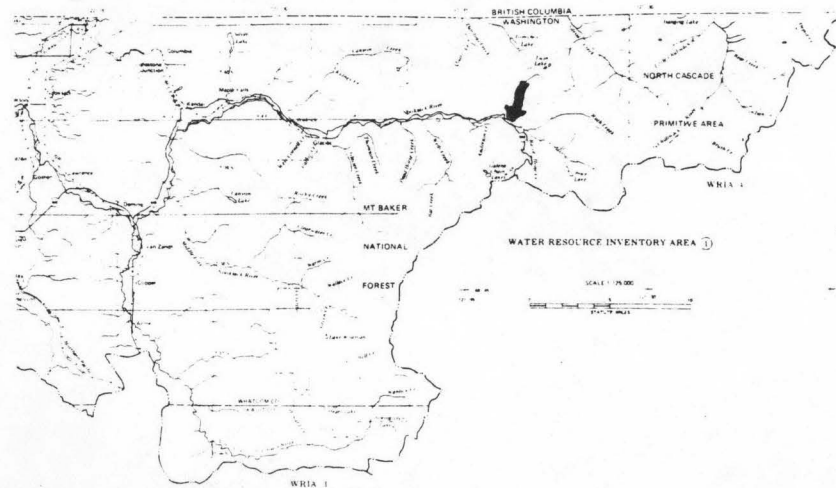
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.2	0.96	8.4	1.00
80	21.1	1.53	12.7	0.95
50	37.7	2.73	19.6	0.82
30	56.8	4.12	24.5	0.68
10	100	7.24	29.8	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 49 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-023-000-000-000-R0035

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R9E</u>
D. Latitude, Longitude	<u>48°54' 121°37'</u>
E. Stream Name	<u>Ruth Creek</u>
F. Major Basin Name	<u>Nooksack</u>
G. River Mile	<u>0.0/4.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

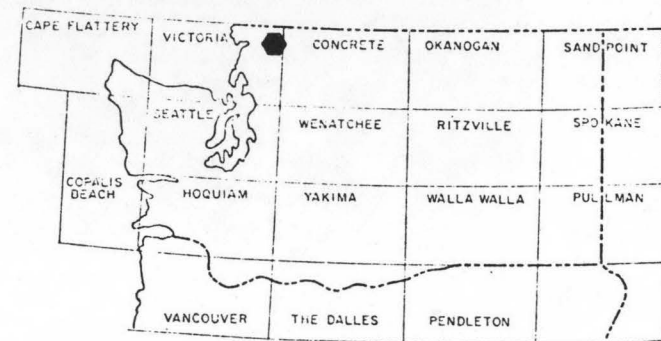
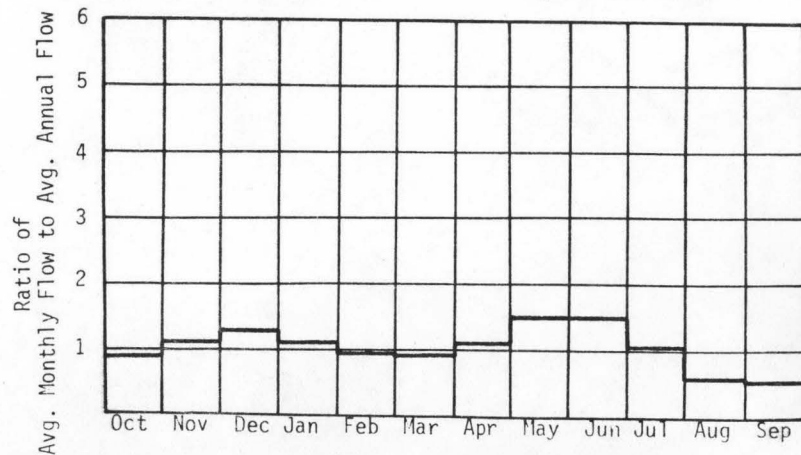
A. Upstream Elevation of Reach	<u>3200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2090</u>	Ft. MSL
C. Total Available Head in Reach	<u>1110 + 66 = 1176</u>	Ft.
D. Average Slope in Reach	<u>246</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>12.4</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.0	1.69	14.8	1.00
80	27.1	2.70	22.4	0.95
50	48.5	4.83	34.7	0.82
30	73.1	7.27	43.3	0.68
10	128	12.8	52.7	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 63 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-024-000-000-000-R0001

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T40N R9E
D. Latitude, Longitude	48°59' 121°36'
E. Stream Name	Silesia Creek
F. Major Basin Name	Silesia
G. River Mile	0.0/2.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

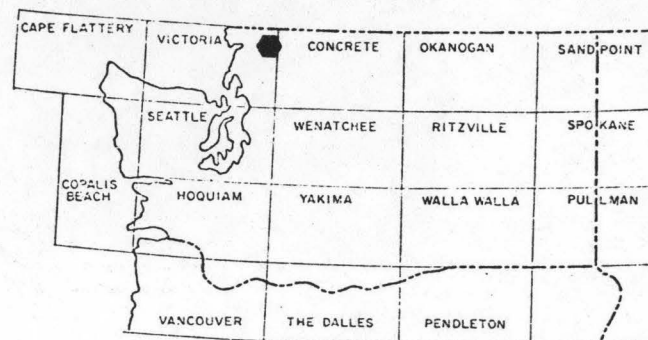
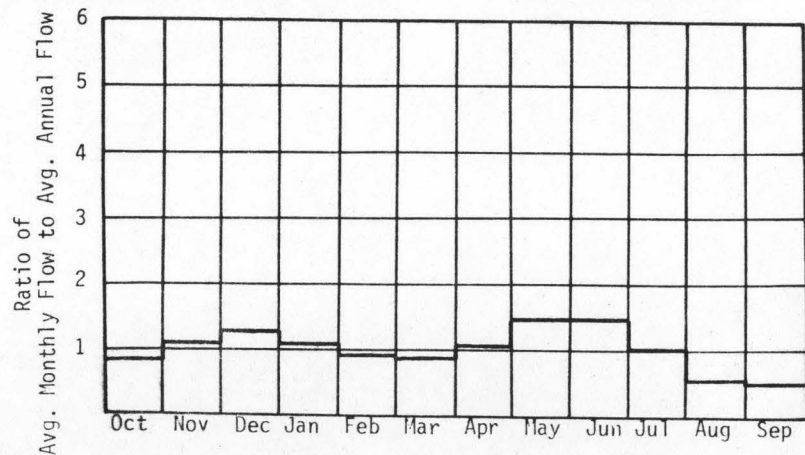
A. Upstream Elevation of Reach	2360	Ft. MSL
B. Downstream Elevation of Reach	2000	Ft. MSL
C. Total Available Head in Reach	360	Ft.
D. Average Slope in Reach	164	Ft./Mi.
E. Drainage Area above Reach Mouth	42.5	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.7	0.78	0.69	1.00
80	42.8	1.30	10.8	0.94
50	171	5.22	32.5	0.71
30	311	9.48	47.4	0.57
10	699	21.3	67.2	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 286 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-024-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R10E</u>
D. Latitude, Longitude	<u>48°57' 121°33'</u>
E. Stream Name	<u>Silesia Creek</u>
F. Major Basin Name	<u>Silesia</u>
G. River Mile	<u>2.2/6.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

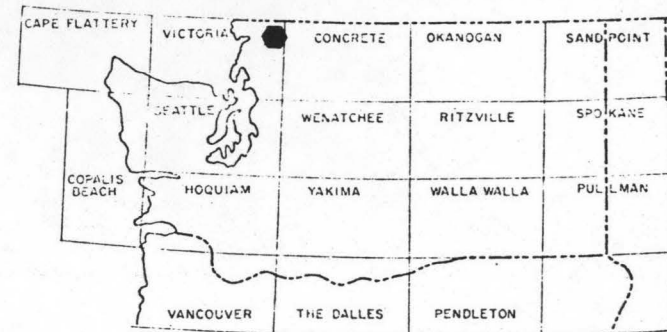
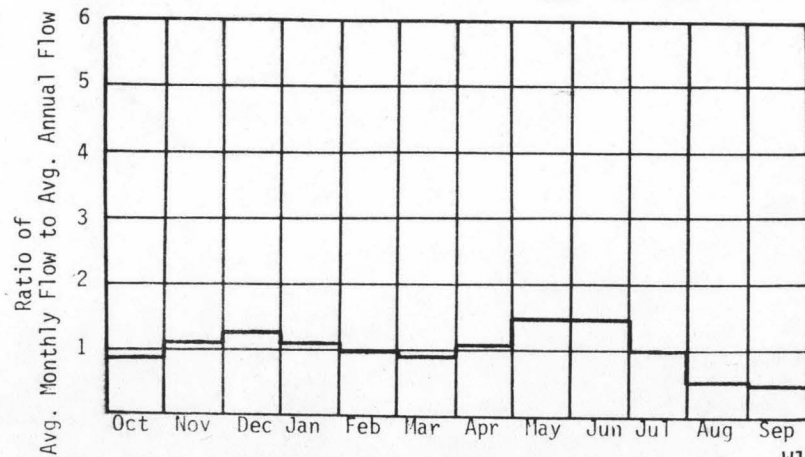
A. Upstream Elevation of Reach	<u>2860</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2360</u>	Ft. MSL
C. Total Available Head in Reach	<u>500</u>	Ft.
D. Average Slope in Reach	<u>132</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

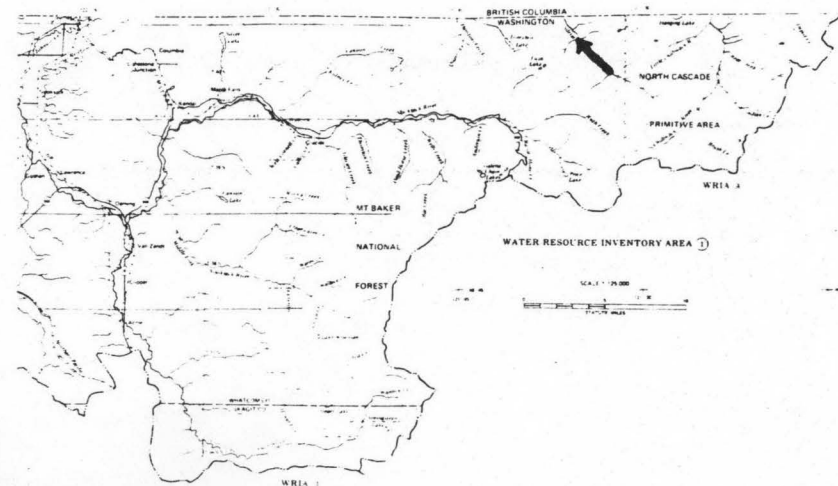
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.8	0.58	5.10	1.00
80	23.0	0.97	8.00	0.94
50	91.8	3.88	24.2	0.71
30	167	7.06	35.2	0.57
10	375	15.9	50.0	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 153 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-024-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R10E</u>
D. Latitude, Longitude	<u>48°56' 121°31'</u>
E. Stream Name	<u>Silesia Creek</u>
F. Major Basin Name	<u>Silesia</u>
G. River Mile	<u>6.0/8.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

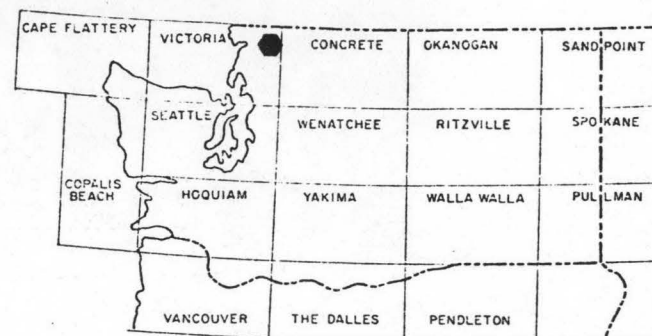
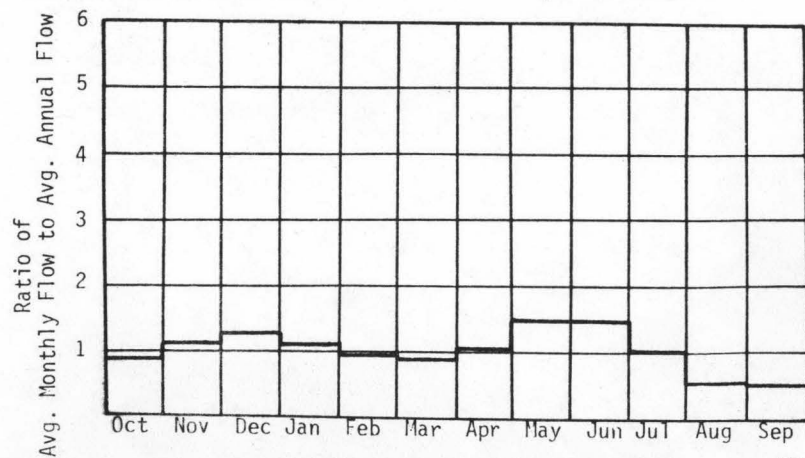
A. Upstream Elevation of Reach	<u>3180</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2860</u>	Ft. MSL
C. Total Available Head in Reach	<u>320 + 66 = 386</u>	Ft.
D. Average Slope in Reach	<u>133</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

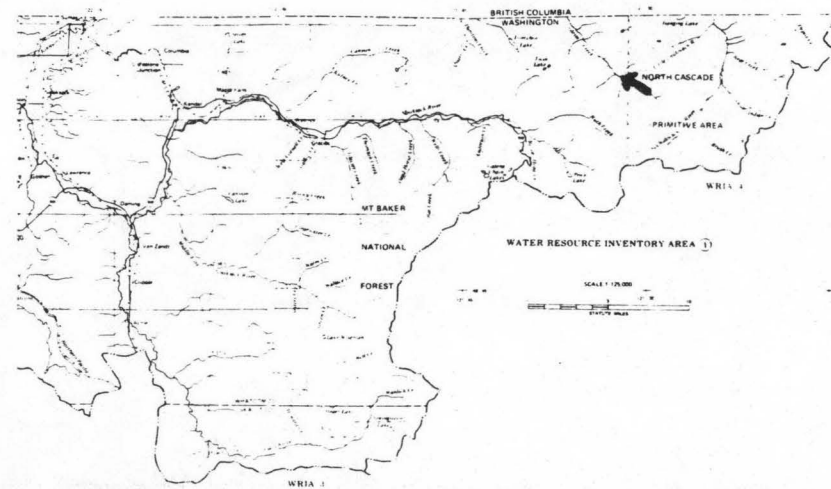
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.58	0.18	1.60	1.00
80	9.30	0.30	2.50	0.94
50	37.2	1.22	7.56	0.71
30	67.6	2.21	11.0	0.57
10	152	4.96	15.7	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-024-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R9E</u>
D. Latitude, Longitude	<u>48°58' 121°36'</u>
E. Stream Name	<u>Winchester Creek</u>
F. Major Basin Name	<u>Silesia</u>
G. River Mile	<u>0.0/1.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

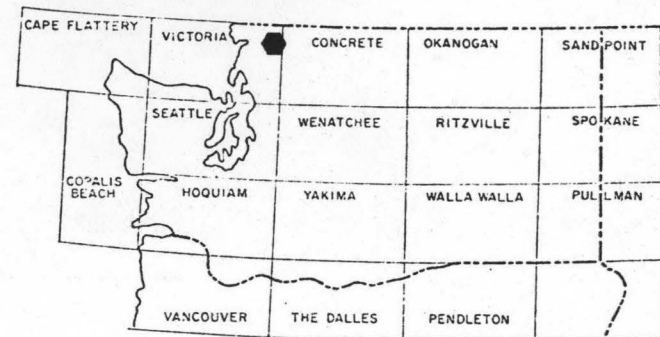
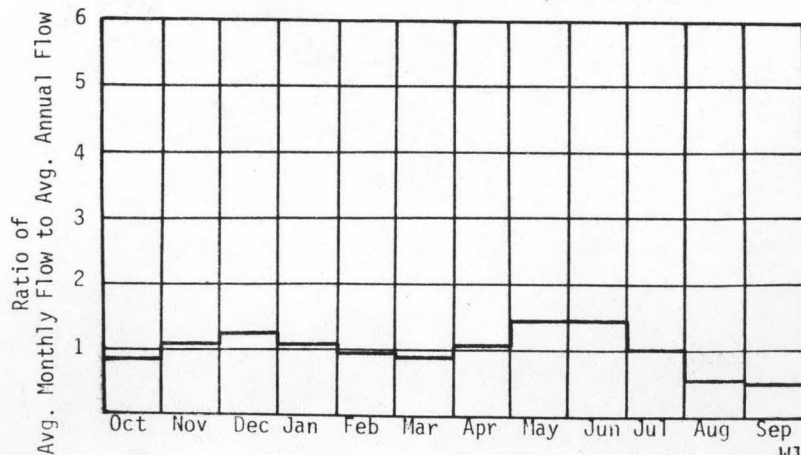
A. Upstream Elevation of Reach	<u>2720</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2360</u>	Ft. MSL
C. Total Available Head in Reach	<u>360+66 = 426</u>	Ft.
D. Average Slope in Reach	<u>277</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>5.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

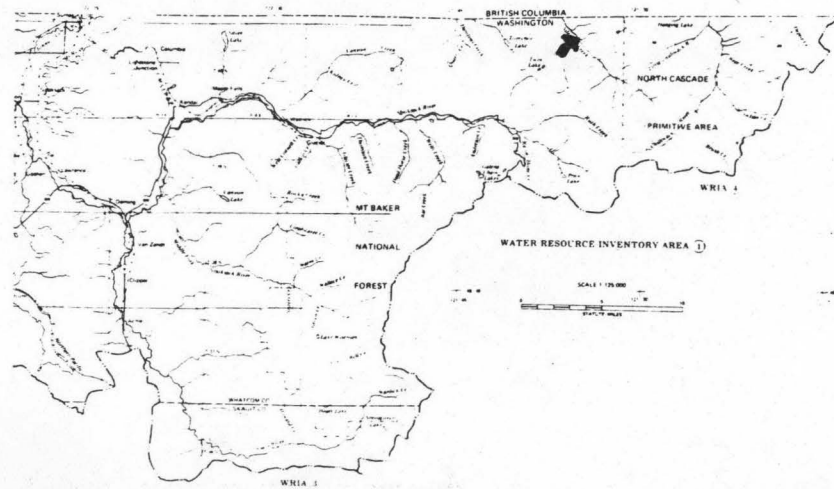
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.67	0.20	1.79	1.00
80	9.45	0.34	2.81	0.94
50	37.8	1.36	8.48	0.71
30	68.7	2.48	12.4	0.57
10	154	5.57	17.6	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 63 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R1E</u>
D. Latitude, Longitude	<u>48°57' 121°24'</u>
E. Stream Name	<u>Chilliwack River</u>
F. Major Basin Name	<u>Chilliwack</u>
G. River Mile	<u>0.0/2.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

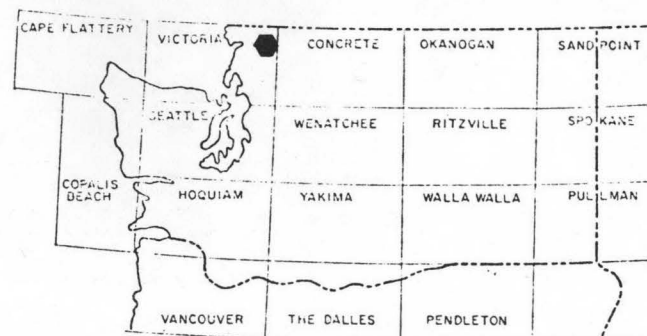
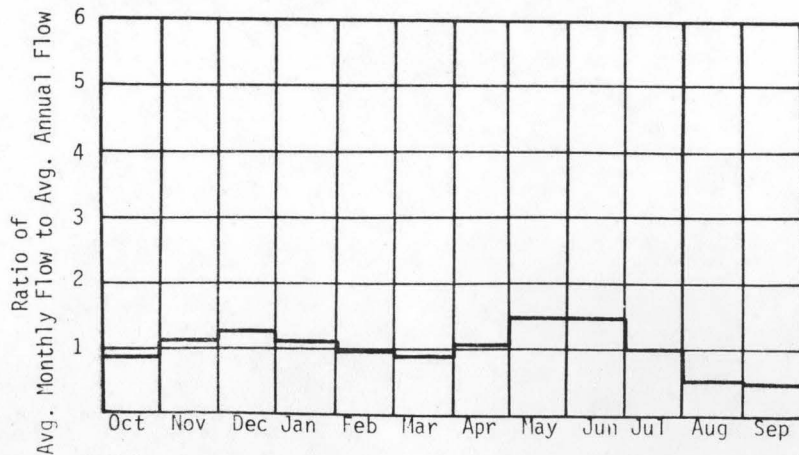
A. Upstream Elevation of Reach	<u>2150</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2080</u>	Ft. MSL
C. Total Available Head in Reach	<u>70</u>	Ft.
D. Average Slope in Reach	<u>28</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>54.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

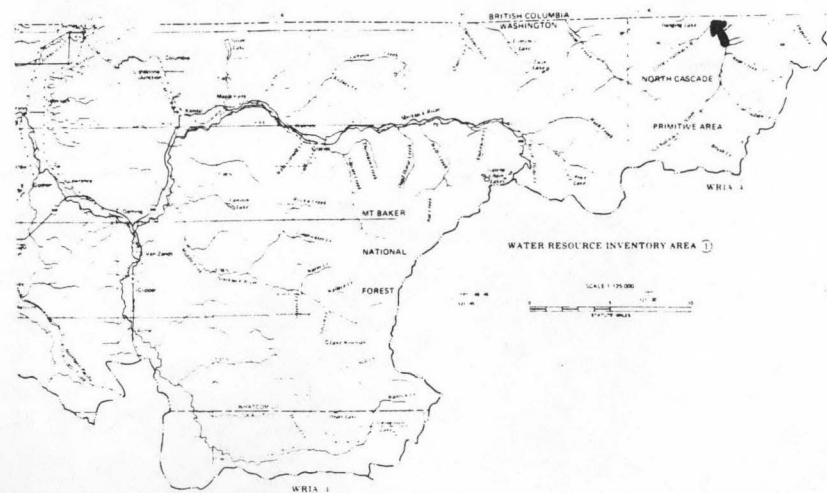
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	33.1	0.20	1.72	1.00
80	55.2	0.33	2.69	0.94
50	221	1.31	8.14	0.71
30	401	2.38	11.9	0.57
10	902	5.34	16.9	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 368 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R11E</u>
D. Latitude, Longitude	<u>48°57' 121°24'</u>
E. Stream Name	<u>Chilliwack River</u>
F. Major Basin Name	<u>Chilliwack</u>
G. River Mile	<u>2.5/4.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

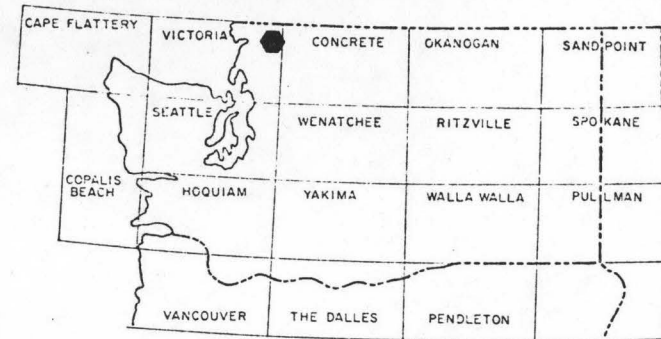
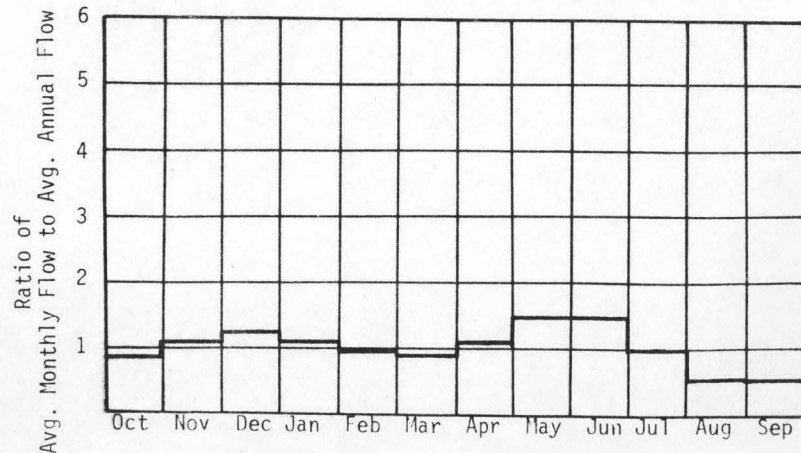
A. Upstream Elevation of Reach	<u>2210</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2150</u>	Ft. MSL
C. Total Available Head in Reach	<u>60</u>	Ft.
D. Average Slope in Reach	<u>38</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>42.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

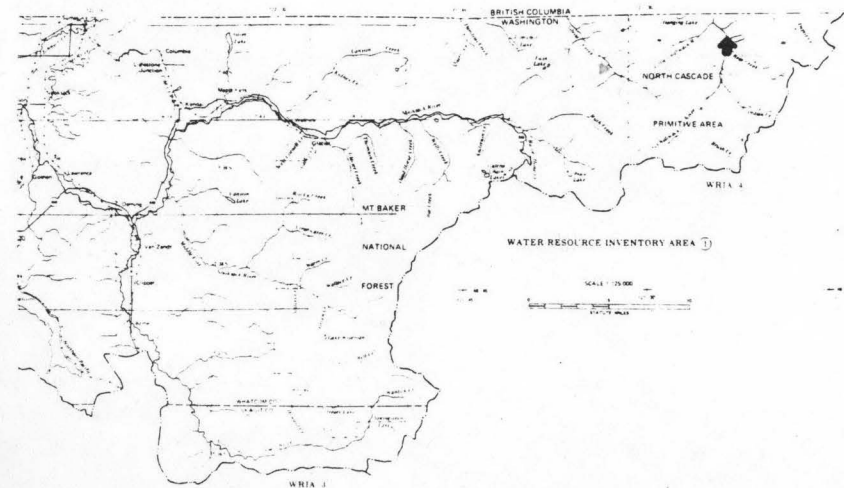
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	26.0	0.13	1.16	1.00
80	43.4	0.22	1.81	0.94
50	173	0.88	5.48	0.71
30	315	1.60	7.99	0.57
10	708	3.60	11.3	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 289 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R11E</u>
D. Latitude, Longitude	<u>48°56' 121°25'</u>
E. Stream Name	<u>Chilliwack River</u>
F. Major Basin Name	<u>Chilliwack</u>
G. River Mile	<u>4.1/7.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

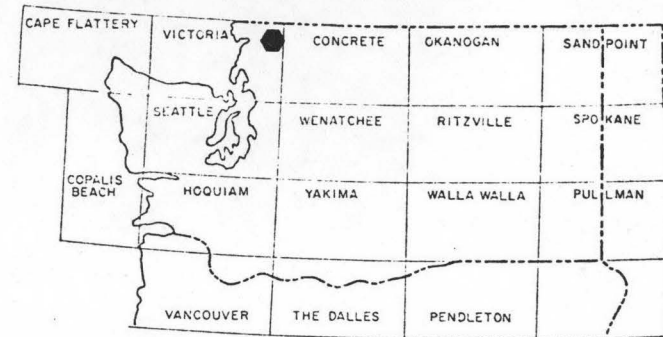
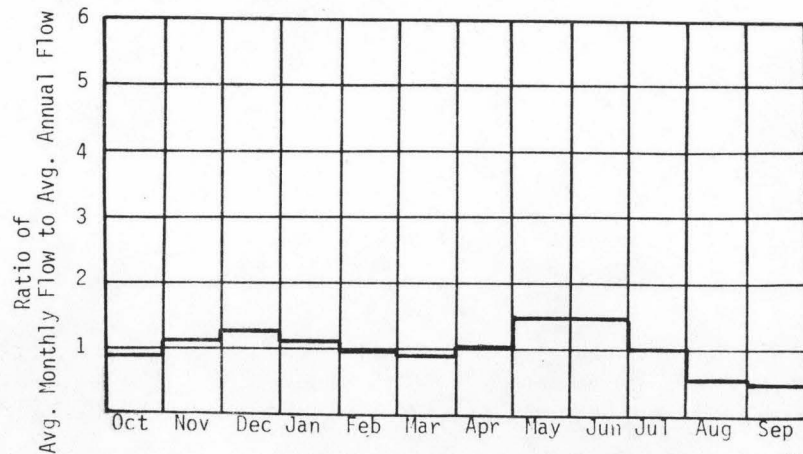
A. Upstream Elevation of Reach	<u>2390</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2210</u>	Ft. MSL
C. Total Available Head in Reach	<u>180</u>	Ft.
D. Average Slope in Reach	<u>58</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>28.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

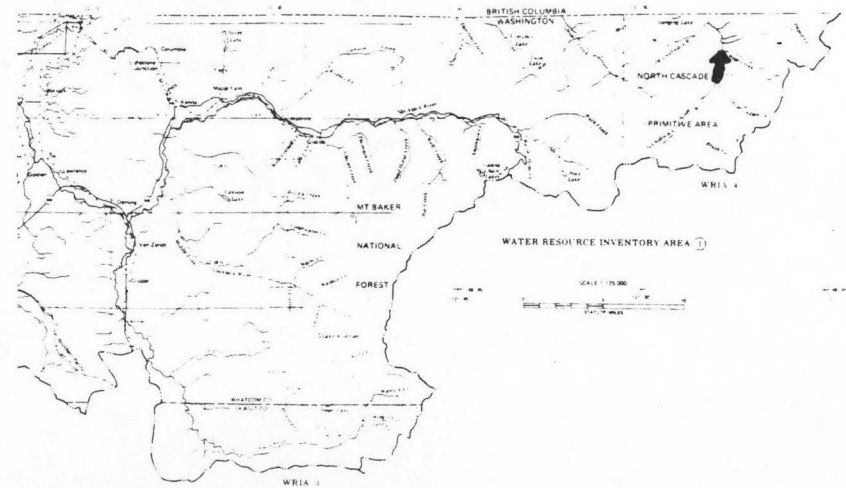
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.4	0.26	2.32	1.00
80	29.0	0.44	3.63	0.94
50	116	1.76	11.0	0.71
30	210	3.21	16.0	0.47
10	473	7.20	22.7	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 193 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0004

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T39N T10E  
 D. Latitude, Longitude 48°54' 121°27'  
 E. Stream Name Chilliwack River  
 F. Major Basin Name Chilliwack  
 G. River Mile 7.2/10.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

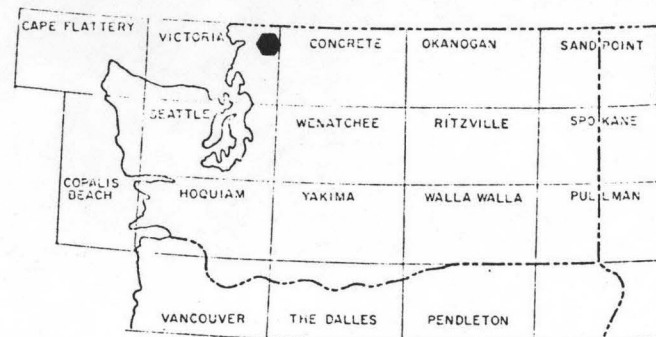
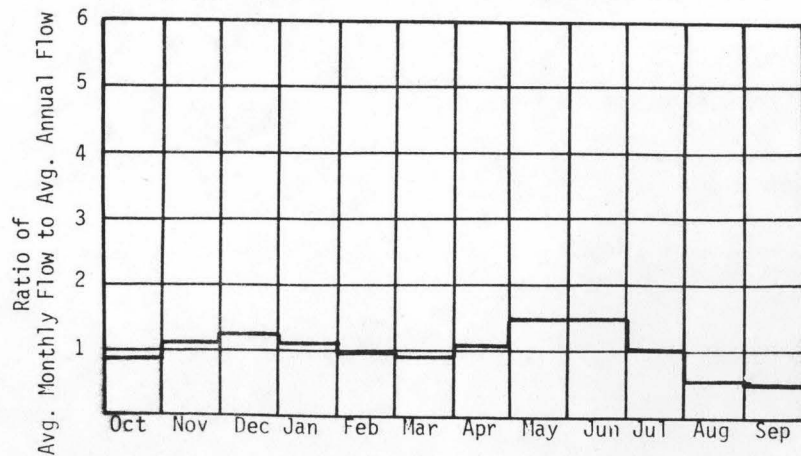
A. Upstream Elevation of Reach 2720 Ft. MSL  
 B. Downstream Elevation of Reach 2390 Ft. MSL  
 C. Total Available Head in Reach 330 + 66 = 396 Ft.  
 D. Average Slope in Reach 107 Ft./Mi.  
 E. Drainage Area above Reach Mouth 15.0 Sq.Mi.  
 F. Inflow Classification Natural

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

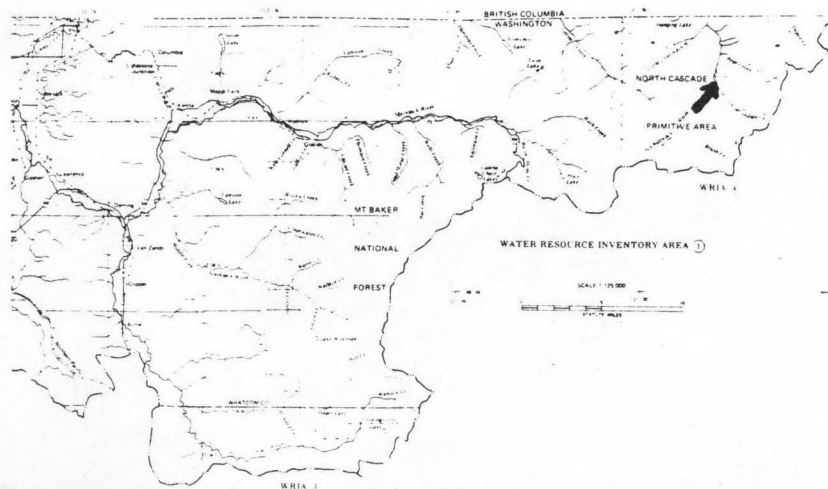
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	7.65	0.26	2.25	1.00
80	12.8	0.43	3.52	0.94
50	51.0	1.71	10.6	0.71
30	92.7	3.11	15.5	0.57
10	208	6.98	22.0	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 85 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R11E</u>
D. Latitude, Longitude	<u>118°58' 121°25'</u>
E. Stream Name	<u>Little Chilliwack River</u>
F. Major Basin Name	<u>Chilliwack</u>
G. River Mile	<u>0.0/1.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

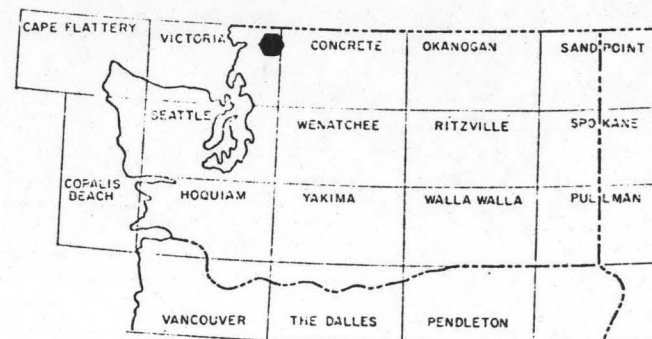
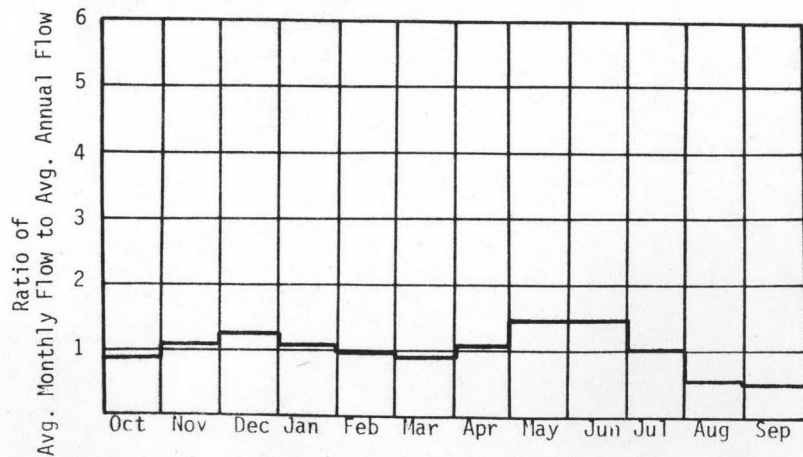
A. Upstream Elevation of Reach	<u>2640</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2080</u>	Ft. MSL
C. Total Available Head in Reach	<u>566 + 66 = 626</u>	Ft.
D. Average Slope in Reach	<u>431</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

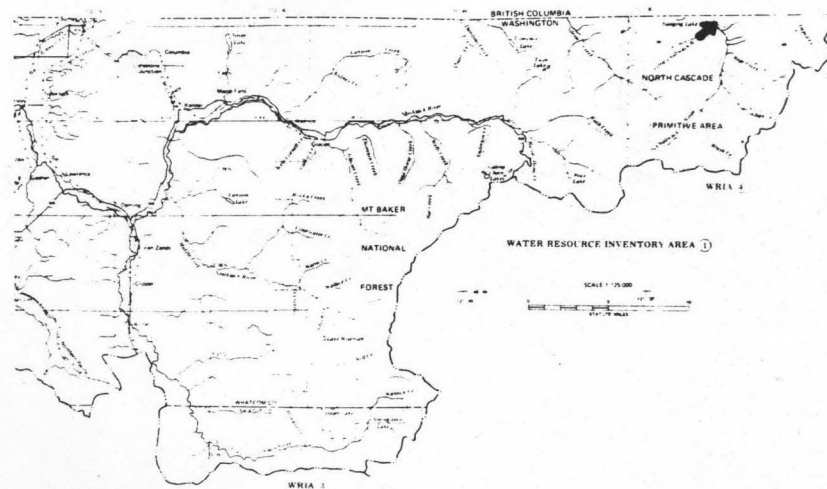
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	7.38	0.39	3.43	1.00
80	12.3	0.65	5.37	0.94
50	49.2	2.61	16.2	0.71
30	89.4	4.74	23.7	0.57
10	201	10.6	33.6	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 82 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0006

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R11E</u>
D. Latitude, Longitude	<u>48°55' 121°23'</u>
E. Stream Name	<u>Indian Creek</u>
F. Major Basin Name	<u>Chilliwack</u>
G. River Mile	<u>0.0/3.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

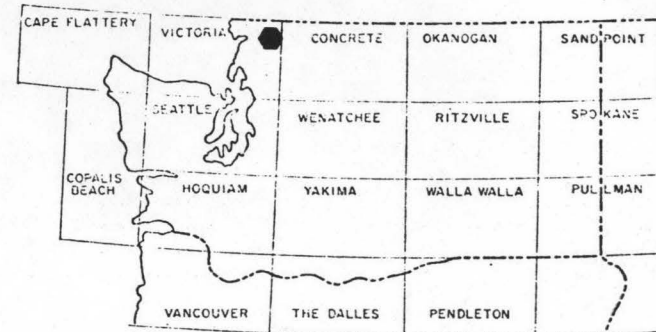
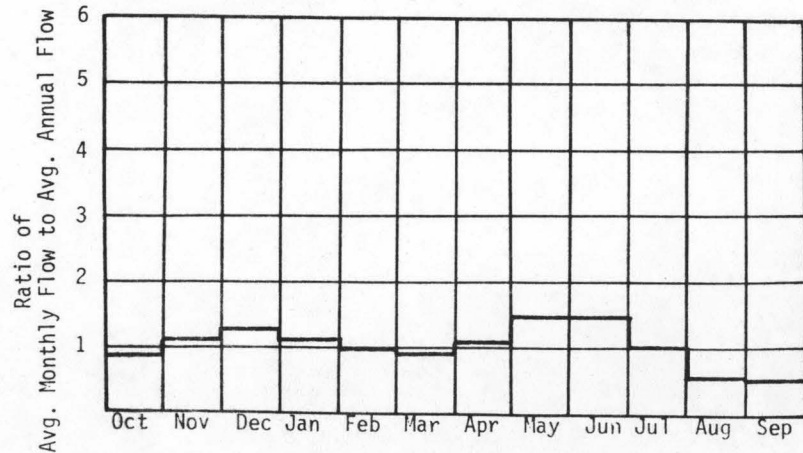
A. Upstream Elevation of Reach	<u>3270</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2210</u>	Ft. MSL
C. Total Available Head in Reach	<u>1060 + 66 = 1126</u>	Ft.
D. Average Slope in Reach	<u>331</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

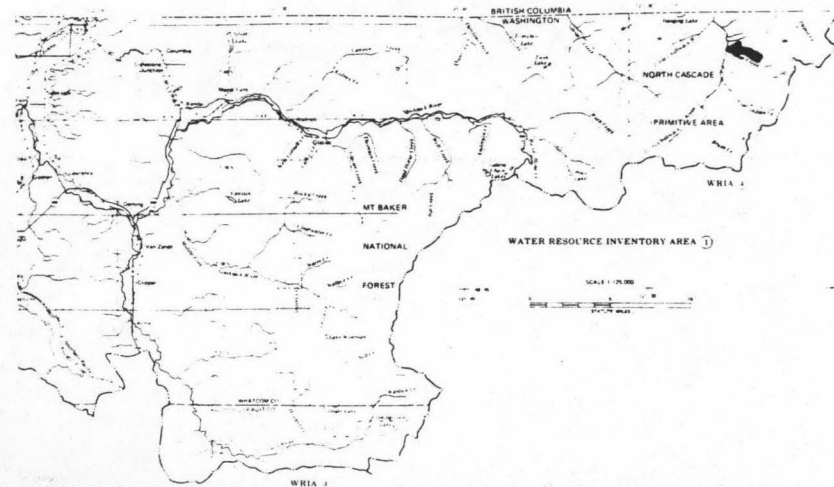
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.22	0.50	4.36	1.00
80	8.70	0.83	6.83	0.94
50	34.8	3.32	20.6	0.71
30	63.2	6.03	30.8	0.57
10	142	13.5	42.7	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 58 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-025-000-000-000-R0007

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R1E</u>
D. Latitude, Longitude	<u>48°54' 121°25'</u>
E. Stream Name	<u>Brush Creek</u>
F. Major Basin Name	<u>Chilliwack</u>
G. River Mile	<u>0.0/1.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

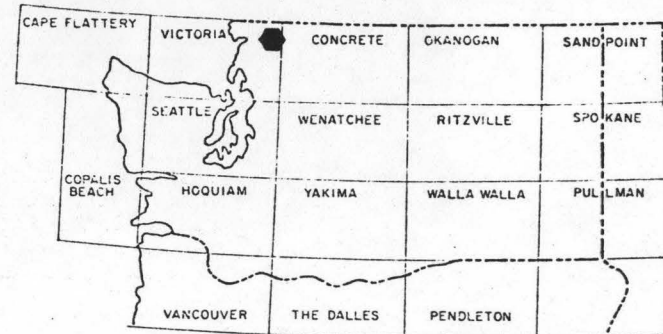
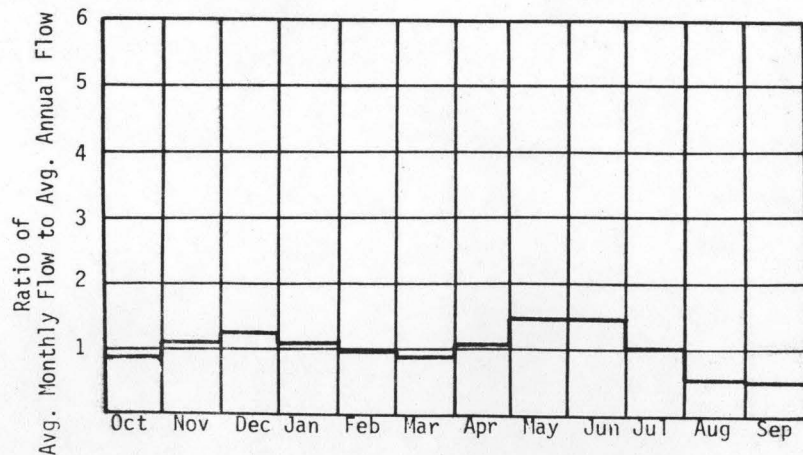
A. Upstream Elevation of Reach	<u>2800</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2390</u>	Ft. MSL
C. Total Available Head in Reach	<u>410 + 66 = 476</u>	Ft.
D. Average Slope in Reach	<u>315</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

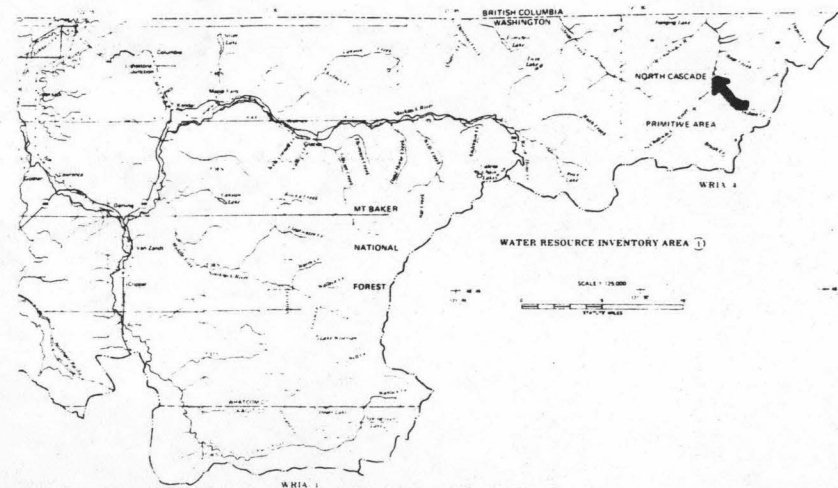
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.13	0.21	1.81	1.00
80	8.55	0.34	2.84	0.94
50	34.2	1.38	8.57	0.71
30	62.1	2.50	12.5	0.57
10	140	5.63	17.7	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 57 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-026-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T41N R4E</u>
D. Latitude, Longitude	<u>49°00' 122°14'</u>
E. Stream Name	<u>Sumas River</u>
F. Major Basin Name	<u>Sumas</u>
G. River Mile	<u>0.0/1.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

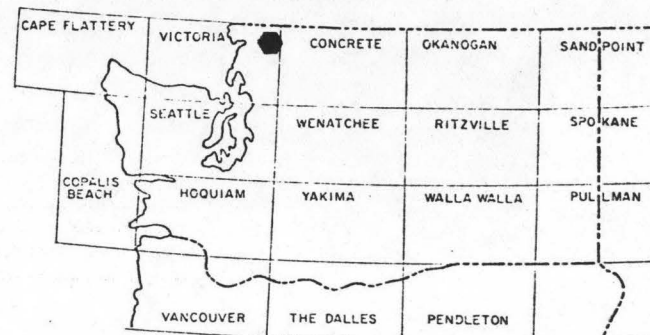
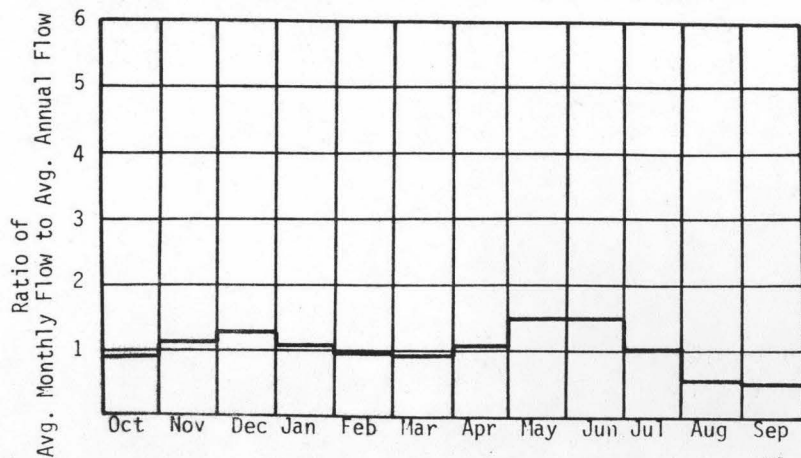
A. Upstream Elevation of Reach	<u>25</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>15</u>	Ft. MSL
C. Total Available Head in Reach	<u>10</u>	Ft.
D. Average Slope in Reach	<u>7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>59.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

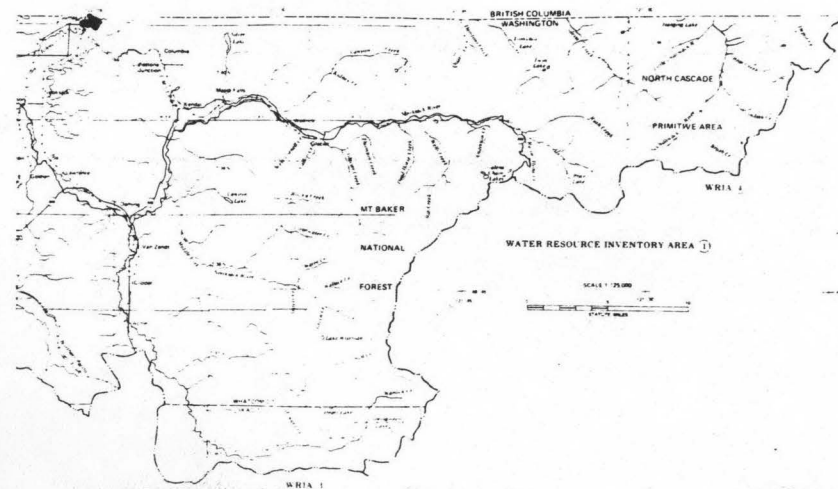
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	55.4	0.05	0.41	1.00
80	83.0	0.07	0.59	0.96
50	142	0.12	0.87	0.83
30	199	0.17	1.05	0.71
10	320	0.27	1.21	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 173 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-026-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R4E</u>
D. Latitude, Longitude	<u>58°57' 122°16'</u>
E. Stream Name	<u>Sumas River</u>
F. Major Basin Name	<u>Sumas</u>
G. River Mile	<u>1.4/14.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

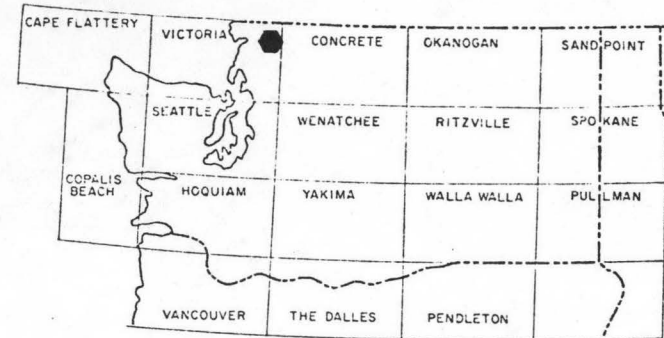
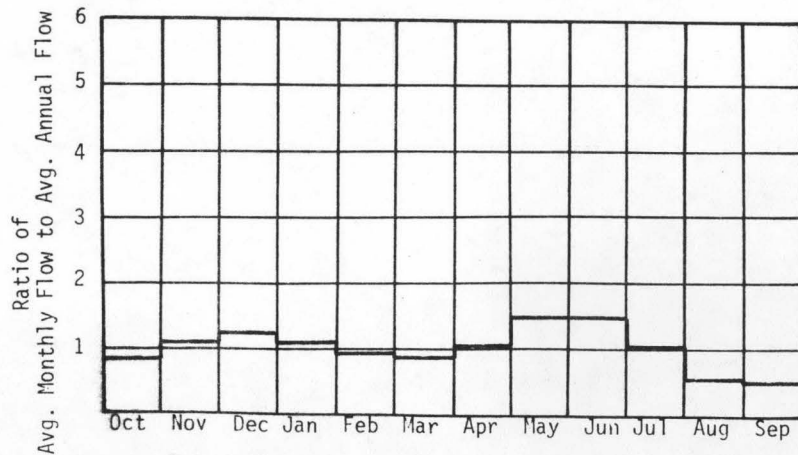
A. Upstream Elevation of Reach	<u>72</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>25</u>	Ft. MSL
C. Total Available Head in Reach	<u>47</u>	Ft.
D. Average Slope in Reach	<u>3.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>52.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

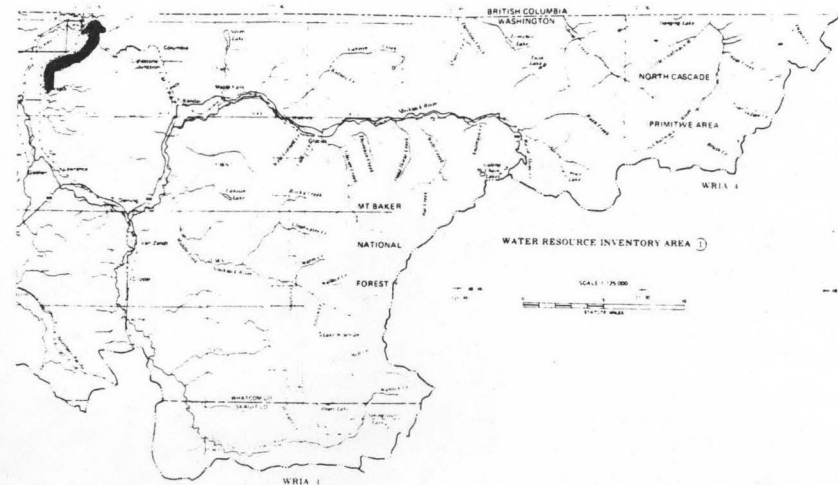
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	28.8	0.11	1.00	1.00
80	43.2	0.17	1.42	0.94
50	73.8	0.29	2.13	0.83
30	104	0.41	2.56	0.71
10	167	0.66	2.96	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-026-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R4E</u>
D. Latitude, Longitude	<u>48°56' 122°18'</u>
E. Stream Name	<u>Sumas River</u>
F. Major Basin Name	<u>Sumas</u>
G. River Mile	<u>14.1/14.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

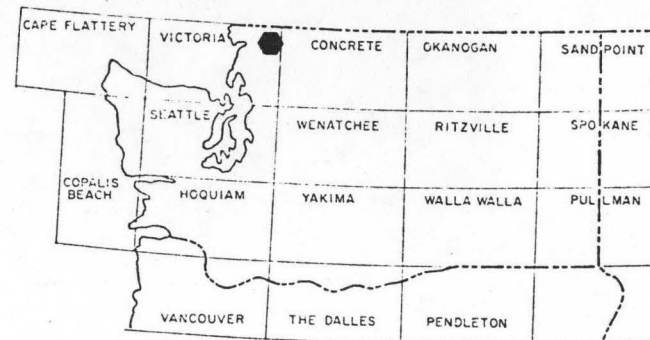
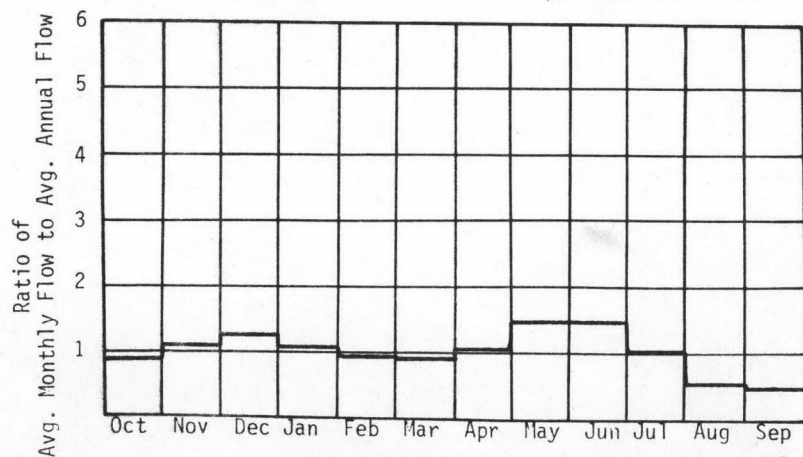
A. Upstream Elevation of Reach	<u>72</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>72</u>	Ft. MSL
C. Total Available Head in Reach	<u>0 + 66 = 66</u>	Ft.
D. Average Slope in Reach	<u>--</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>23.4</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

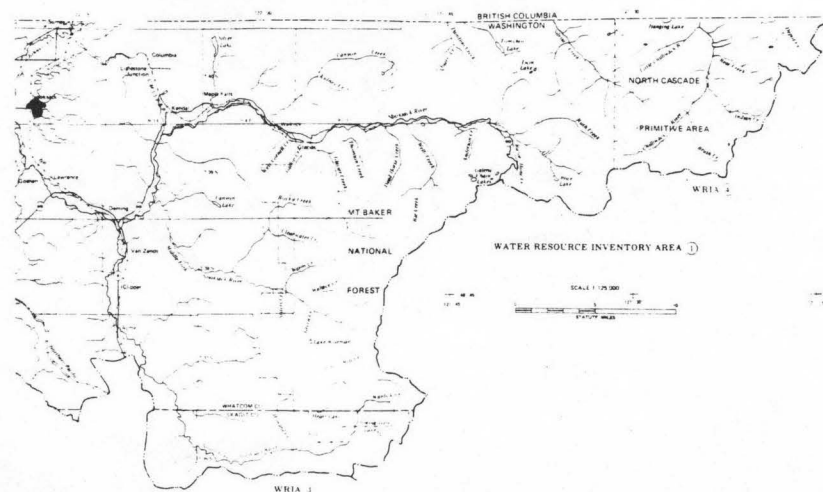
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.0	0.08	0.74	1.00
80	22.6	0.13	1.04	0.94
50	38.5	0.22	1.57	0.83
30	54.1	0.30	1.88	0.71
10	87.0	0.49	2.17	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 47 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-026-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R4E</u>
D. Latitude, Longitude	<u>48°59' 122°16'</u>
E. Stream Name	<u>Johnson Creek</u>
F. Major Basin Name	<u>Sumas</u>
G. River Mile	<u>0.0/6.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

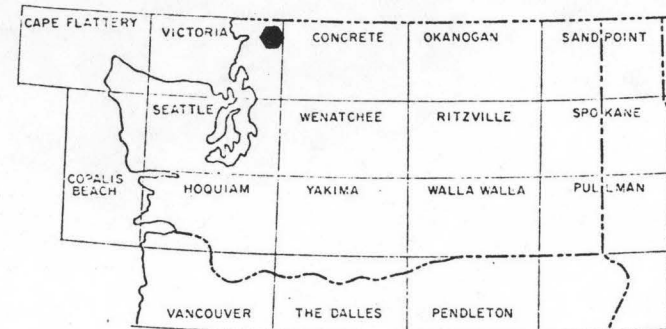
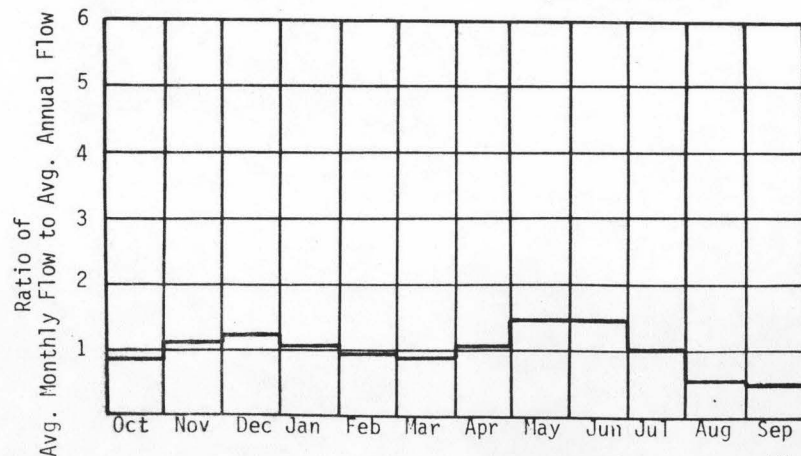
A. Upstream Elevation of Reach	<u>53</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>25</u>	Ft. MSL
C. Total Available Head in Reach	<u>28 + 66 = 94</u>	Ft.
D. Average Slope in Reach	<u>4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>6.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

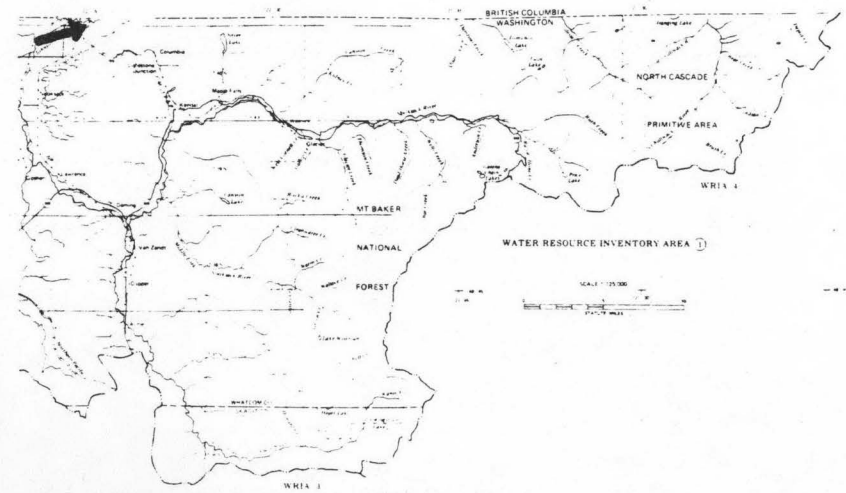
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.9	0.14	1.25	1.00
80	26.9	0.21	1.76	0.94
50	45.9	0.37	2.69	0.84
30	64.4	0.51	3.19	0.71
10	104	0.82	3.68	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 56-cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-060-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R3E</u>
D. Latitude, Longitude	<u>48°31' 122°23'</u>
E. Stream Name	<u>Samish River</u>
F. Major Basin Name	<u>Samish</u>
G. River Mile	<u>0.0/7.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

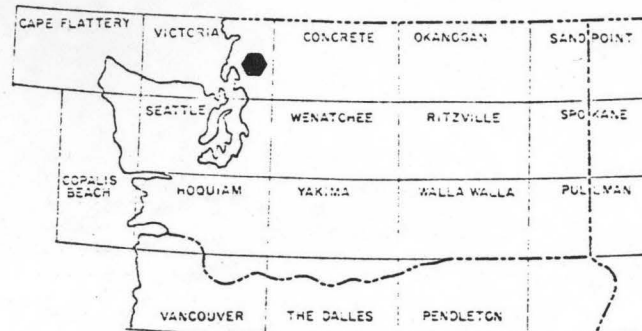
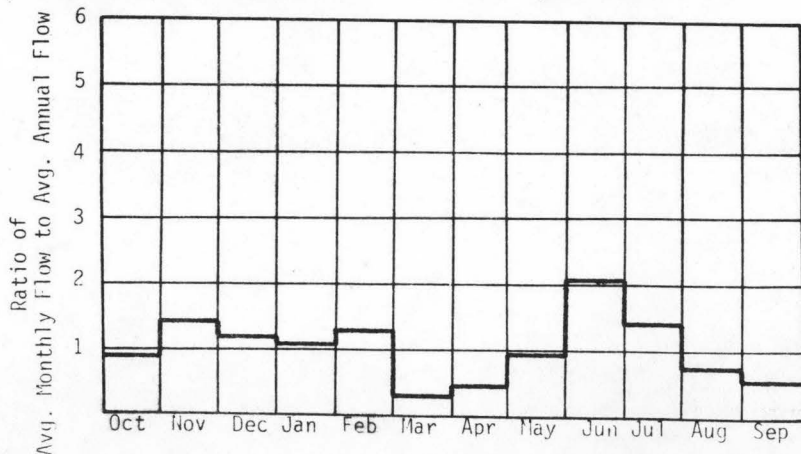
A. Upstream Elevation of Reach	<u>20</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>0.0</u>	Ft. MSL
C. Total Available Head in Reach	<u>20</u>	Ft.
D. Average Slope in Reach	<u>2.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>106</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

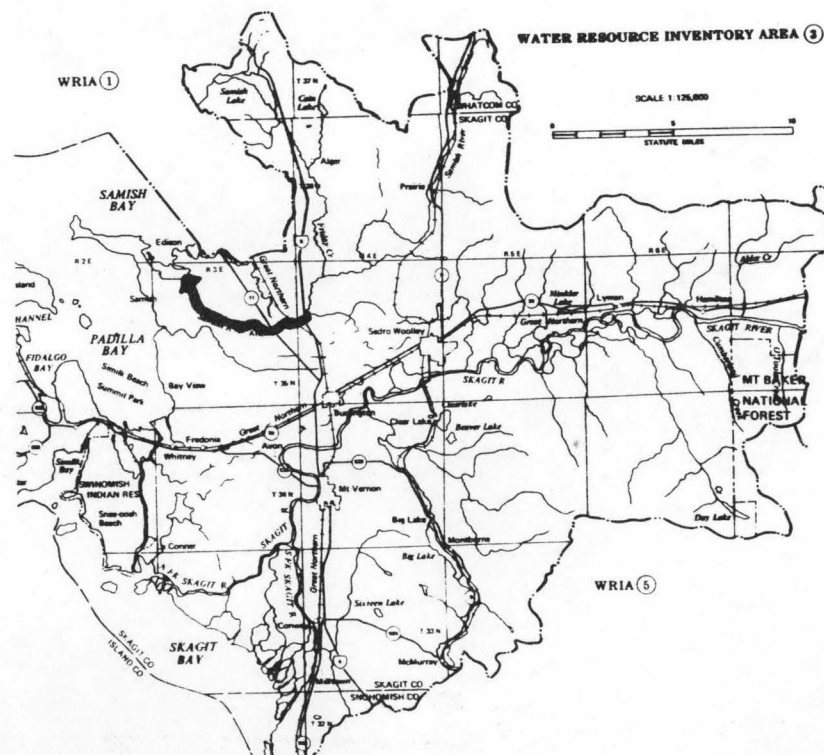
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	29.0	0.05	0.43	1.00
80	50.2	0.08	0.70	0.94
50	185	0.31	1.97	0.72
30	309	0.52	2.70	0.59
10	576	0.97	3.41	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 264 cfs



LOCAT. CNS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-060-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R4E</u>
D. Latitude, Longitude	<u>48°32' 122°21'</u>
E. Stream Name	<u>Samish River</u>
F. Major Basin Name	<u>Samish</u>
G. River Mile	<u>7.8/10.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

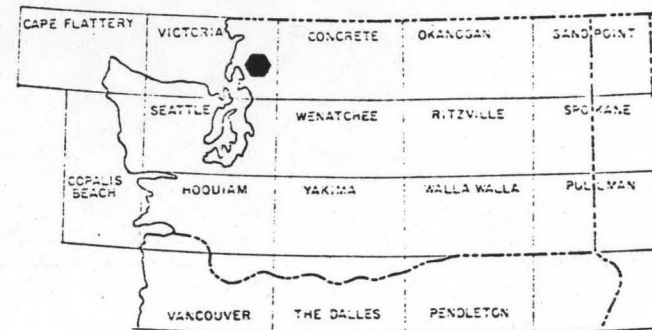
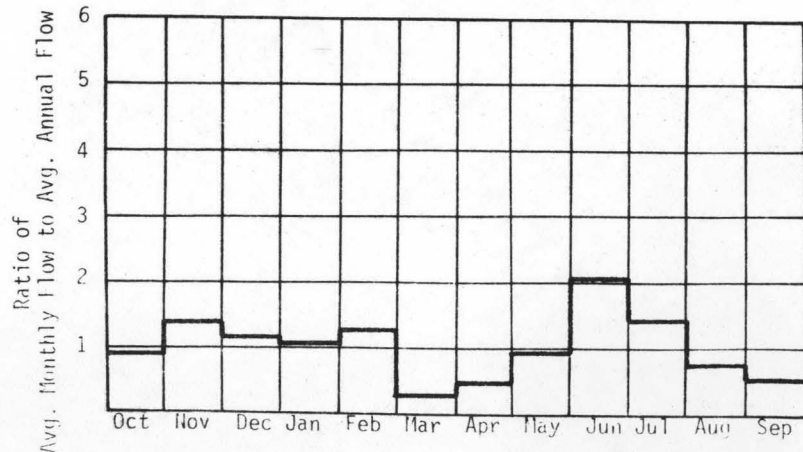
A. Upstream Elevation of Reach	<u>45</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>20</u>	Ft. MSL
C. Total Available Head in Reach	<u>25</u>	Ft.
D. Average Slope in Reach	<u>11.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>85</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

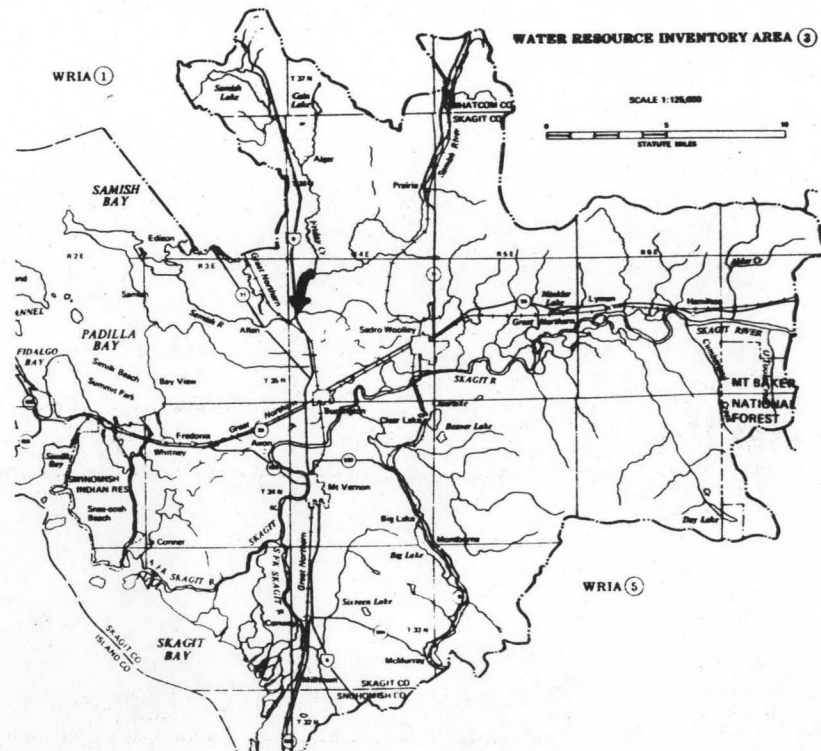
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.5	0.05	0.47	1.00
80	44.1	0.09	0.77	0.94
50	162	0.34	2.17	0.72
30	271	0.57	2.97	0.59
10	506	1.07	3.75	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 232 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-060-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R4E</u>
D. Latitude, Longitude	<u>48°32' 122°18'</u>
E. Stream Name	<u>Samish River</u>
F. Major Basin Name	<u>Samish</u>
G. River Mile	<u>10.0/12.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

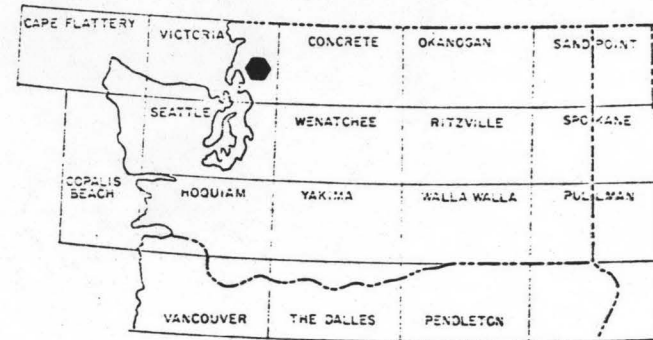
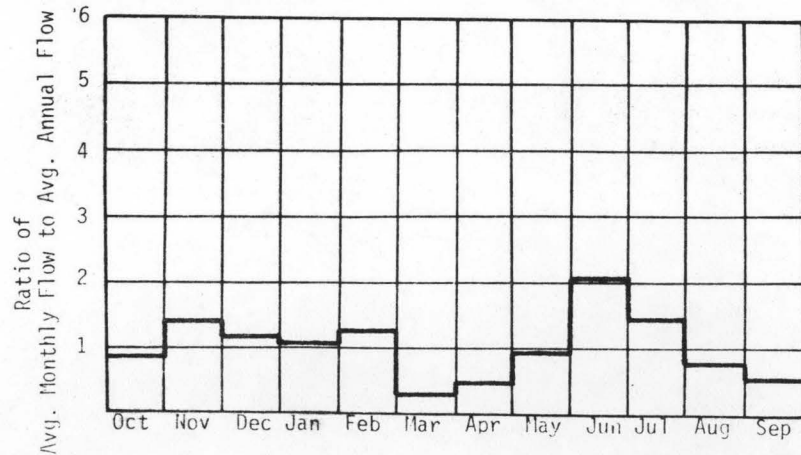
A. Upstream Elevation of Reach	<u>79</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>45</u>	Ft. MSL
C. Total Available Head in Reach	<u>34</u>	Ft.
D. Average Slope in Reach	<u>13.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>49</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

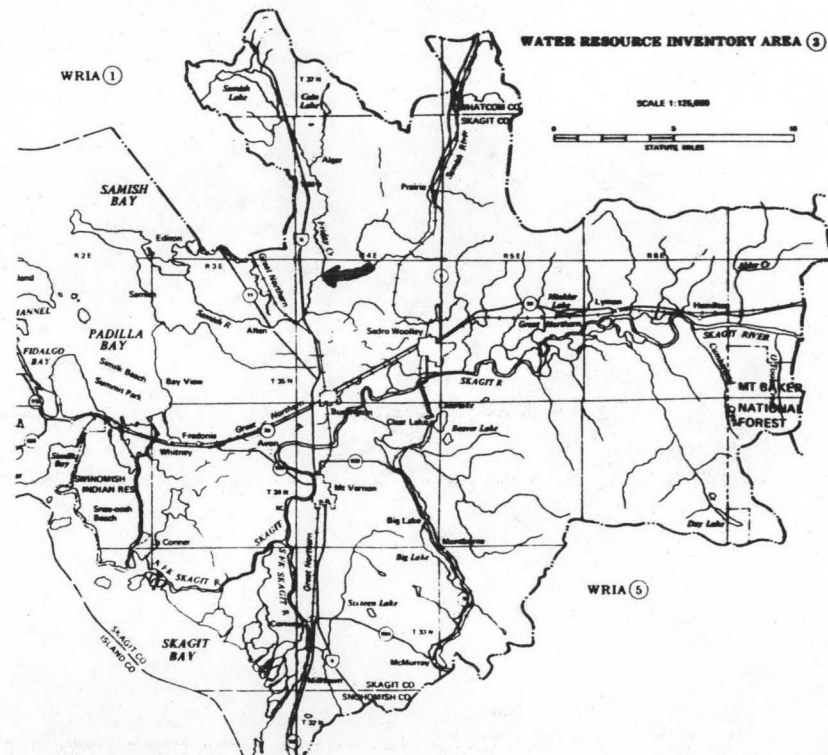
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.0	0.04	0.38	1.00
80	25.8	0.07	0.61	0.94
50	95.2	0.27	1.73	0.72
30	159	0.46	2.37	0.59
10	296	0.85	2.99	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 136 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-060-000-000-000-R0004

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T35N R4E
D. Latitude, Longitude	48°35' 122°15'
E. Stream Name	Samish River
F. Major Basin Name	Samish
G. River Mile	12.5/23.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

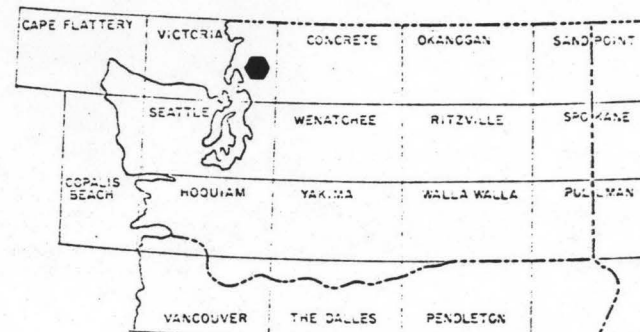
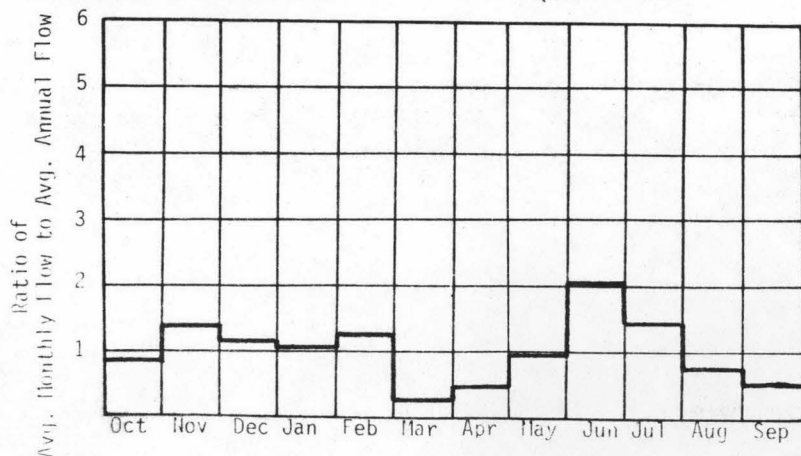
A. Upstream Elevation of Reach	250	Ft. MSL
B. Downstream Elevation of Reach	79	Ft. MSL
C. Total Available Head in Reach	171 + 66 = 237	Ft.
D. Average Slope in Reach	15.1	Ft./Mi.
E. Drainage Area above Reach Mouth	42	Sq.Mi.
F. Inflow Classification	Natural	

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

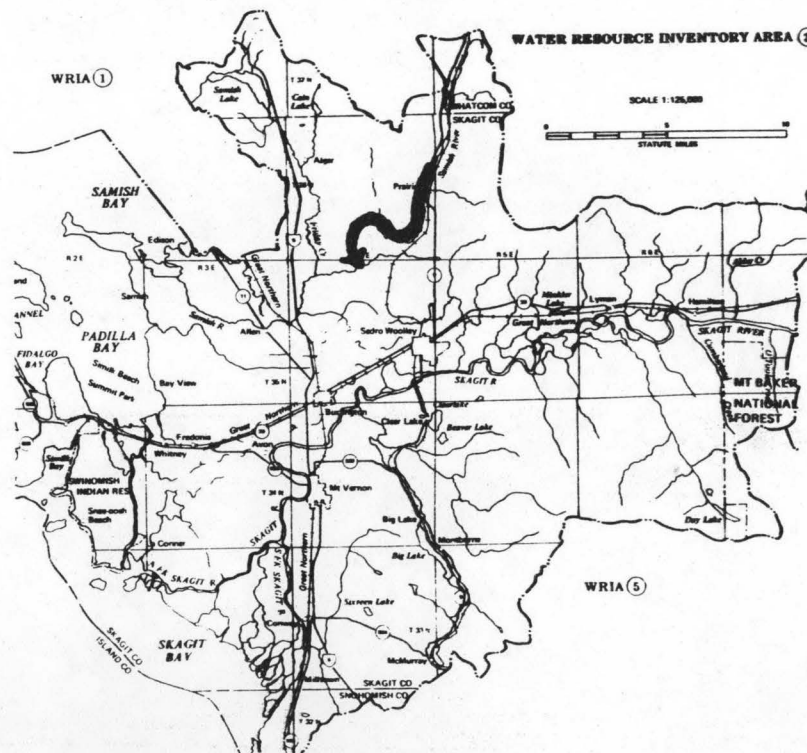
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	9.90	0.20	1.74	1.00
80	17.0	0.34	2.82	0.94
50	63.0	1.26	7.97	0.72
30	105	2.11	10.9	0.59
10	196	3.94	13.8	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-060-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R4E</u>
D. Latitude, Longitude	<u>48°32' 122°20'</u>
E. Stream Name	<u>Friday Creek</u>
F. Major Basin Name	<u>Samish</u>
G. River Mile	<u>0.0/4.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

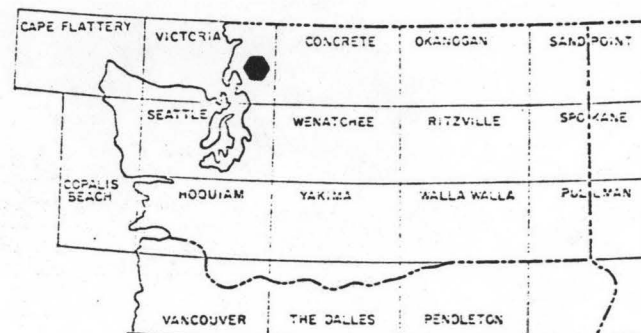
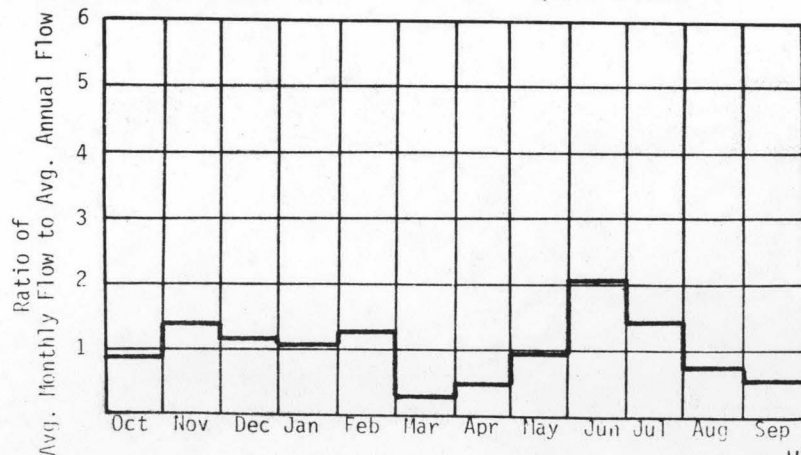
A. Upstream Elevation of Reach	<u>190</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>45</u>	Ft. MSL
C. Total Available Head in Reach	<u>145</u>	Ft.
D. Average Slope in Reach	<u>31.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>37</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

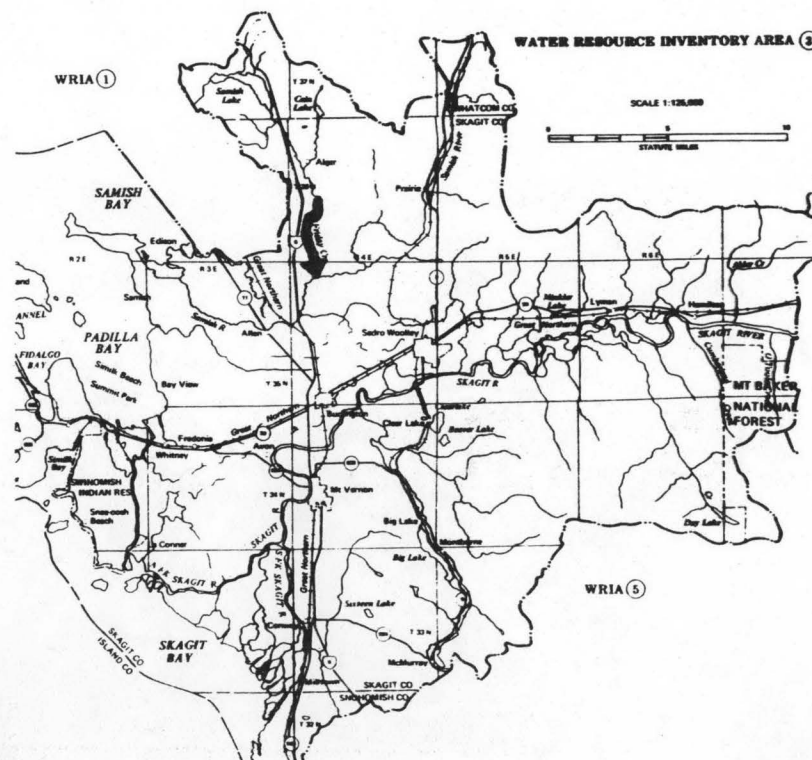
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2.70	0.03	0.29	1.00
80	6.30	0.08	0.63	0.93
50	57.6	0.71	4.09	0.66
30	108	1.33	6.15	0.53
10	216	2.65	8.59	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 89 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-060-000-000-R0006

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R4E</u>
D. Latitude, Longitude	<u>48°36' 122°20'</u>
E. Stream Name	<u>Friday Creek</u>
F. Major Basin Name	<u>Samish</u>
G. River Mile	<u>4.6/6.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

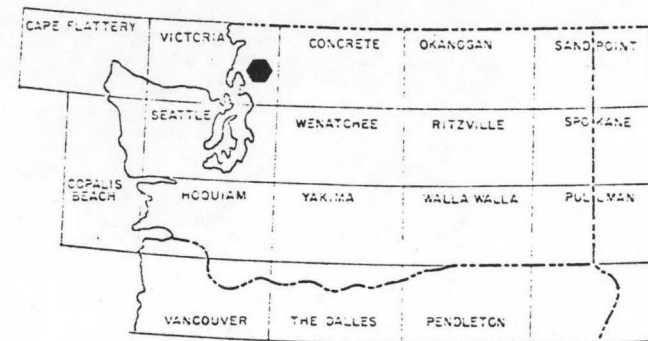
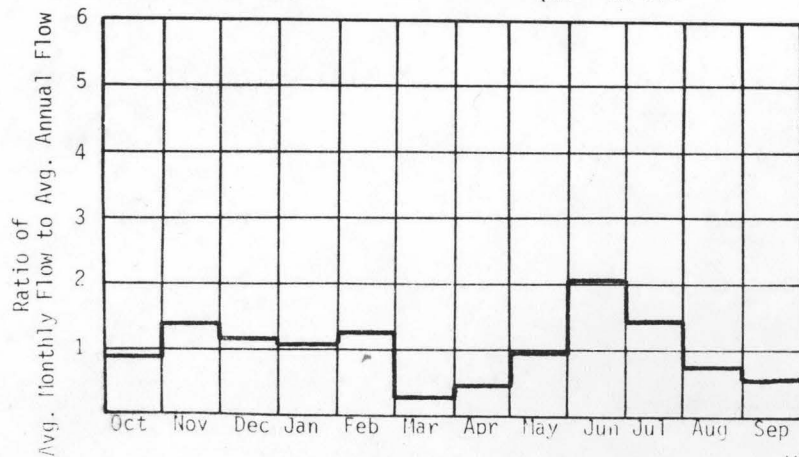
A. Upstream Elevation of Reach	<u>238</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>190</u>	Ft. MSL
C. Total Available Head in Reach	<u>48+66 = 114</u>	Ft.
D. Average Slope in Reach	<u>22.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>34</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

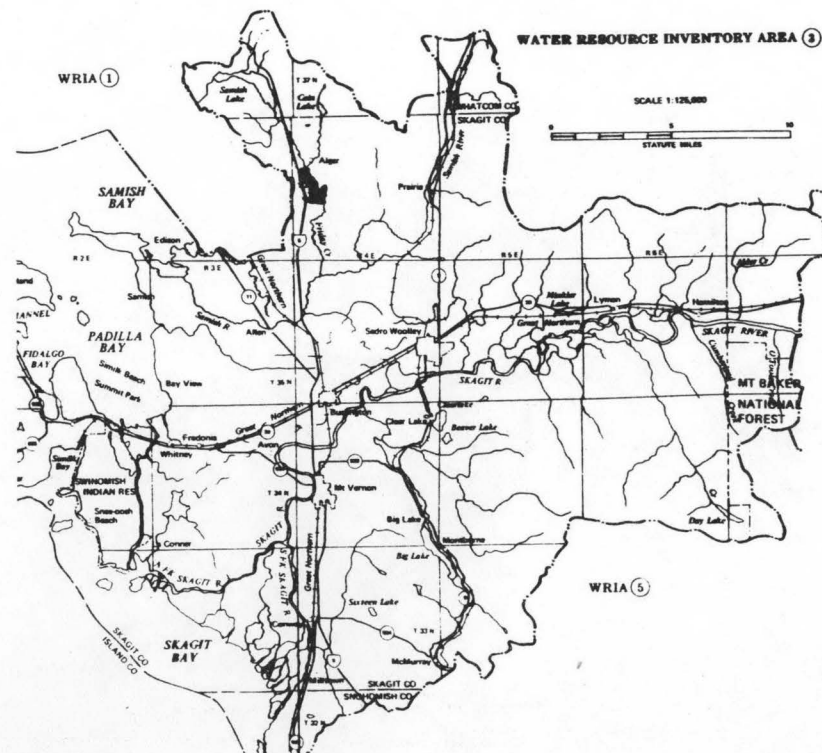
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1.85	0.02	0.16	1.00
80	4.34	0.04	0.34	0.93
50	39.7	0.38	2.21	0.66
30	74.4	0.72	3.33	0.53
10	149	1.44	4.65	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R3E</u>
D. Latitude, Longitude	<u>48°27' 122°22'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>8.1/18.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

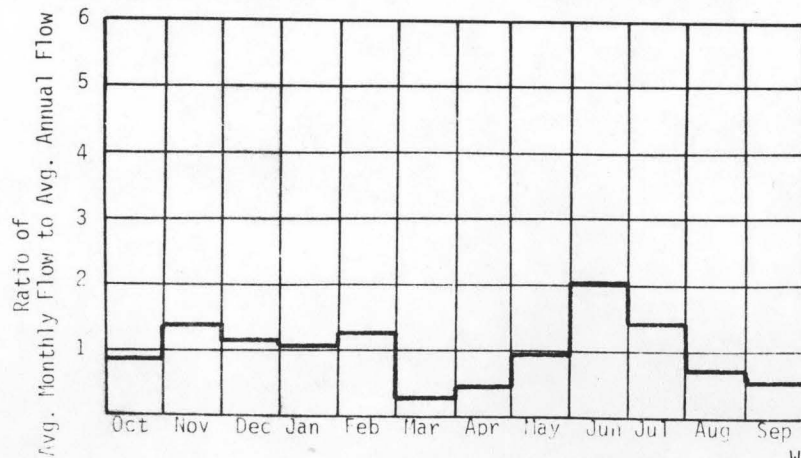
A. Upstream Elevation of Reach	<u>19.5</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>7</u>	Ft. MSL
C. Total Available Head in Reach	<u>12.5</u>	Ft.
D. Average Slope in Reach	<u>1.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>3102</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

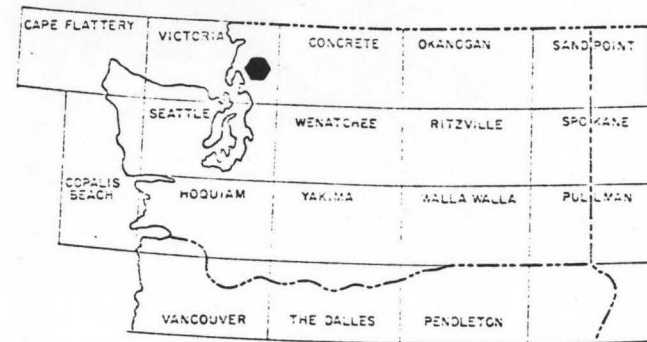
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6510	6.88	60.3	1.00
80	9270	9.81	82.5	0.96
50	14300	15.1	113	0.85
30	18400	19.4	128	0.75
10	27800	29.4	144	0.56

### IV. TYPICAL ANNUAL HYDROGRAPH

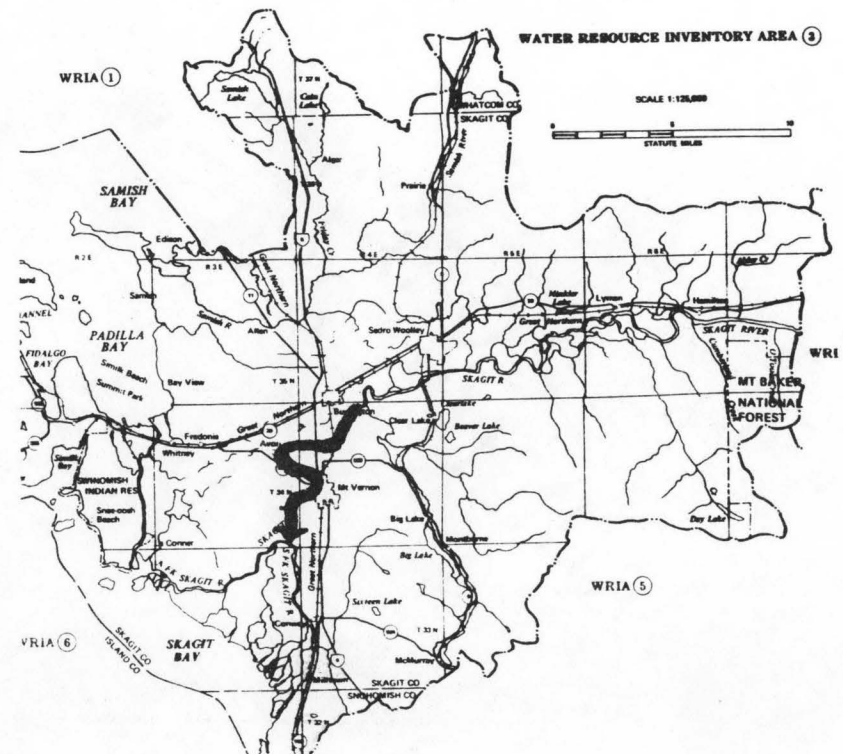
QMR = 16,270 cfs



W4-57



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R5E</u>
D. Latitude, Longitude	<u>48°29' 122°12'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>18.7/29.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

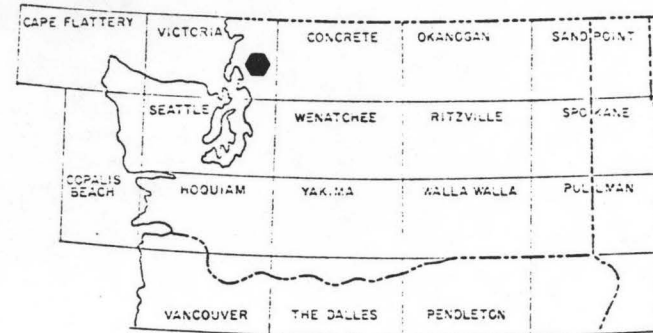
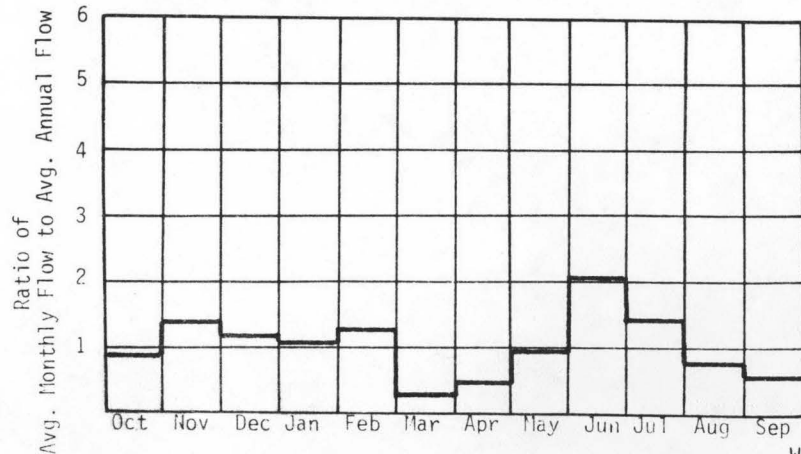
A. Upstream Elevation of Reach	<u>40</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>19.5</u>	Ft. MSL
C. Total Available Head in Reach	<u>20.5</u>	Ft.
D. Average Slope in Reach	<u>2.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>3029</u>	Sq. Mi.
F. Inflow Classification	<u>Regulated</u>	

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

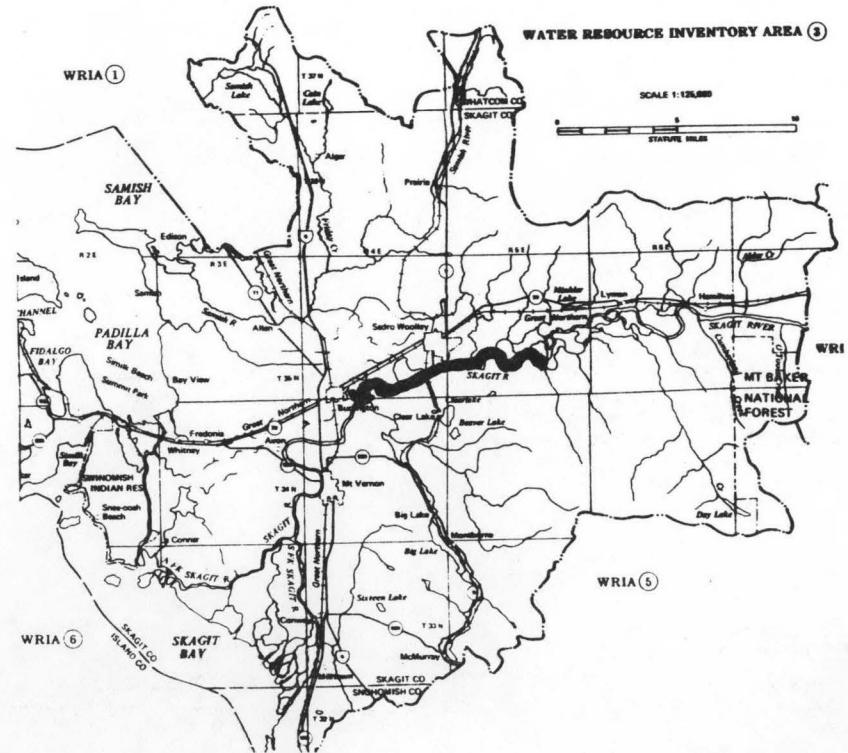
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5120	8.87	77.7	1.00
80	7030	12.2	104	0.97
50	12500	21.6	155	0.82
30	18500	32.2	194	0.69
10	30900	53.5	230	0.49

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 15,988 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R5E</u>
D. Latitude, Longitude	<u>48°31' 122°06'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>29.0/35.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

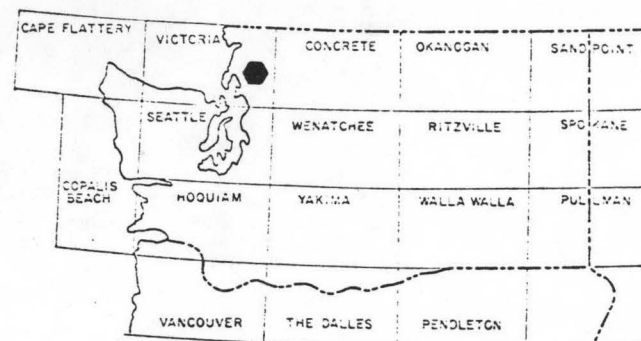
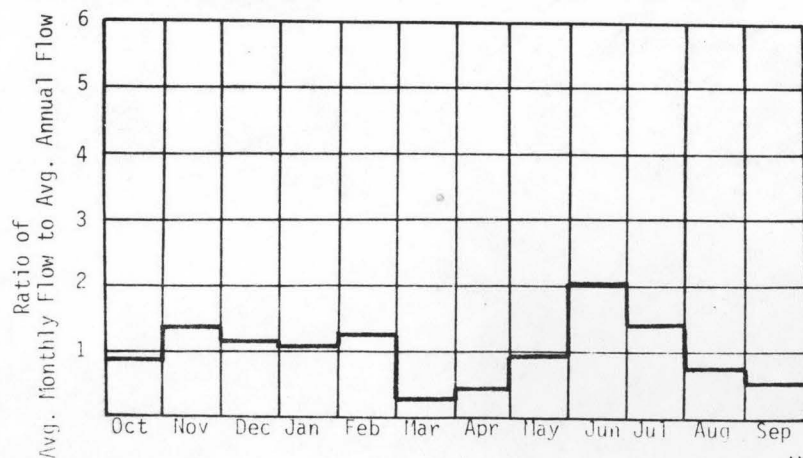
A. Upstream Elevation of Reach	<u>65</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>40</u>	Ft. MSL
C. Total Available Head in Reach	<u>25</u>	Ft.
D. Average Slope in Reach	<u>3.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>2983</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

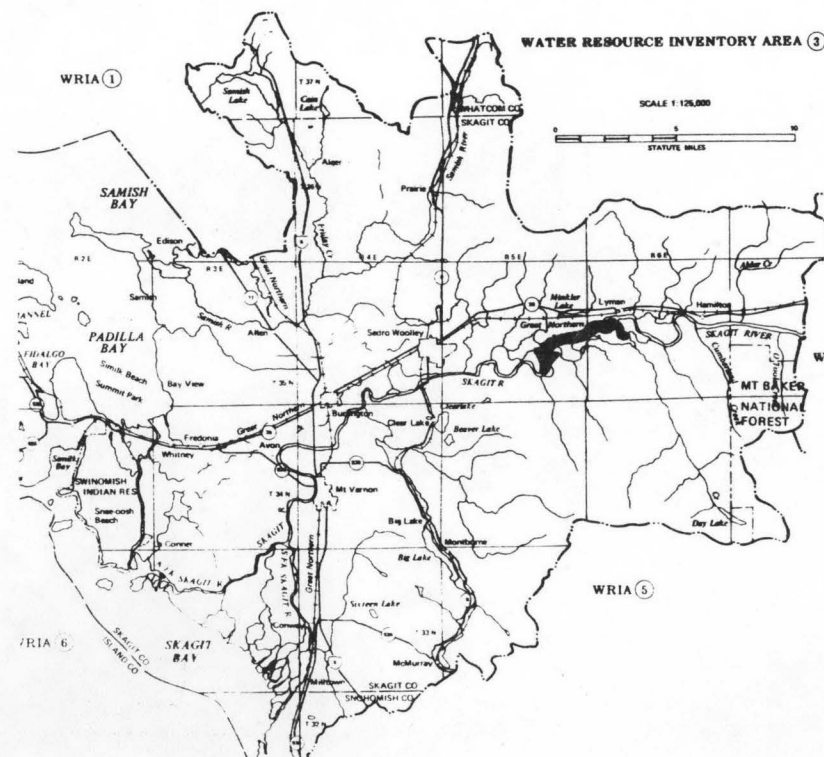
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5070	10.7	9.40	1.00
80	6970	14.8	125	0.97
50	12400	26.1	188	0.82
30	18400	38.9	235	0.69
10	30600	64.7	278	0.49

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 15,846 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0004

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T35N R6E
D. Latitude, Longitude	48°31' 121°58'
E. Stream Name	Skagit River
F. Major Basin Name	Skagit
G. River Mile	35.6/46.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

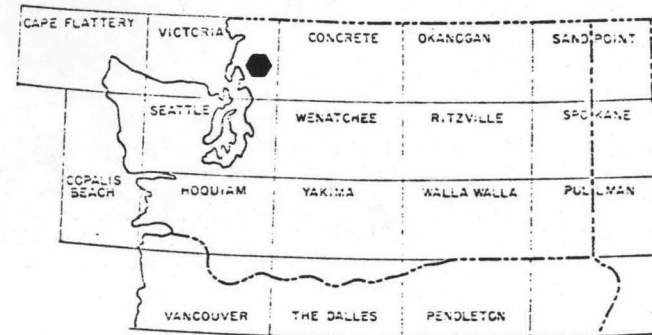
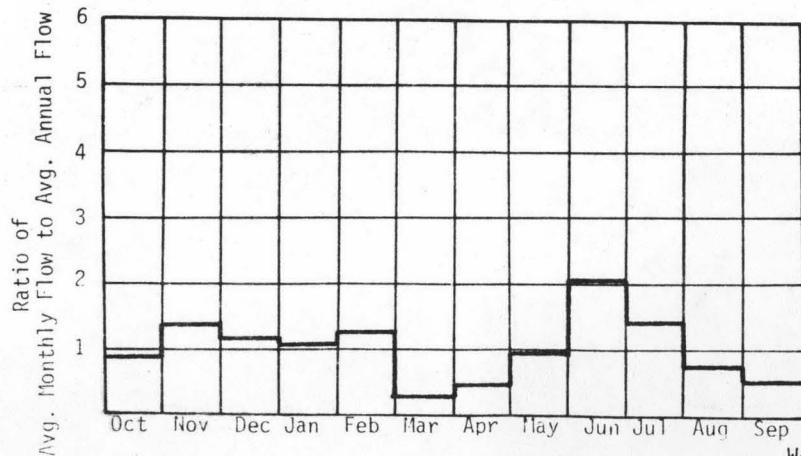
A. Upstream Elevation of Reach	115	Ft. MSL
B. Downstream Elevation of Reach	65	Ft. MSL
C. Total Available Head in Reach	50	Ft.
D. Average Slope in Reach	4.8	Ft./Mi.
E. Drainage Area above Reach Mouth	2910	Sq.Mi.
F. Inflow Classification	Regulated	

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

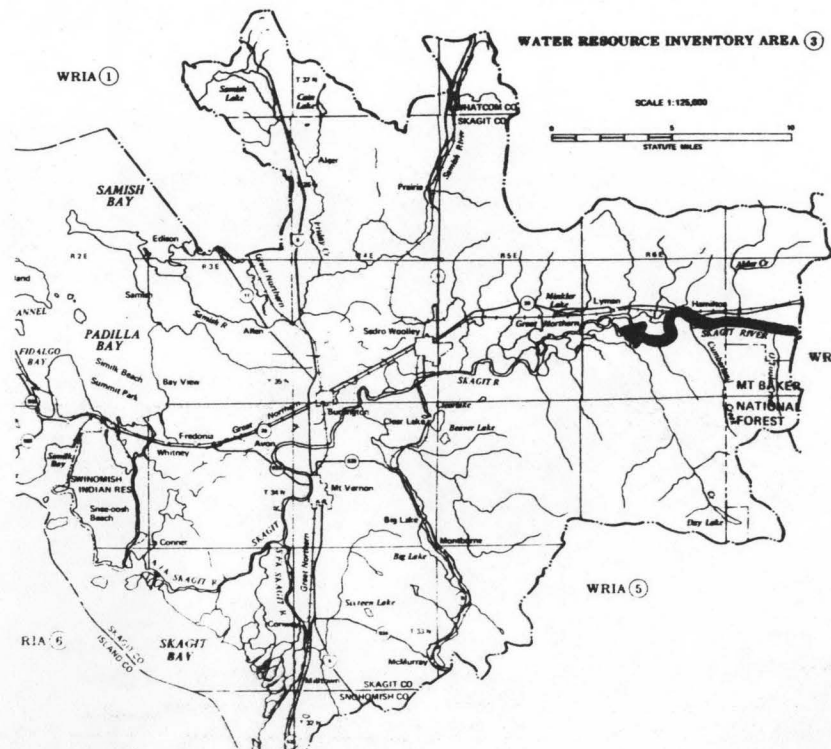
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5580	23.6	207	1.00
80	8060	34.1	287	0.96
50	13200	55.7	410	0.84
30	17700	74.8	478	0.73
10	28400	120	557	0.53

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 15,504 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R7E</u>
D. Latitude, Longitude	<u>38°31' 121°52'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>46.0/47.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

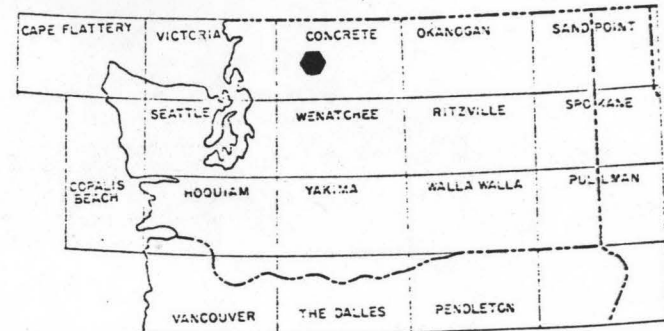
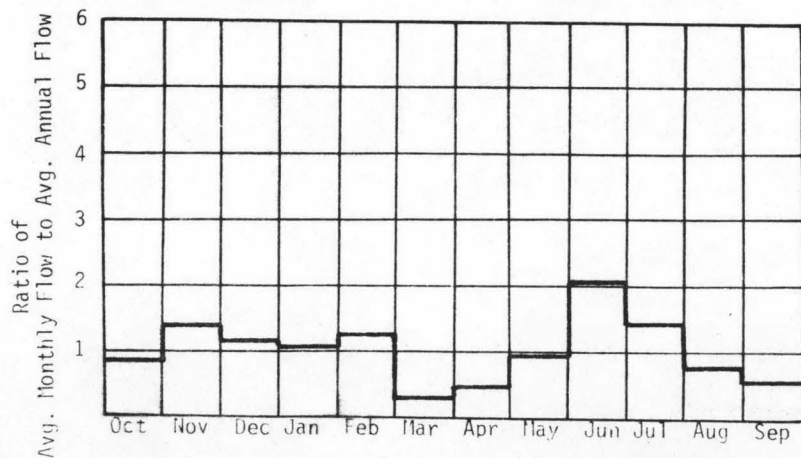
A. Upstream Elevation of Reach	<u>125</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>115</u>	Ft. MSL
C. Total Available Head in Reach	<u>10</u>	Ft.
D. Average Slope in Reach	<u>7.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>2824</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5510	4.66	40.8	1.00
80	7960	6.73	56.6	0.96
50	13000	11.0	81.0	0.84
30	17500	14.8	94.4	0.73
10	28000	23.7	110	0.53

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 15,308 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0006

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R8E</u>
D. Latitude, Longitude	<u>48°32' 121°48'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>47.3/56.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

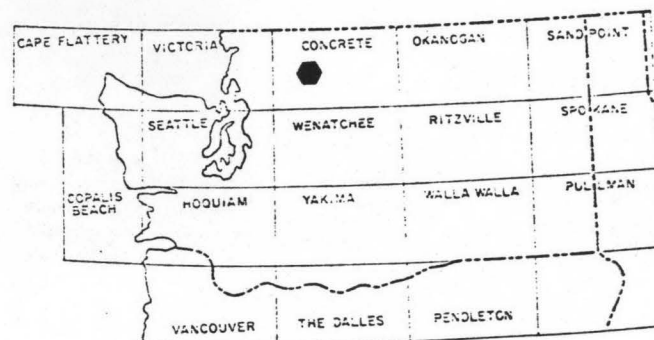
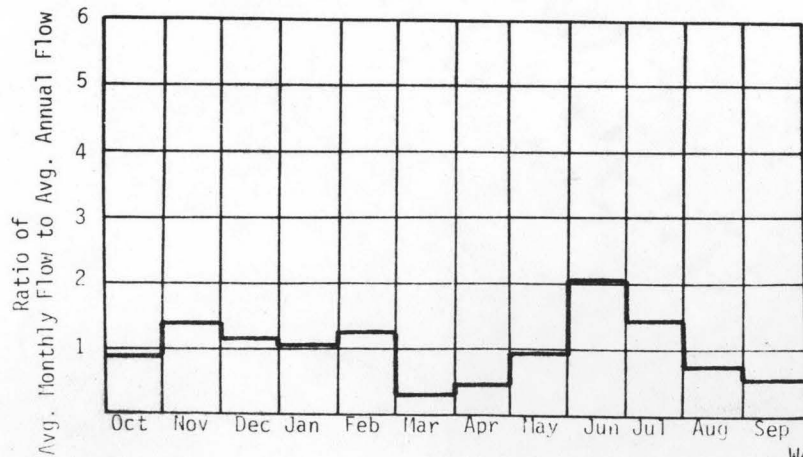
A. Upstream Elevation of Reach	<u>170</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>125</u>	Ft. MSL
C. Total Available Head in Reach	<u>45</u>	Ft.
D. Average Slope in Reach	<u>4.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>2808</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

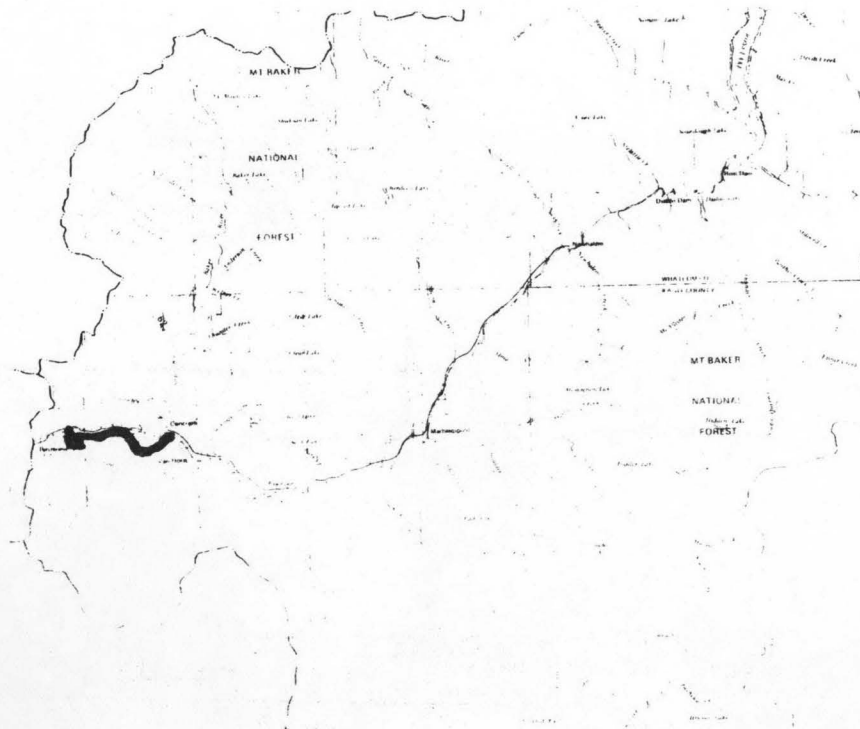
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5430	20.7	181	1.00
80	7850	29.9	251	0.96
50	12800	48.8	359	0.84
30	17200	65.5	419	0.73
10	27600	105	488	0.53

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 15,087 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0007

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R8E</u>
D. Latitude, Longitude	<u>48°32' 121°43'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>56.9/57.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

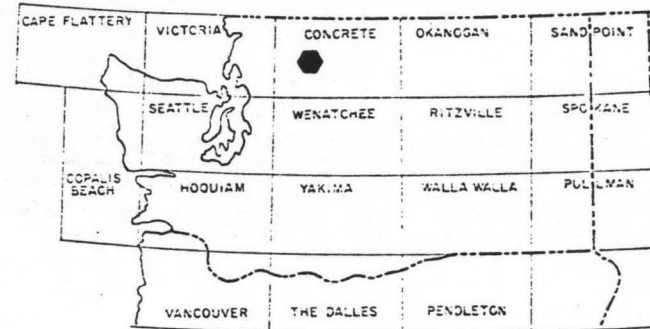
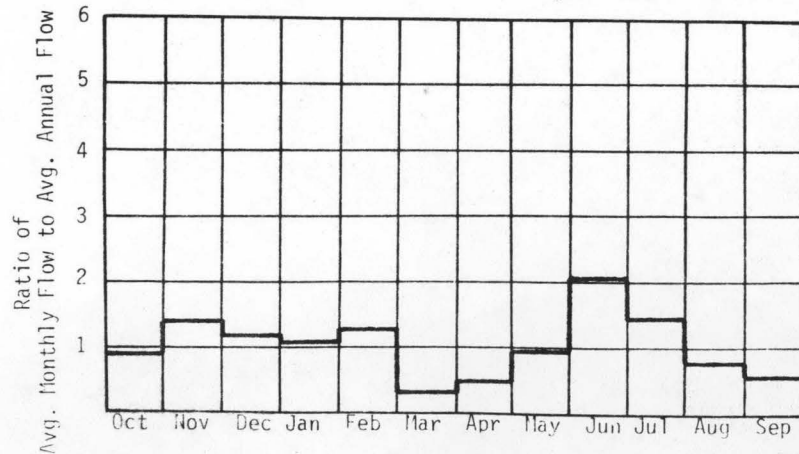
A. Upstream Elevation of Reach	<u>175</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>170</u>	Ft. MSL
C. Total Available Head in Reach	<u>5</u>	Ft.
D. Average Slope in Reach	<u>12.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>2438</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

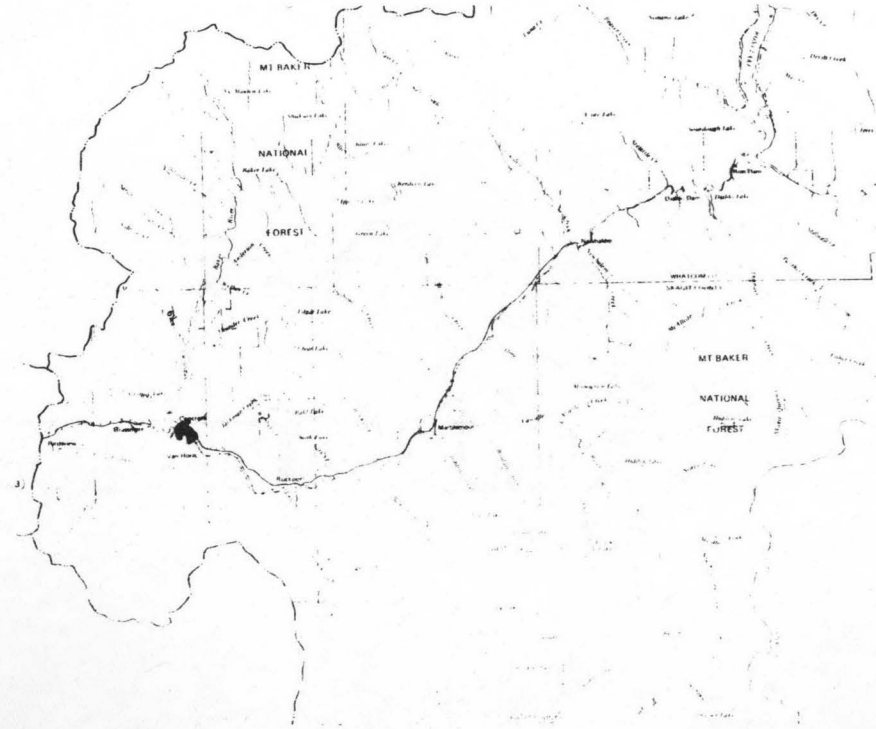
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4430	1.88	16.4	1.00
80	6410	2.71	22.8	0.96
50	10500	4.43	32.6	0.84
30	14000	5.94	38.0	0.73
10	22500	9.54	44.3	0.53

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 12,319 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0008

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R9E</u>
D. Latitude, Longitude	<u>48°31' 121°41'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>57.3/64.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

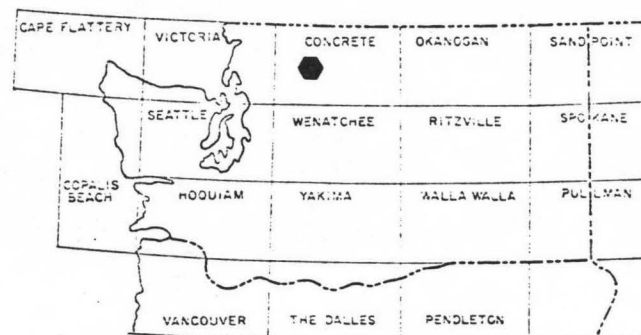
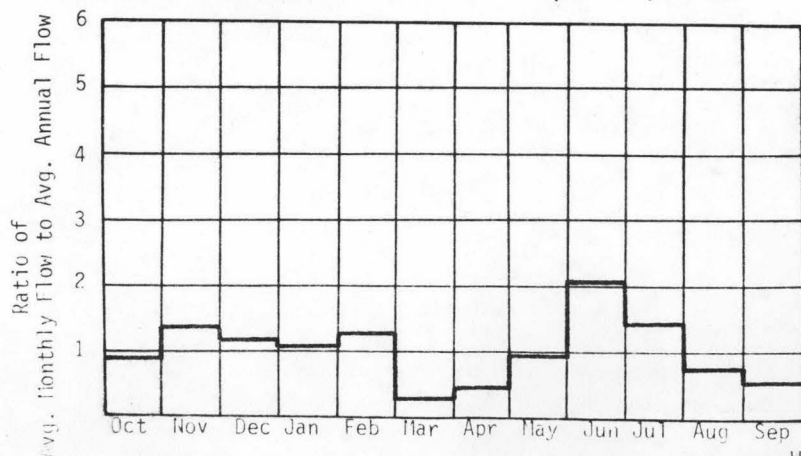
A. Upstream Elevation of Reach	<u>200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>175</u>	Ft. MSL
C. Total Available Head in Reach	<u>25</u>	Ft.
D. Average Slope in Reach	<u>3.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>2412</u>	Sq. Mi.
F. Inflow Classification	<u>Regulated</u>	

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

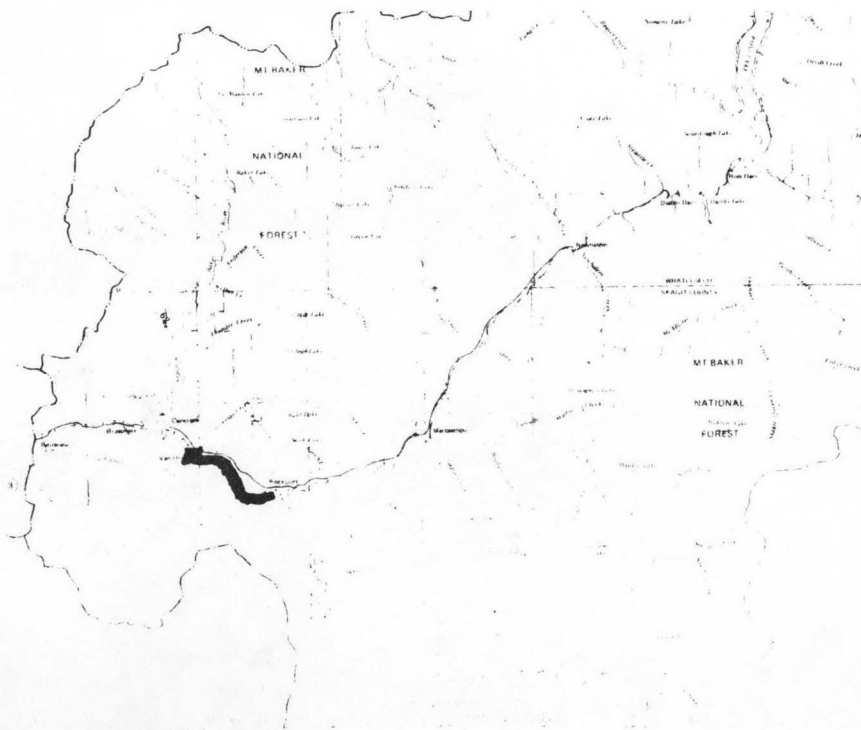
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4360	9.21	80.7	1.00
80	6300	13.3	112	0.96
50	10300	21.8	160	0.84
30	13800	29.2	187	0.73
10	22100	46.8	217	0.53

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 12,102 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0009

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R9E</u>
D. Latitude, Longitude	<u>48°29' 121°35'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>64.4/70.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

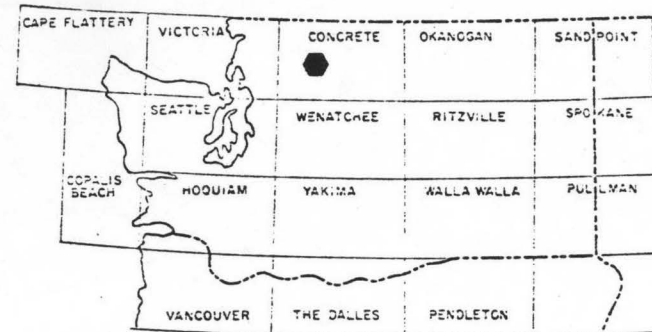
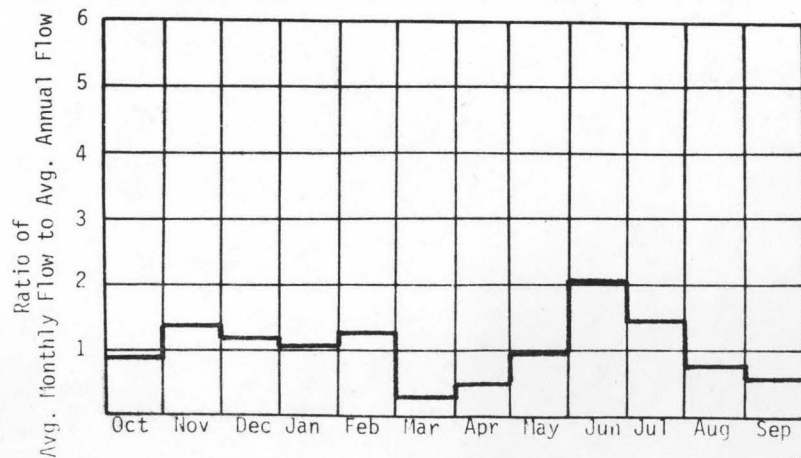
A. Upstream Elevation of Reach	<u>245</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>200</u>	Ft. MSL
C. Total Available Head in Reach	<u>45</u>	Ft.
D. Average Slope in Reach	<u>7.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1664</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

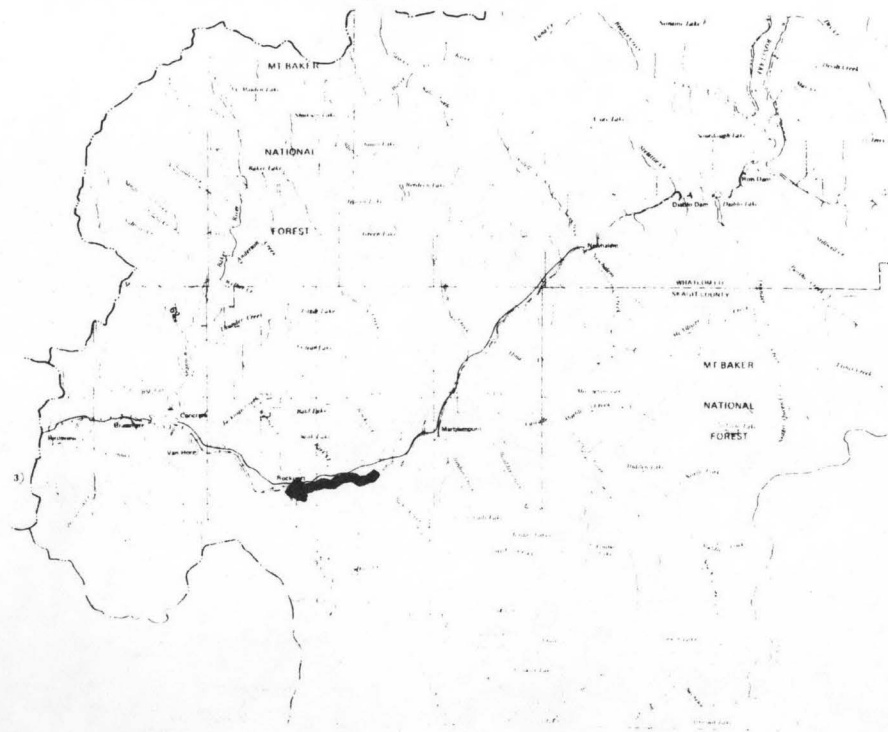
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2710	10.3	90.4	1.00
80	4740	18.1	150	0.94
50	6780	25.8	194	0.86
30	8360	31.8	215	0.77
10	12600	47.9	243	0.58

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 7,531 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0010

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skaqit</u>
C. Township, Range	<u>T35N R10E</u>
D. Latitude, Longitude	<u>48°31' 121°28'</u>
E. Stream Name	<u>Skaqit River</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>70.7/77.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

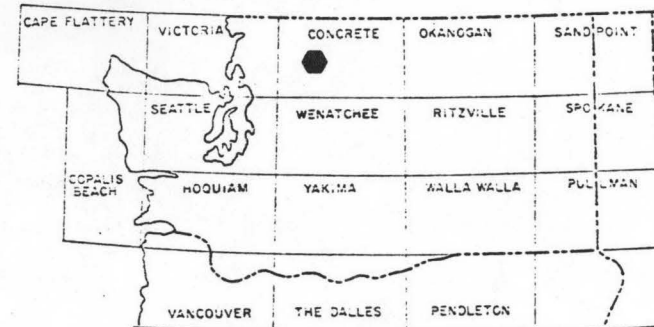
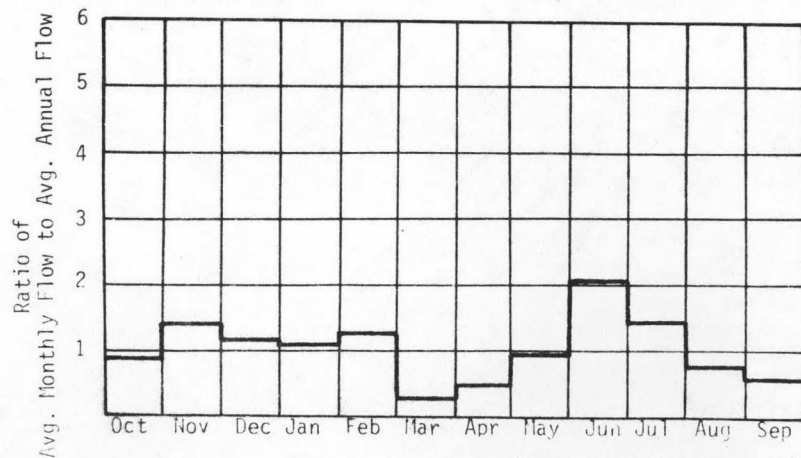
A. Upstream Elevation of Reach	<u>300</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>245</u>	Ft. MSL
C. Total Available Head in Reach	<u>55</u>	Ft.
D. Average Slope in Reach	<u>8.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1598</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

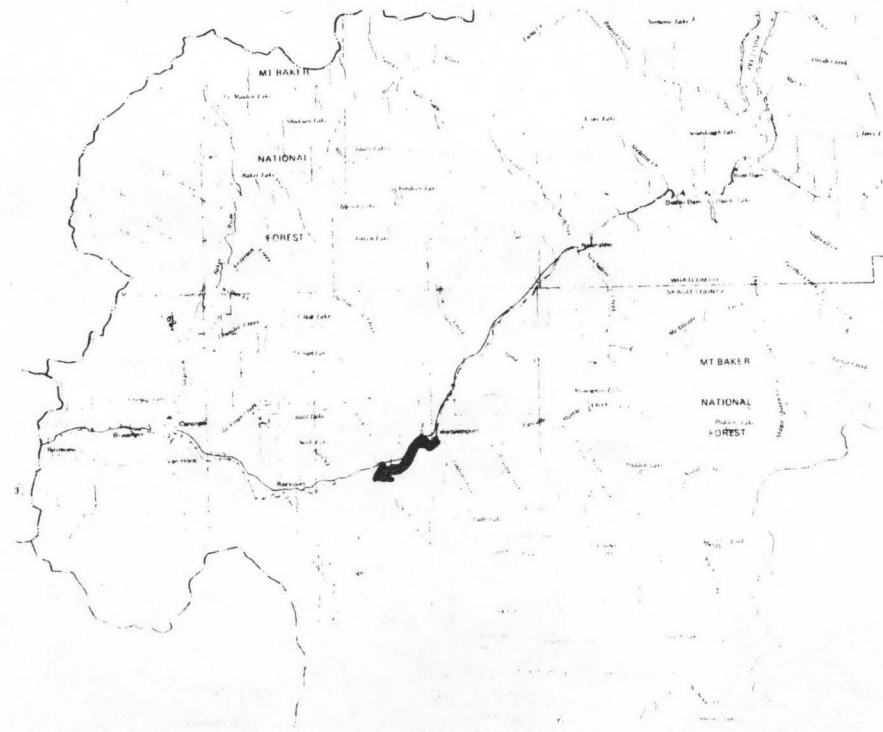
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2300	10.7	93.9	1.00
80	4030	18.8	156	0.95
50	5760	26.8	202	0.86
30	7100	33.0	223	0.77
10	10700	49.7	253	0.58

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 6398 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0011

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R11E</u>
D. Latitude, Longitude	<u>48°33' 121°25'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>77.2/79.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

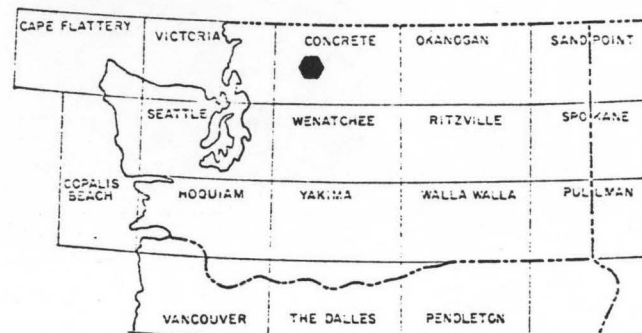
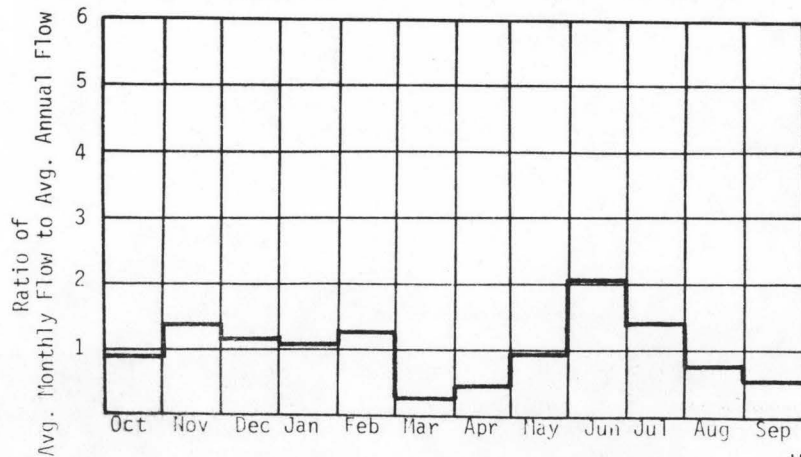
A. Upstream Elevation of Reach	<u>325</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>300</u>	Ft. MSL
C. Total Available Head in Reach	<u>25</u>	Ft.
D. Average Slope in Reach	<u>9.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1396</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

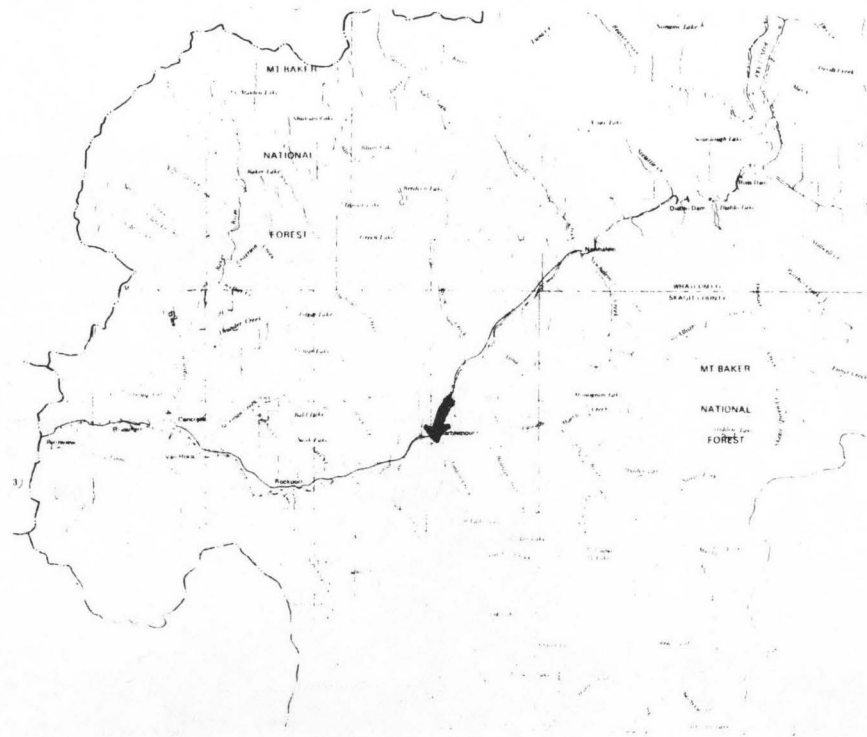
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2070	4.37	38.3	1.00
80	3620	7.65	63.7	0.95
50	5170	10.9	82.3	0.86
30	6370	13.5	90.0	0.77
10	9590	20.3	103	0.58

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 5742 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0012

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R11E</u>
D. Latitude, Longitude	<u>48°34' 121°24'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>79.8/82.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

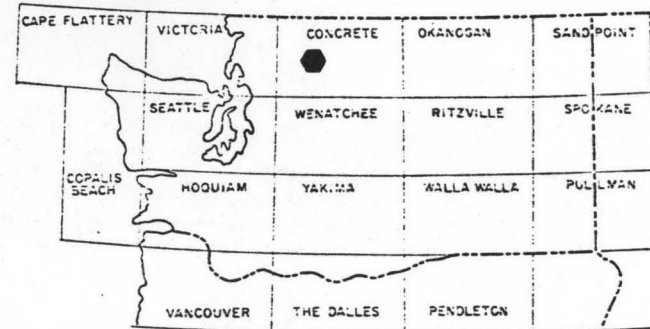
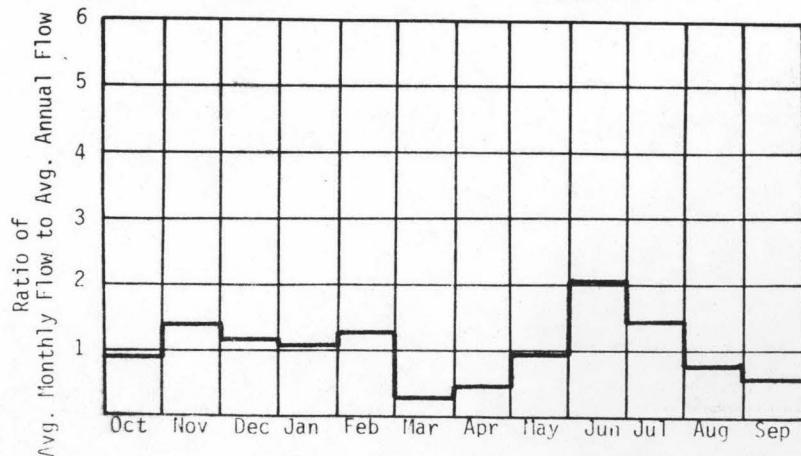
A. Upstream Elevation of Reach	<u>330</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>325</u>	Ft. MSL
C. Total Available Head in Reach	<u>5</u>	Ft.
D. Average Slope in Reach	<u>2.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1360</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

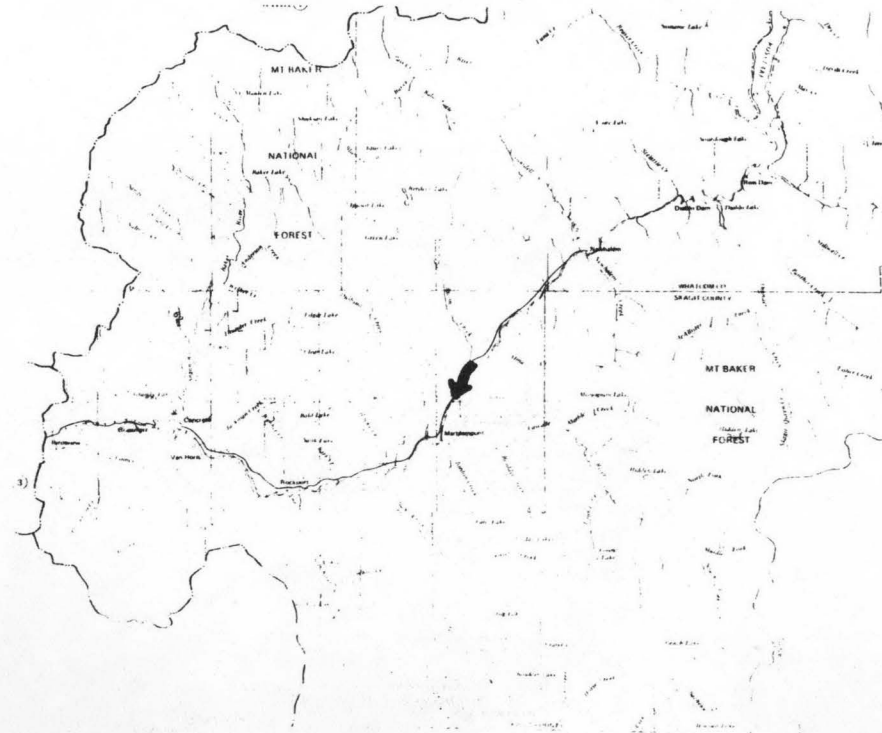
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2490	1.05	9.23	1.00
80	3740	1.58	13.3	0.96
50	5150	2.18	16.8	0.88
30	6060	2.56	18.2	0.81
10	8780	3.71	20.2	0.62

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 5663 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # Q1-061-000-000-000-R0013

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skaqit</u>
C. Township, Range	<u>T36N R11E</u>
D. Latitude, Longitude	<u>48°36' 121°22'</u>
E. Stream Name	<u>Skaqit River</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>82.0/84.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

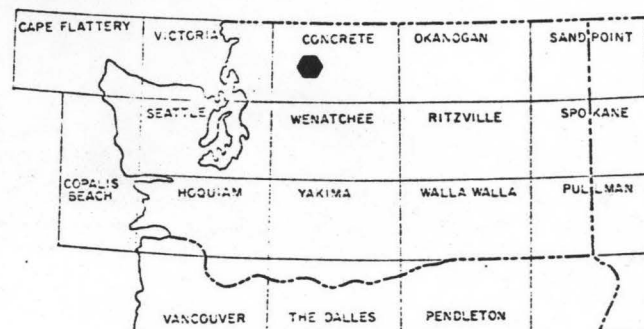
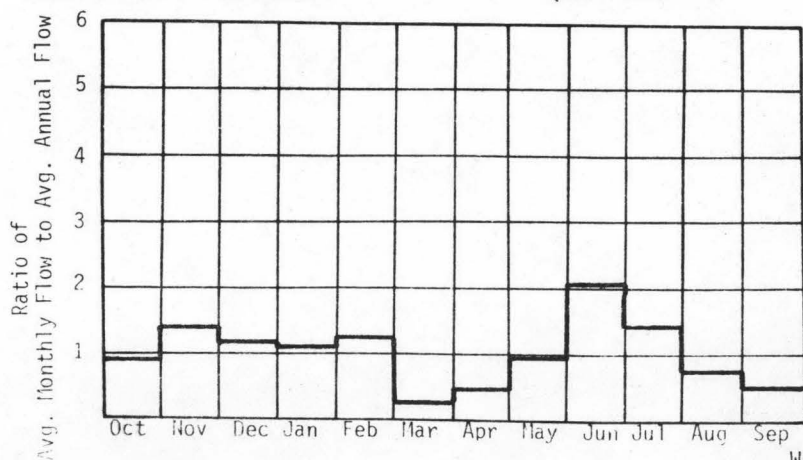
A. Upstream Elevation of Reach	<u>360</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>330</u>	Ft. MSL
C. Total Available Head in Reach	<u>30</u>	Ft.
D. Average Slope in Reach	<u>13.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1305</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

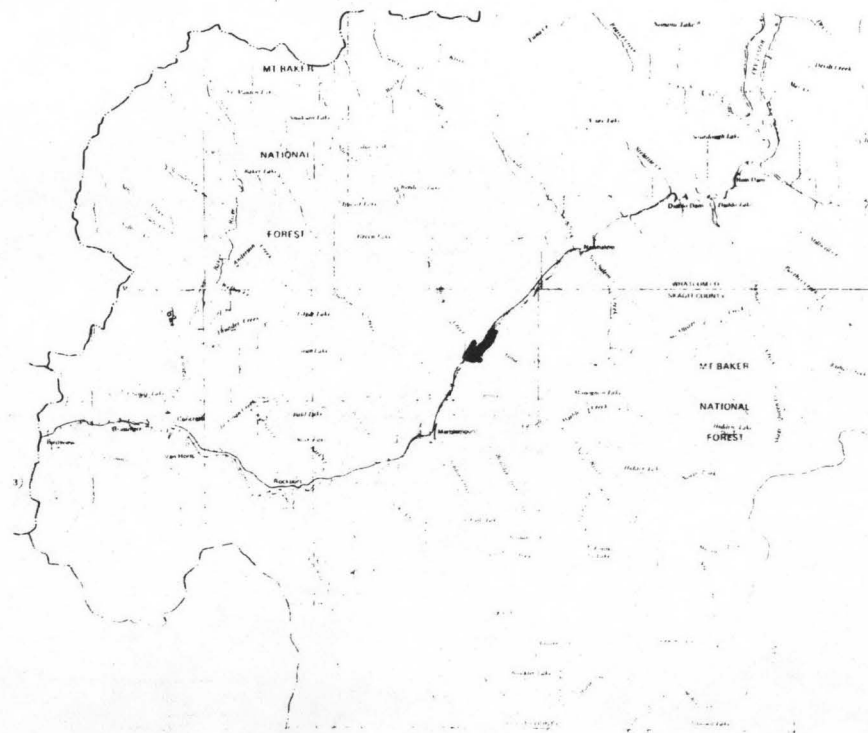
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2300	5.83	51.1	1.00
80	3440	8.74	73.5	0.96
50	4750	12.1	92.9	0.88
30	5580	14.2	101	0.81
10	8090	20.5	112	0.62

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 5219 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-051-000-000-000-R0014

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skaqit</u>
C. Township, Range	<u>T36N R11E</u>
D. Latitude, Longitude	<u>48°38' 121°23'</u>
E. Stream Name	<u>Skaqit River</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>84.2/91.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

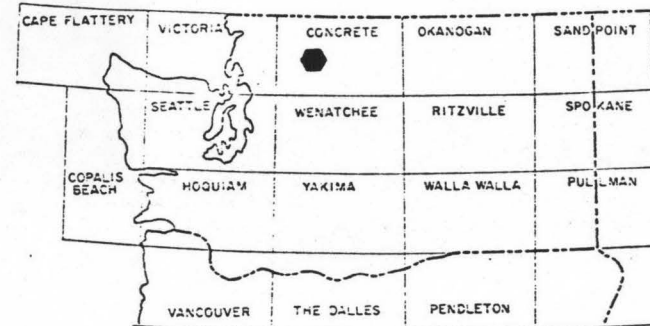
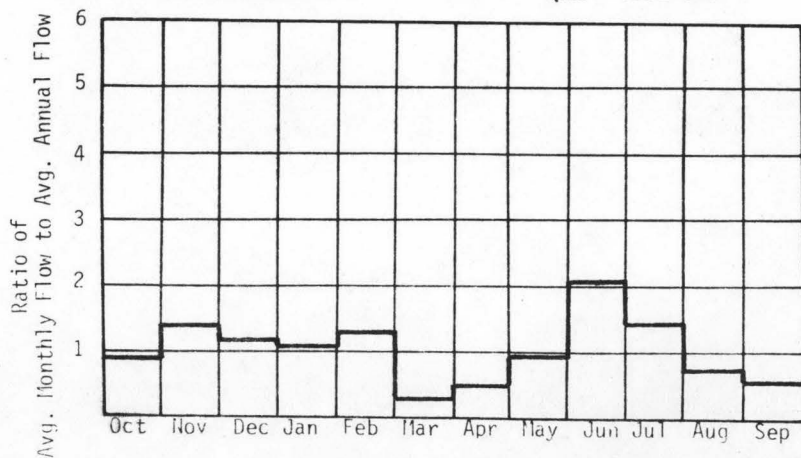
A. Upstream Elevation of Reach	<u>470</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>360</u>	Ft. MSL
C. Total Available Head in Reach	<u>110</u>	Ft.
D. Average Slope in Reach	<u>14.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1290</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

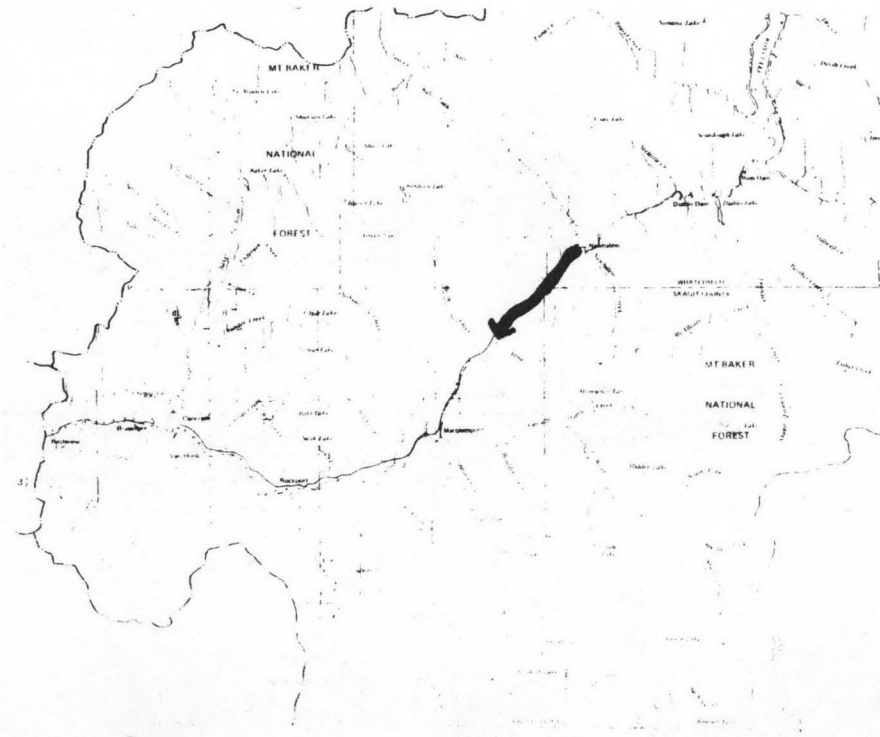
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2200	20.4	179	1.00
80	3290	30.7	258	0.96
50	4540	42.3	326	0.88
30	5340	49.7	353	0.81
10	7740	72.0	391	0.62

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 4992 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0015

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T37N R12E  
 D. Latitude, Longitude 48°40' 121°15'  
 E. Stream Name Skagit River  
 F. Major Basin Name Skagit  
 G. River Mile 91.9/42.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

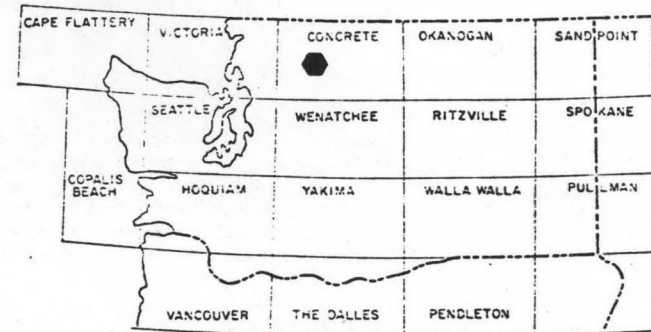
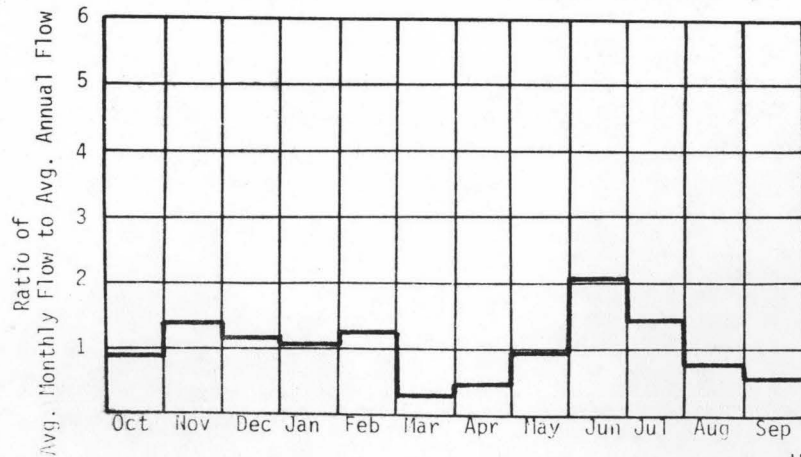
A. Upstream Elevation of Reach 480 Ft. MSL  
 B. Downstream Elevation of Reach 470 Ft. MSL  
 C. Total Available Head in Reach 10 Ft.  
 D. Average Slope in Reach 20 Ft./Mi.  
 E. Drainage Area above Reach Mouth 1219 Sq.Mi.  
 F. Inflow Classification Regulated

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

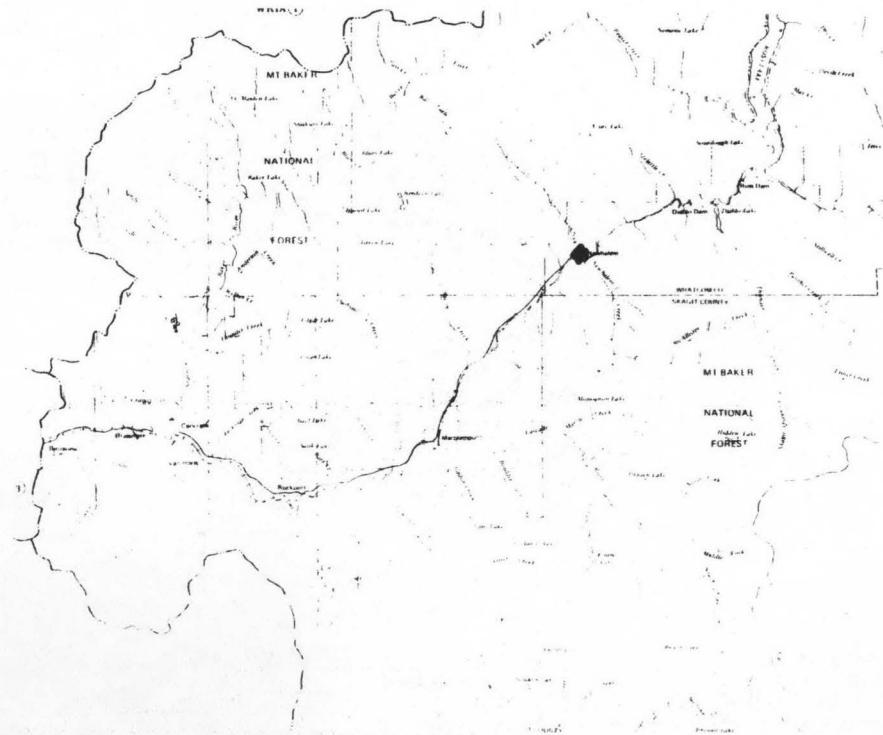
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1210	1.03	8.99	1.00
80	2020	1.71	14.2	0.95
50	3770	3.19	22.7	0.81
30	5080	4.29	26.3	0.70
10	8360	7.07	31.0	0.50

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 4492 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0016

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Shatcom</u>
C. Township, Range	<u>T37N R12E</u>
D. Latitude, Longitude	<u>48°40' 121°15'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>92.4/93.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

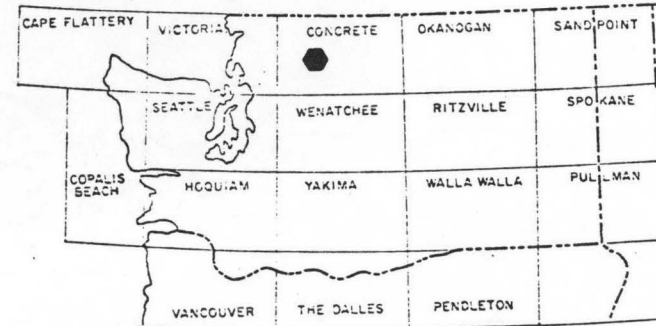
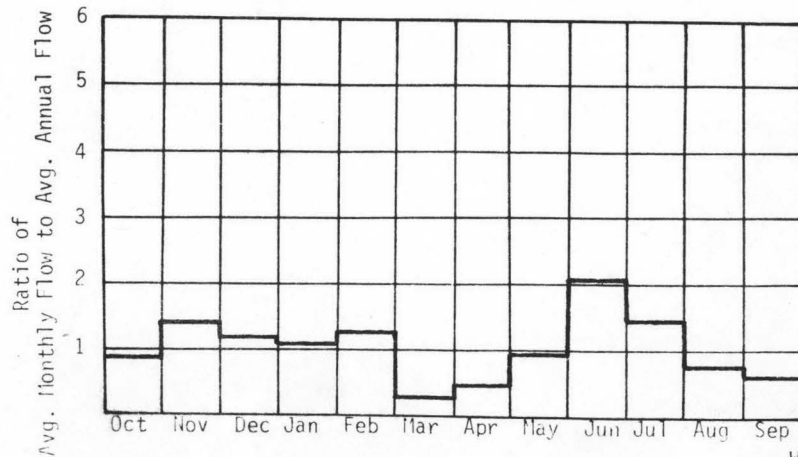
A. Upstream Elevation of Reach	<u>505</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>480</u>	Ft. MSL
C. Total Available Head in Reach	<u>25</u>	Ft.
D. Average Slope in Reach	<u>27.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1190</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

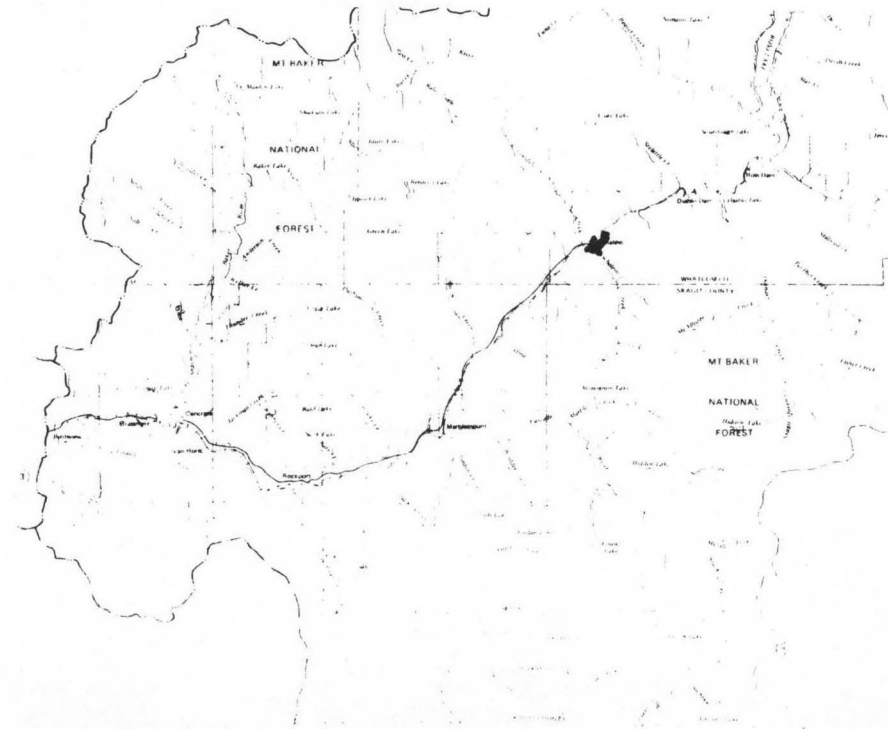
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1190	2.52	22.0	1.00
80	1980	4.19	34.9	0.95
50	3700	7.83	55.5	0.81
30	5000	10.5	64.6	0.70
10	8200	17.3	75.9	0.50

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 4406 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0017

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R4E</u>
D. Latitude, Longitude	<u>48°28' 122°17'</u>
E. Stream Name	<u>Nookachamps Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

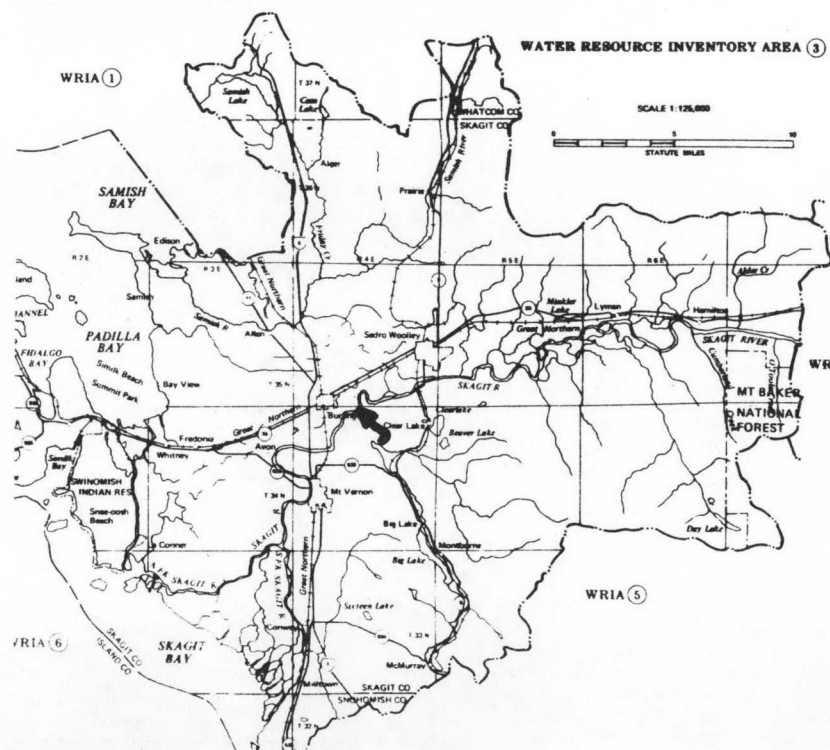
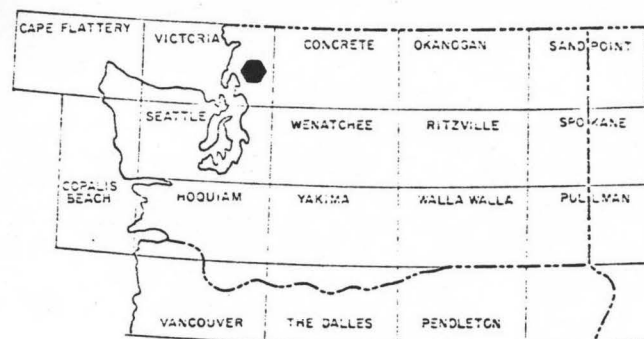
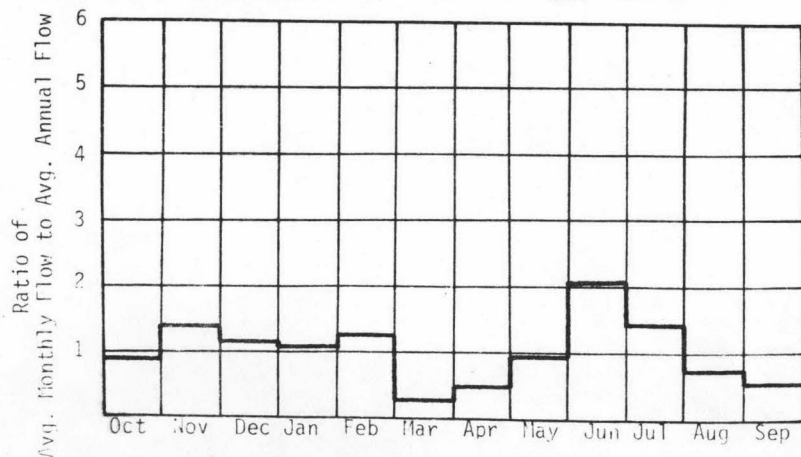
A. Upstream Elevation of Reach	<u>19.75</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>19.5</u>	Ft. MSL
C. Total Available Head in Reach	<u>0.25</u>	Ft.
D. Average Slope in Reach	<u>0.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>71.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.0	0.00	0.00	1.00
80	47.7	0.00	0.01	0.90
50	145	0.00	0.02	0.73
30	247	0.01	0.03	0.59
10	499	0.01	0.04	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 217 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0018

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R4E</u>
D. Latitude, Longitude	<u>48°25' 122°15'</u>
E. Stream Name	<u>Nookachamps Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.8/6.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

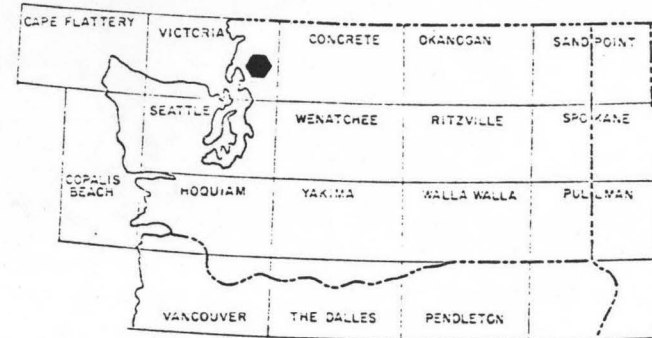
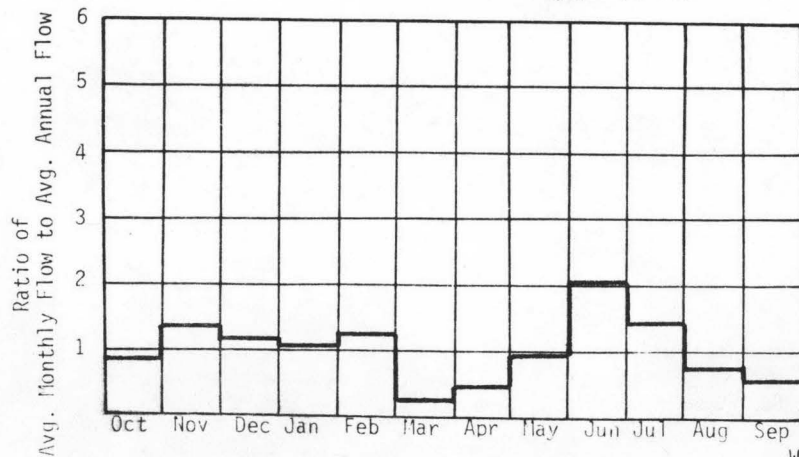
A. Upstream Elevation of Reach	<u>81</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>19.75</u>	Ft. MSL
C. Total Available Head in Reach	<u>127.25</u>	Ft.
D. Average Slope in Reach	<u>15.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>33.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

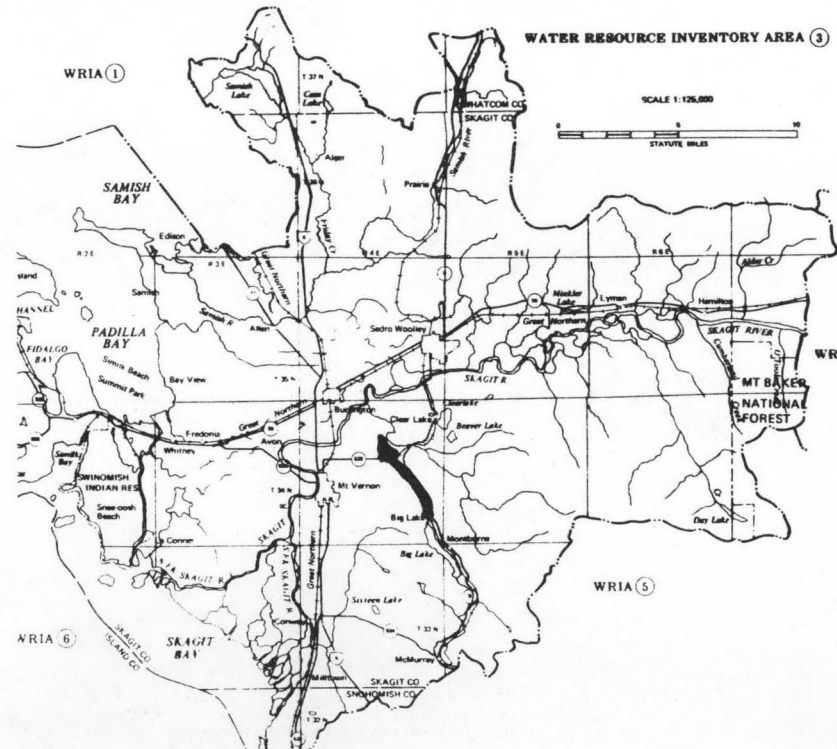
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4.50	0.05	0.42	1.00
80	16.5	0.18	1.40	0.90
50	50.3	0.54	3.46	0.73
30	85.5	0.92	4.76	0.59
10	173	1.86	6.34	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 75 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0019

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T34N R4E
D. Latitude, Longitude	48°26' 122°14'
E. Stream Name	F.F. Nookachamps Cr.
F. Major Basin Name	Skagit
G. River Mile	0/5.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

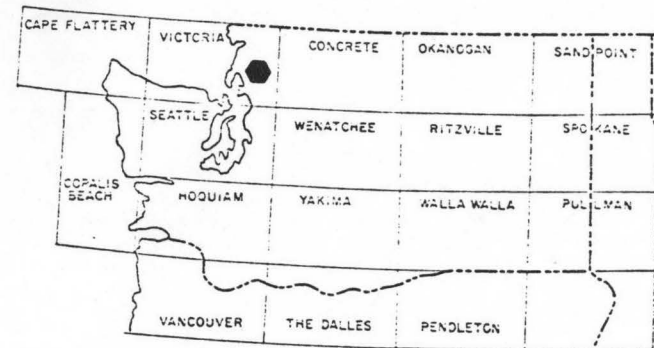
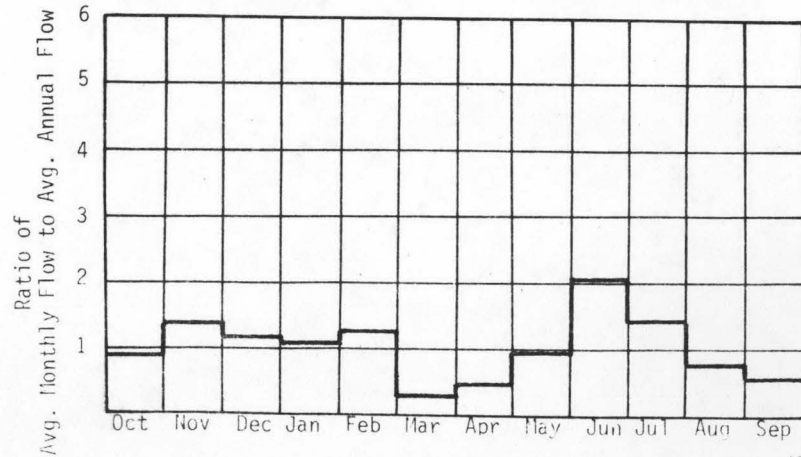
A. Upstream Elevation of Reach	100	Ft. MSL
B. Downstream Elevation of Reach	20	Ft. MSL
C. Total Available Head in Reach	80 + 66 = 146	Ft.
D. Average Slope in Reach	15.1	Ft./Mi.
E. Drainage Area above Reach Mouth	36.2	Sq.Mi.
F. Inflow Classification	Natural	

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

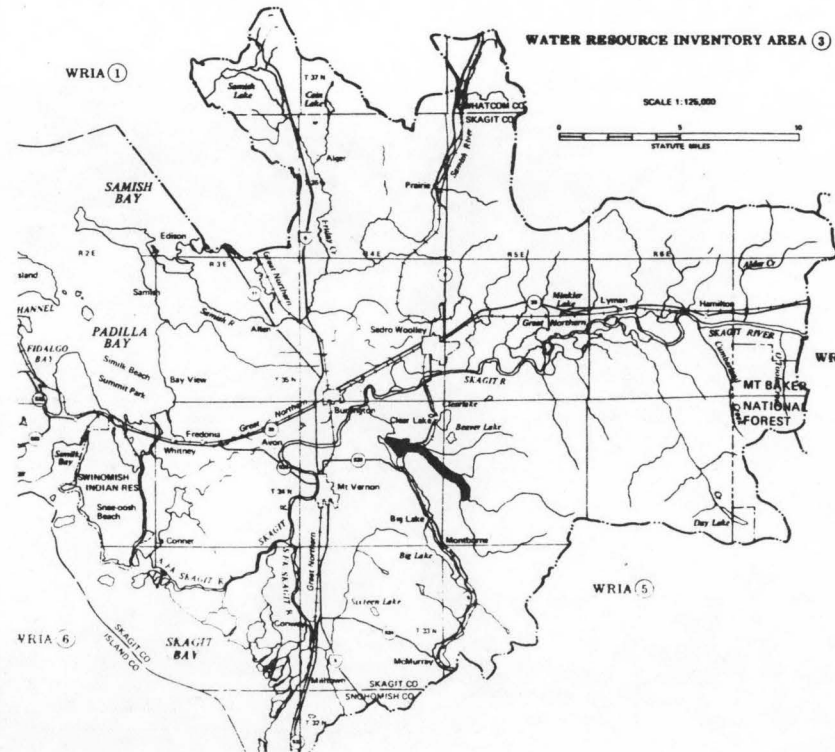
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4.24	0.05	0.46	1.00
80	12.7	0.16	1.25	0.91
50	62.5	0.77	4.67	0.69
30	111	1.37	6.74	0.56
10	244	3.01	9.50	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 106 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0020

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R6E</u>
D. Latitude, Longitude	<u>48°23' 122°02'</u>
E. Stream Name	<u>Day Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/6.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

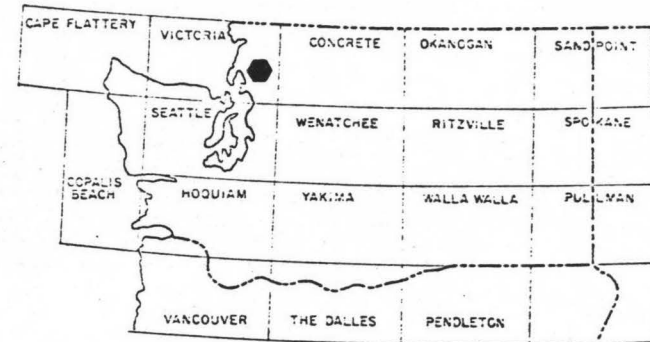
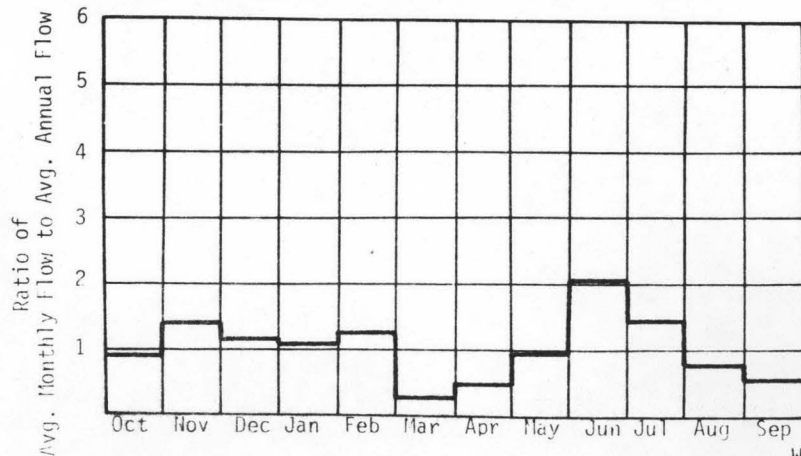
A. Upstream Elevation of Reach	<u>650</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>65</u>	Ft. MSL
C. Total Available Head in Reach	<u>585</u>	Ft.
D. Average Slope in Reach	<u>97.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>36.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

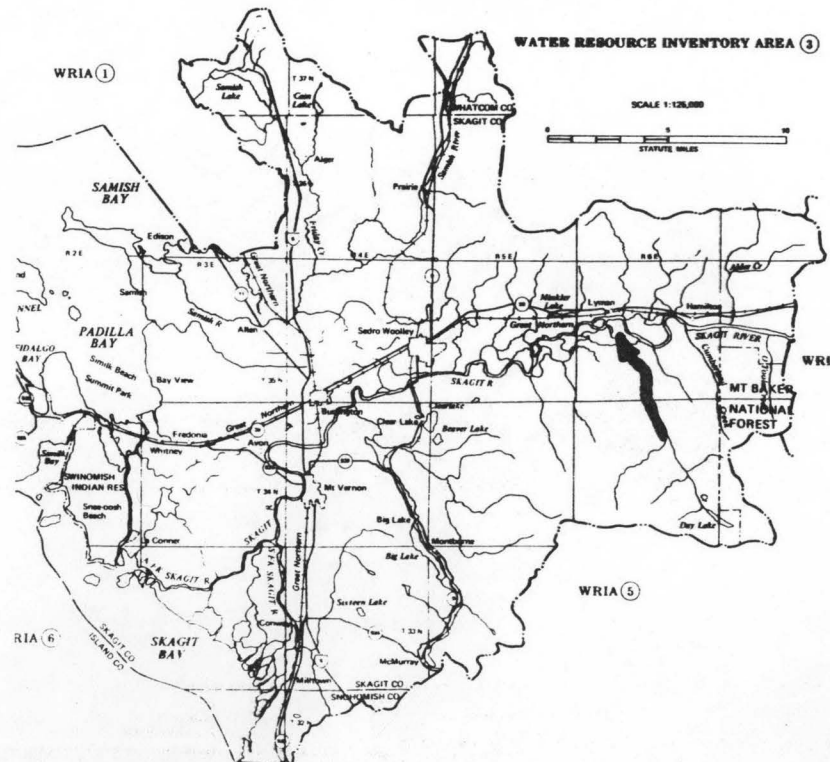
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.0	0.55	4.79	1.00
80	30.4	1.50	12.1	0.92
50	95.2	4.71	30.1	0.73
30	149	7.38	39.4	0.61
10	304	15.0	52.7	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 138 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0021

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R6E</u>
D. Latitude, Longitude	<u>48°24' 122°00'</u>
E. Stream Name	<u>Day Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>6.0/8.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

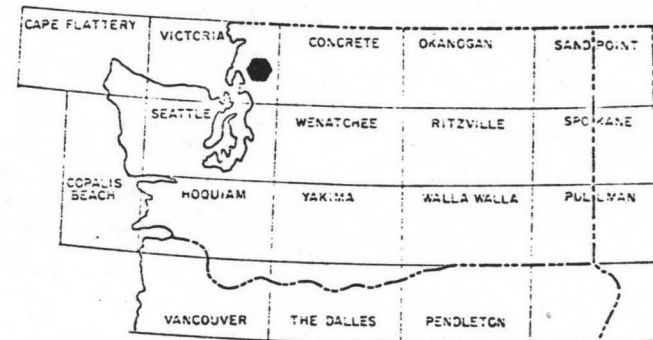
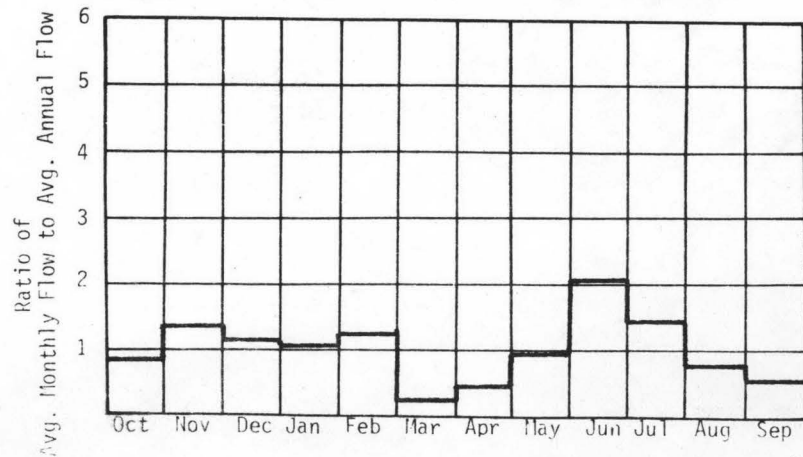
A. Upstream Elevation of Reach	<u>1400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>650</u>	Ft. MSL
C. Total Available Head in Reach	<u>750 + 66 = 816</u>	Ft.
D. Average Slope in Reach	<u>341</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>18.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

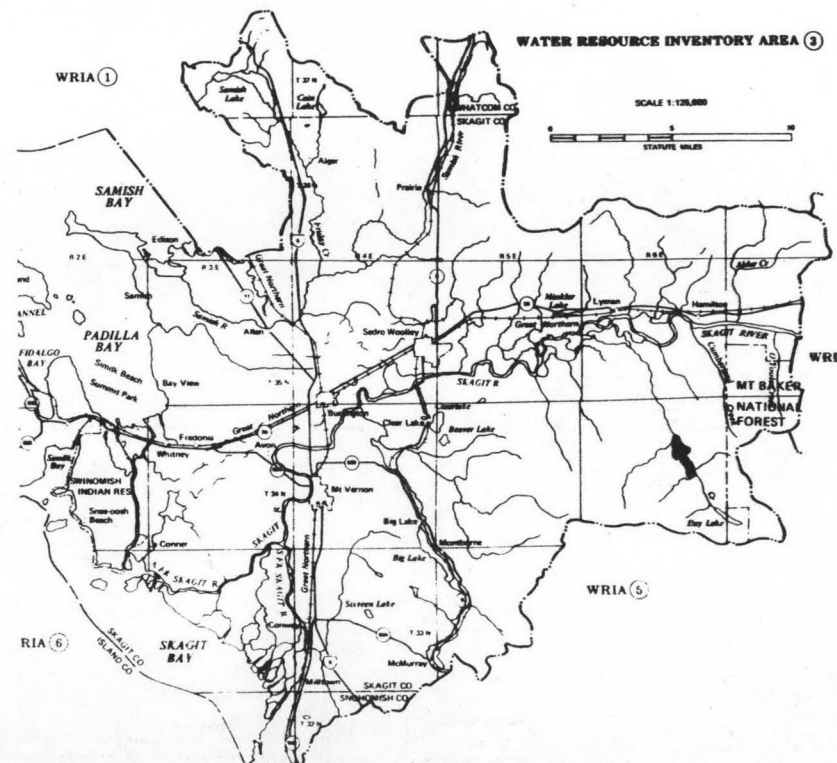
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.36	0.37	3.24	1.00
80	14.7	1.02	8.20	0.92
50	46.2	3.19	20.4	0.73
30	72.4	5.00	26.7	0.61
10	147	10.2	35.7	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 67 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0022

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R7E</u>
D. Latitude, Longitude	<u>48°32' 121°52'</u>
E. Stream Name	<u>Grandy Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

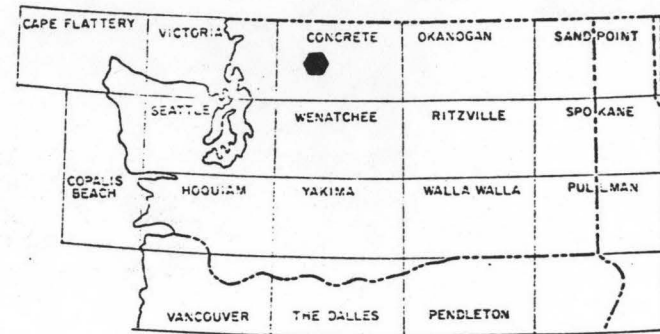
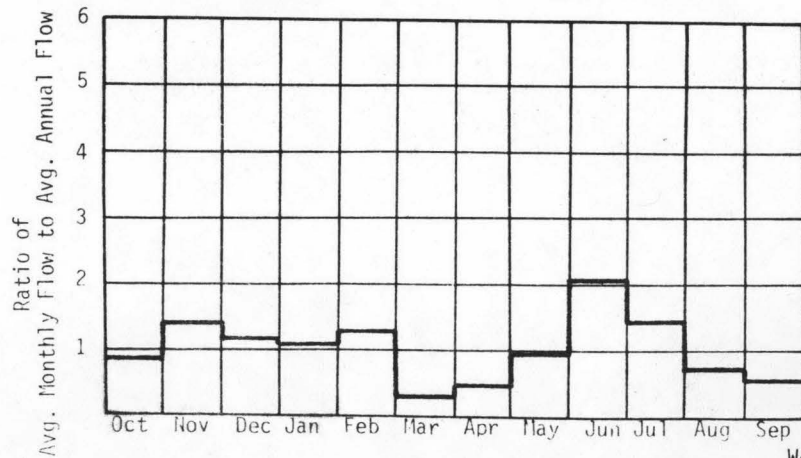
A. Upstream Elevation of Reach	<u>725</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>115</u>	Ft. MSL
C. Total Available Head in Reach	<u>310 + 66 = 376</u>	Ft.
D. Average Slope in Reach	<u>100</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>18.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

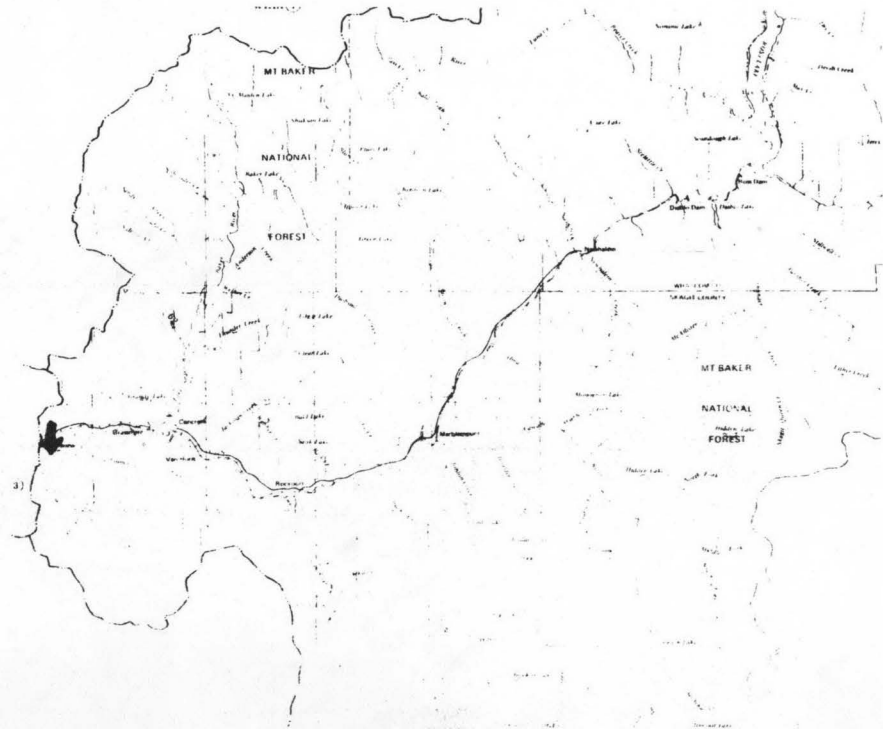
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.67	0.18	1.58	1.00
80	17.0	0.54	4.31	0.91
50	46.0	1.46	9.61	0.75
30	71.8	2.28	12.4	0.62
10	135	4.31	15.9	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 63 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0023

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T35N R7E
D. Latitude, Longitude	48°30' 121°50'
E. Stream Name	Pressentin Creek
F. Major Basin Name	Skagit
G. River Mile	0/4.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

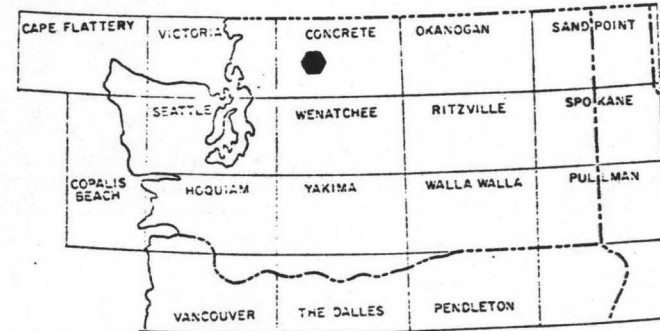
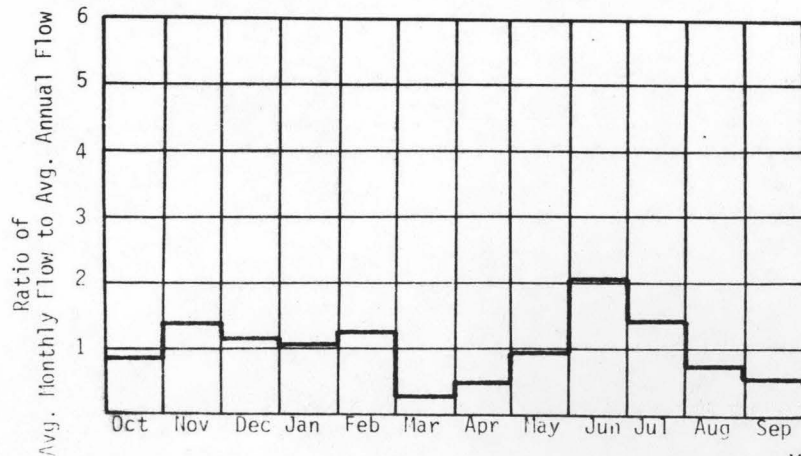
A. Upstream Elevation of Reach	1200	Ft. MSL
B. Downstream Elevation of Reach	125	Ft. MSL
C. Total Available Head in Reach	$1075 + 66 = 1141$	Ft.
D. Average Slope in Reach	269	Ft./Mi.
E. Drainage Area above Reach Mouth	13	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.40	0.52	4.57	1.00
80	16.2	1.55	12.5	0.91
50	43.8	4.23	27.9	0.75
30	68.4	6.60	35.9	0.62
10	129	12.5	45.8	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 60 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0024

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R8E</u>
D. Latitude, Longitude	<u>48°29' 121°42'</u>
E. Stream Name	<u>Finney Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/16.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

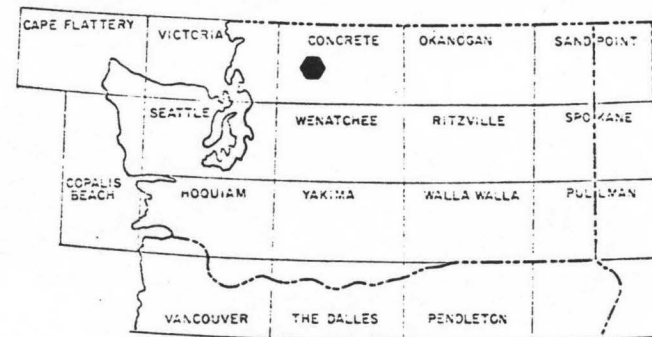
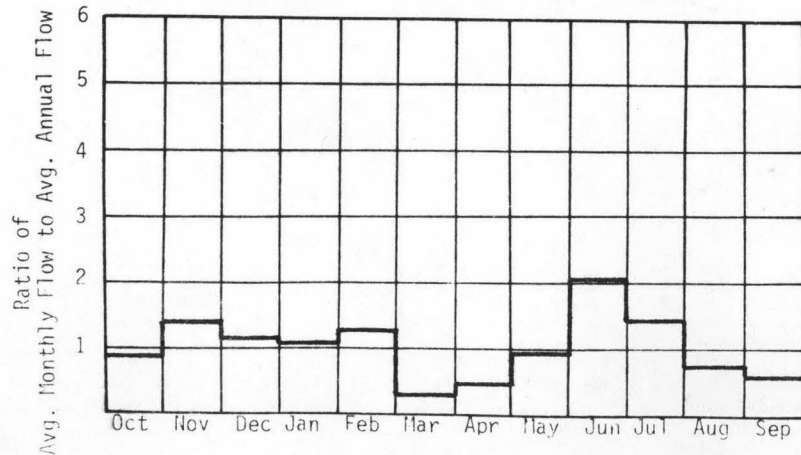
A. Upstream Elevation of Reach	<u>1160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>130</u>	Ft. MSL
C. Total Available Head in Reach	<u>1030</u>	Ft.
D. Average Slope in Reach	<u>61.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>55</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

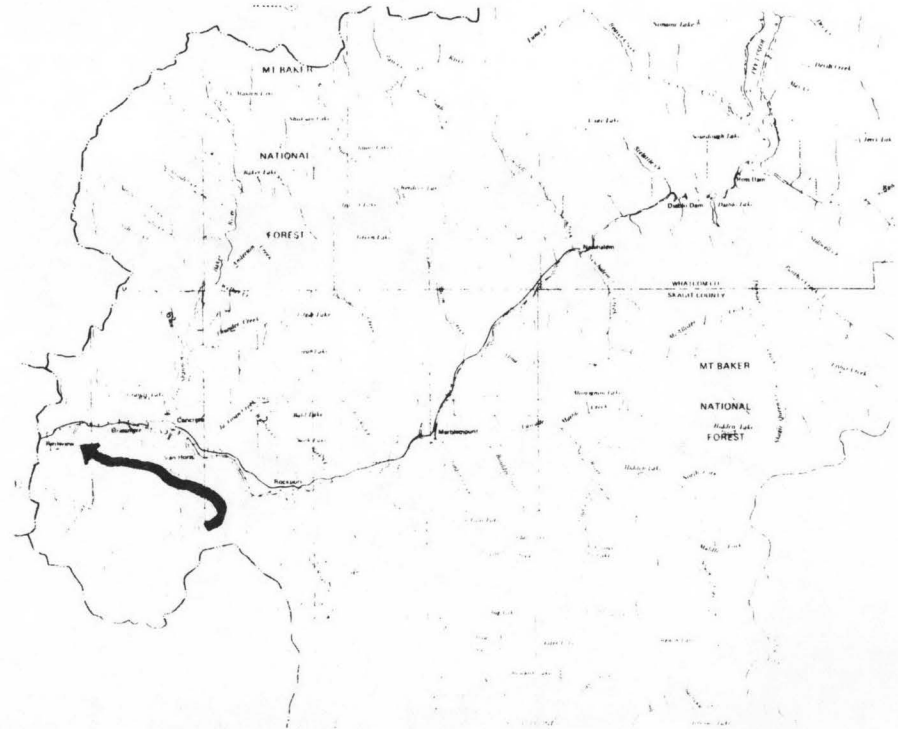
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.9	1.91	16.7	1.00
80	65.6	5.72	45.6	0.91
50	177	15.5	102	0.75
30	277	24.1	131	0.62
10	522	45.5	168	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 243 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0025

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R8E</u>
D. Latitude, Longitude	<u>48°25' 121°46'</u>
E. Stream Name	<u>Finney Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>16.9/20.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

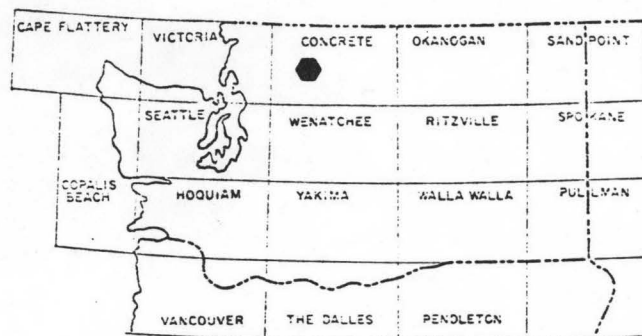
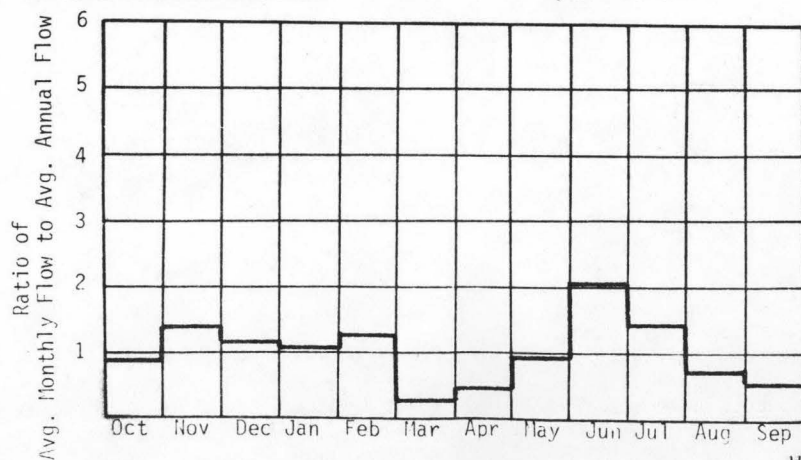
A. Upstream Elevation of Reach	<u>1680</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1160</u>	Ft. MSL
C. Total Available Head in Reach	<u>520 + 66 = 586</u>	Ft.
D. Average Slope in Reach	<u>137</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>180</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

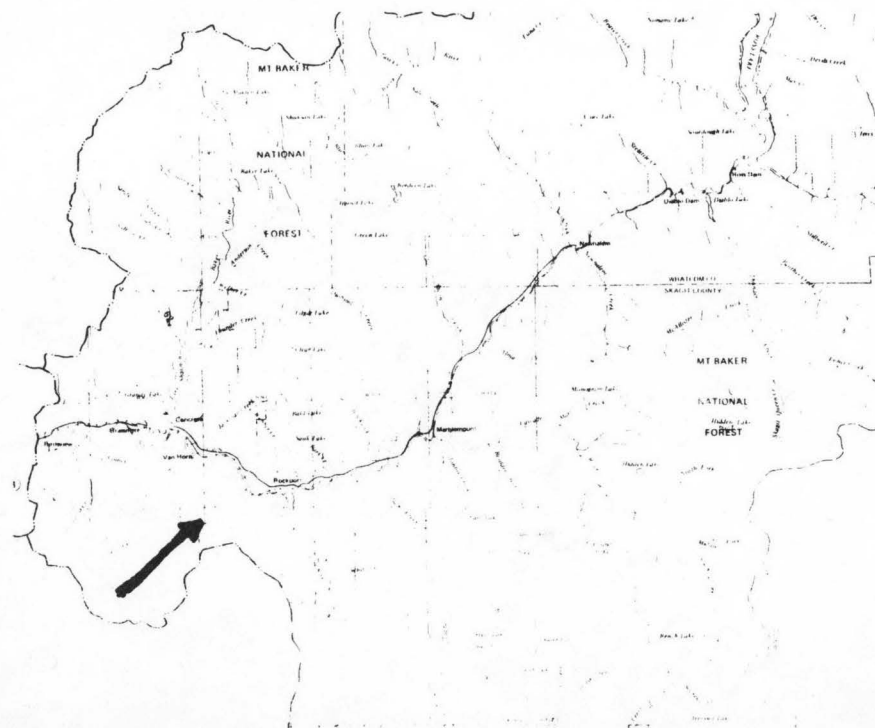
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	8.10	0.40	3.52	1.00
80	24.3	1.20	9.60	0.91
50	65.7	3.26	21.4	0.75
30	103	5.09	27.6	0.62
10	194	9.59	35.3	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0026

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T37N R9E
D. Latitude, Longitude	48°38' 121°41'
E. Stream Name	Baker River
F. Major Basin Name	Skagit
G. River Mile	8.9/11.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

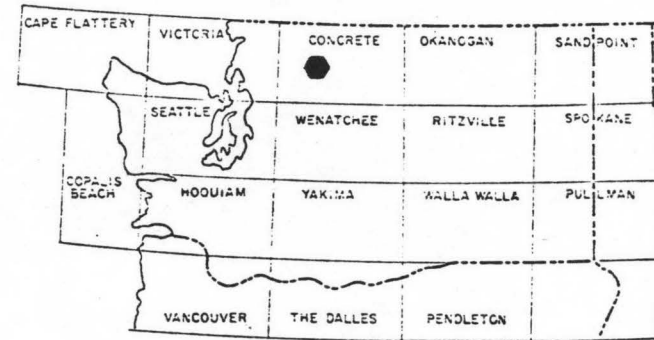
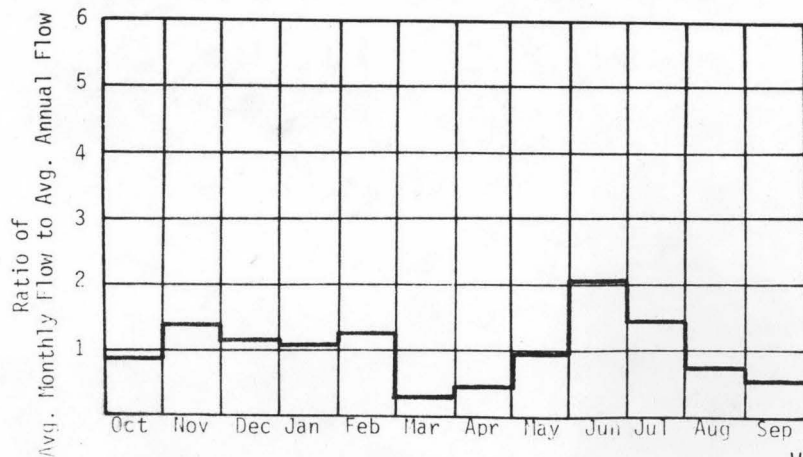
A. Upstream Elevation of Reach	530	Ft. MSL
B. Downstream Elevation of Reach	436	Ft. MSL
C. Total Available Head in Reach	94	Ft.
D. Average Slope in Reach	42.7	Ft./Mi.
E. Drainage Area above Reach Mouth	217	Sq.Mi.
F. Inflow Classification	Natural	

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

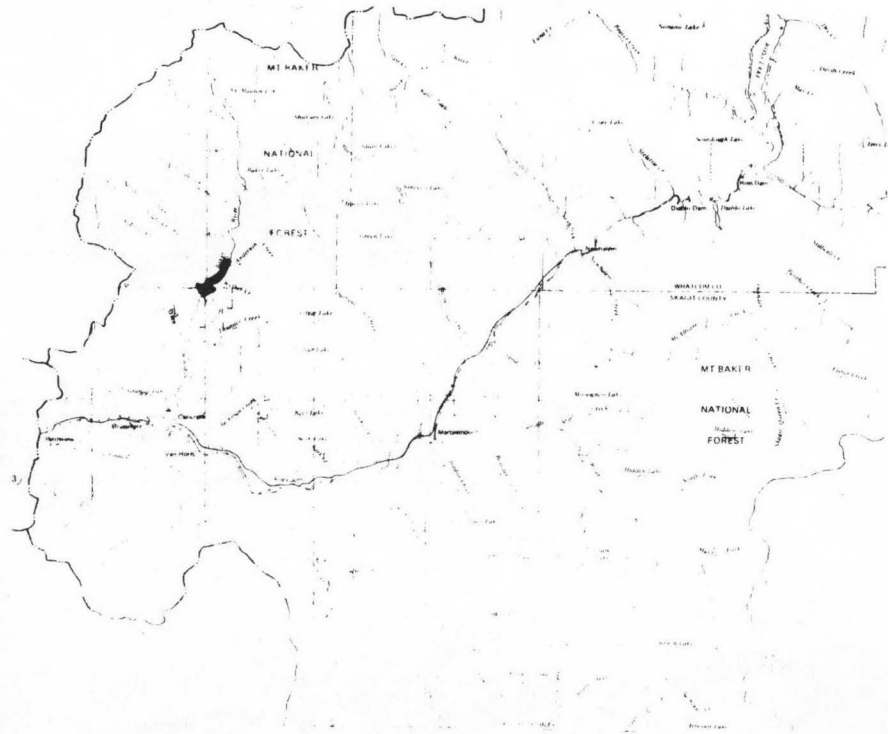
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	536	4.26	37.3	1.00
80	852	6.78	57.1	0.96
50	1590	12.6	89.6	0.81
30	2220	17.7	108	0.70
10	3850	30.6	129	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1984 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0027

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T37N R9E  
 D. Latitude, Longitude 48°40' 121°41'  
 E. Stream Name Baker River  
 F. Major Basin Name Skagit  
 G. River Mile 11.1/13.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

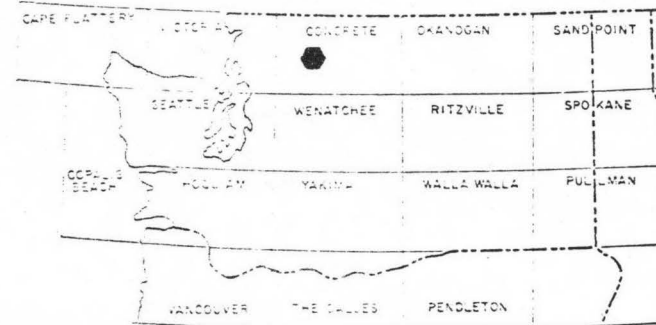
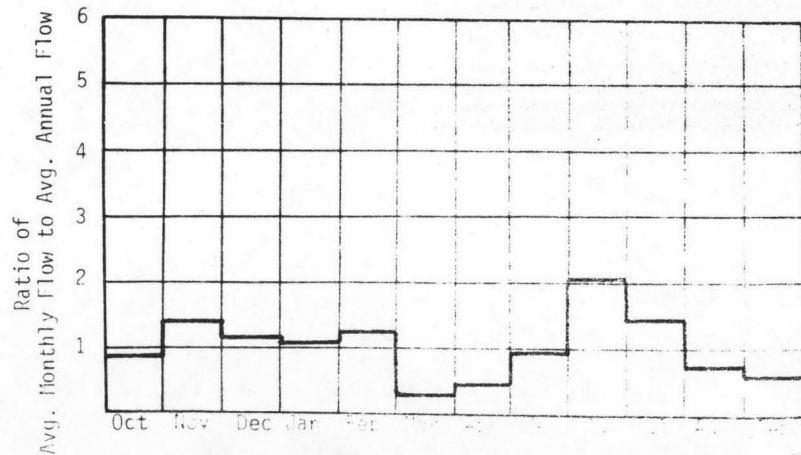
A. Upstream Elevation of Reach 610 Ft. MSL  
 B. Downstream Elevation of Reach 530 Ft. MSL  
 C. Total Available Head in Reach 80 Ft.  
 D. Average Slope in Reach 30.8 Ft./Mi.  
 E. Drainage Area above Reach Mouth 206 Sq. Mi.  
 F. Inflow Classification Natural

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size Mw	Annual Energy Available GW	Plant Factor
95	510	3.45	30.2	1.00
80	812	5.49	46.2	0.96
50	1510	10.2	72.5	0.81
30	2110	14.3	87.8	0.70
10	3660	24.8	104	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMF = 1888 cfs



LOCATIONS FOR USGS 1:50,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0028

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T37N R9E  
 D. Latitude, Longitude 48°42' 121°40'  
 E. Stream Name Baker River  
 F. Major Basin Name Skagit  
 G. River Mile 13.7/16.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

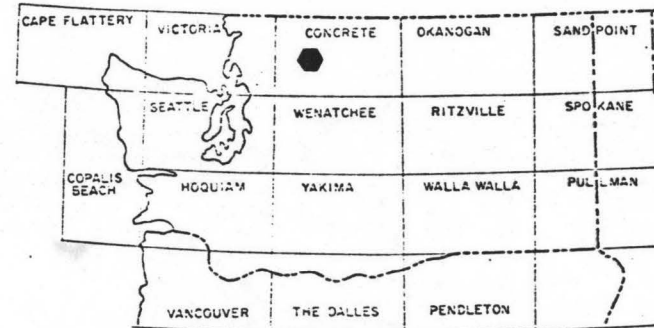
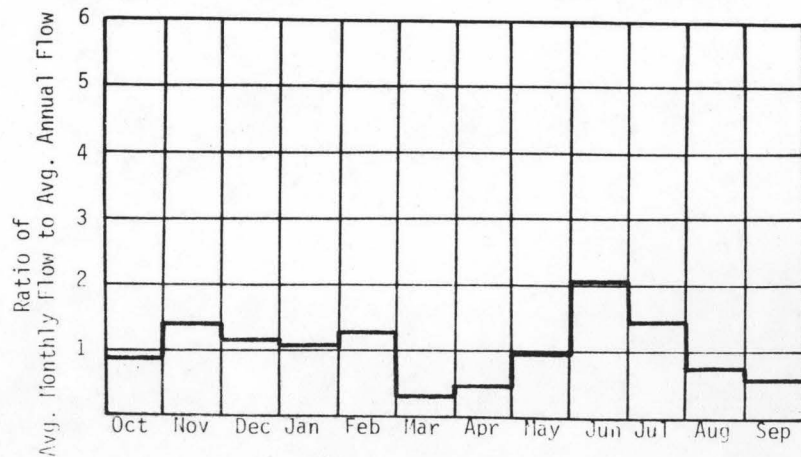
A. Upstream Elevation of Reach 650 Ft. MSL  
 B. Downstream Elevation of Reach 610 Ft. MSL  
 C. Total Available Head in Reach 40 Ft.  
 D. Average Slope in Reach 15.4 Ft./Mi.  
 E. Drainage Area above Reach Mouth 190 Sq.Mi.  
 F. Inflow Classification Natural

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

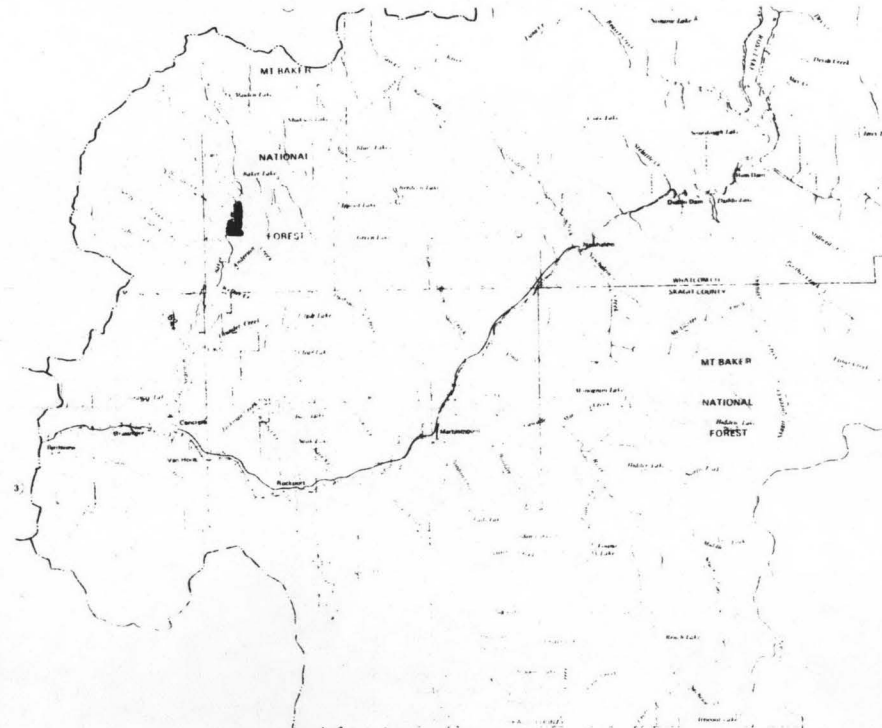
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	462	1.55	13.7	1.00
80	736	2.49	21.0	0.96
50	1370	4.63	32.9	0.81
30	1920	6.49	39.8	0.70
10	3320	11.2	47.4	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1712 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0029

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T37N R9E  
 D. Latitude, Longitude 48°43' 121°40'  
 E. Stream Name Baker River  
 F. Major Basin Name Skagit  
 G. River Mile 16.3/17.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

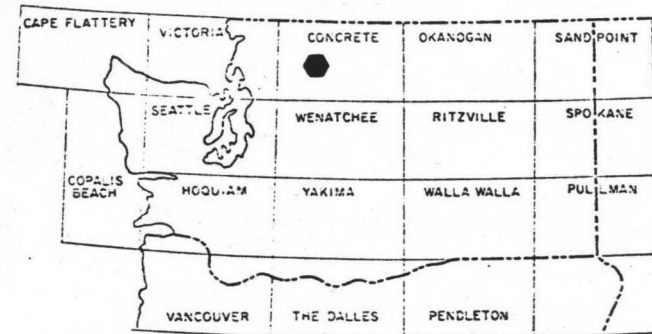
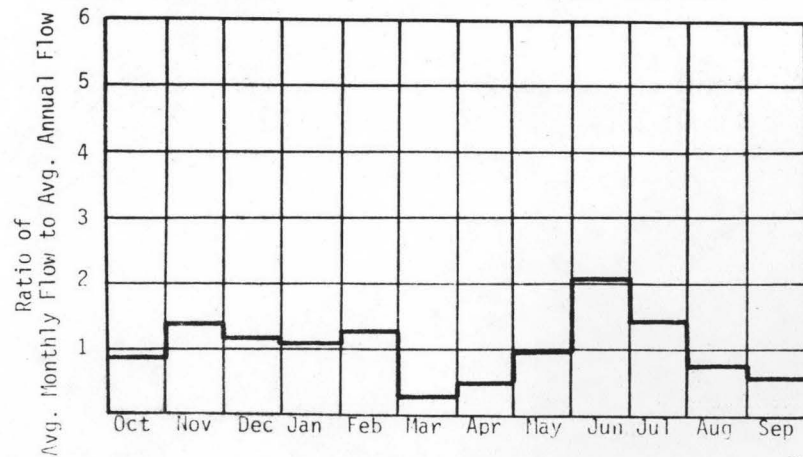
A. Upstream Elevation of Reach 660 Ft. MSL  
 B. Downstream Elevation of Reach 650 Ft. MSL  
 C. Total Available Head in Reach 10 Ft.  
 D. Average Slope in Reach 12.5 Ft./Mi.  
 E. Drainage Area above Reach Mouth 172 Sq.Mi.  
 F. Inflow Classification Natural

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

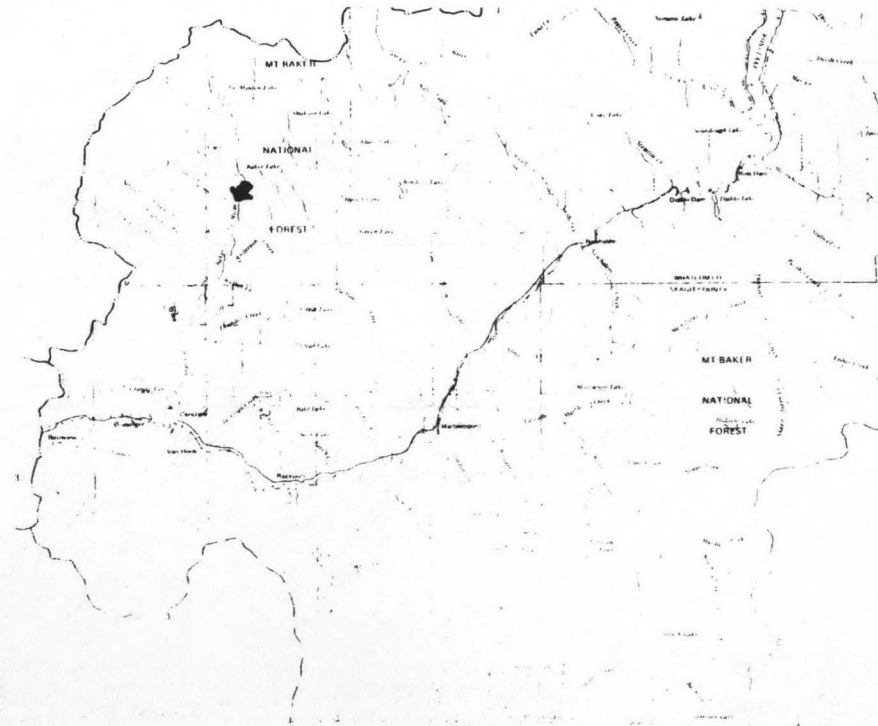
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	424	0.36	3.14	1.00
80	675	0.57	4.80	0.96
50	1260	1.06	7.53	0.81
30	1760	1.49	9.12	0.70
10	3040	2.58	10.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1569 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0030

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R9E</u>
D. Latitude, Longitude	<u>48°43' 121°38'</u>
E. Stream Name	<u>Baker River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>17.1/19.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

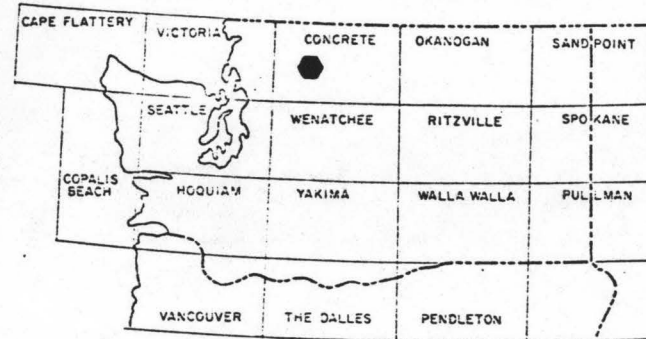
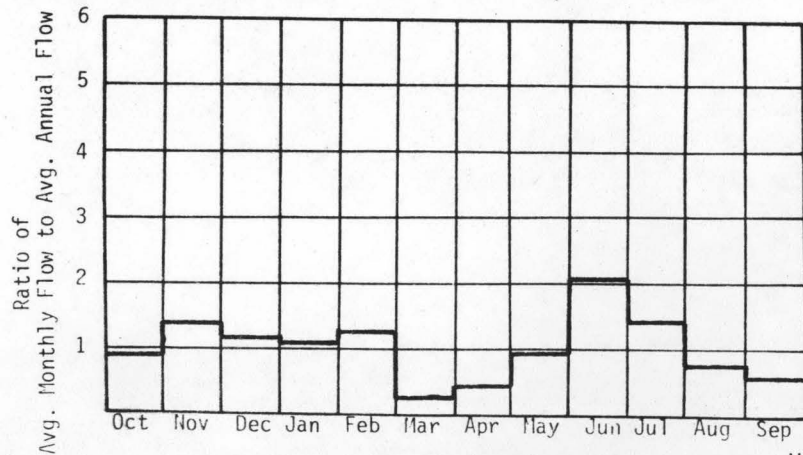
A. Upstream Elevation of Reach	<u>663</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>660</u>	Ft. MSL
C. Total Available Head in Reach	<u>3</u>	Ft.
D. Average Slope in Reach	<u>1.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>121</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

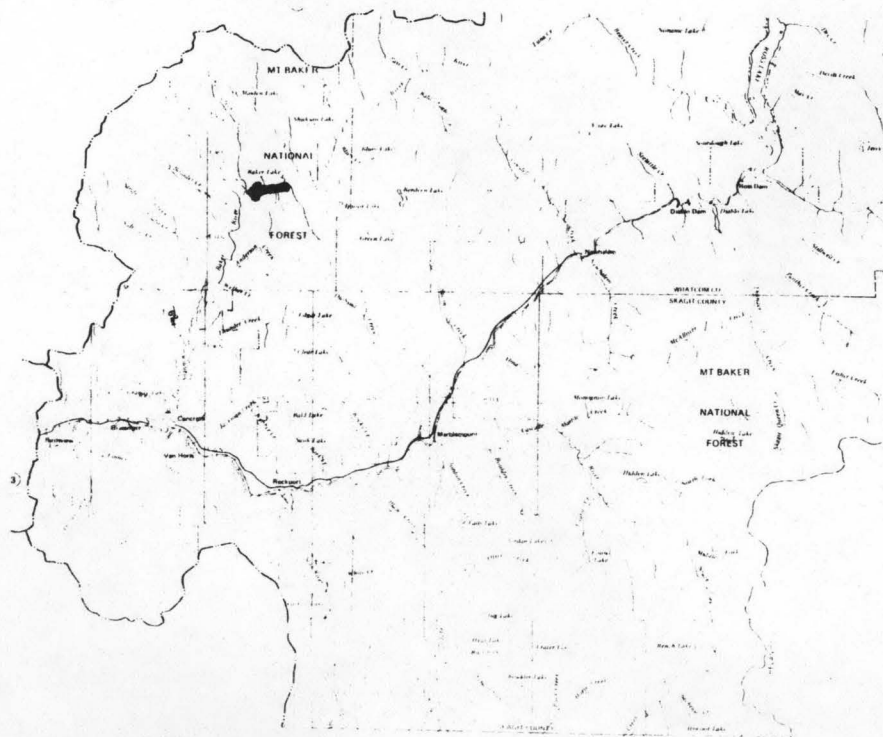
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	302	0.08	0.67	1.00
80	480	0.12	1.03	0.96
50	894	0.23	1.61	0.81
30	1250	0.32	1.95	0.70
10	2170	0.55	2.31	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1117 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0031

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R10E</u>
D. Latitude, Longitude	<u>48°45' 121°33'</u>
E. Stream Name	<u>Baker River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>19.3/25.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

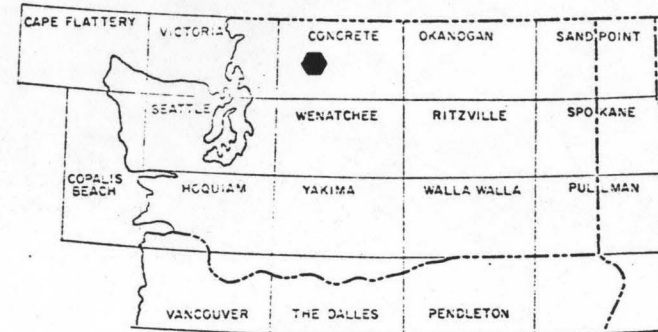
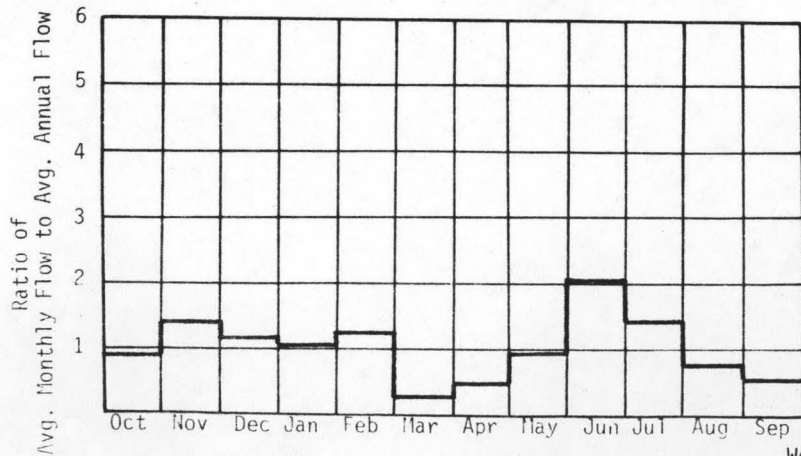
A. Upstream Elevation of Reach	<u>875</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>663</u>	Ft. MSL
C. Total Available Head in Reach	<u>212</u>	Ft.
D. Average Slope in Reach	<u>35.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>99</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

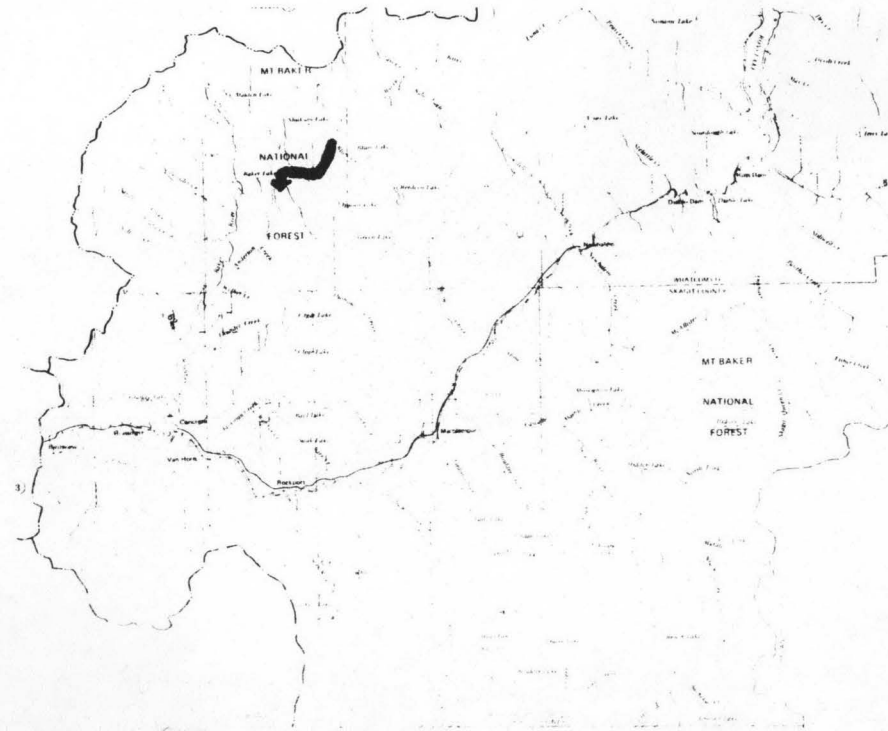
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	224	4.02	35.2	1.00
80	357	6.40	53.8	0.96
50	664	11.9	84.5	0.81
30	930	16.7	102	0.70
10	1610	28.9	121	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 830 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0032

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R10E</u>
D. Latitude, Longitude	<u>48°47' 121°30'</u>
E. Stream Name	<u>Baker River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>25.3/27.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

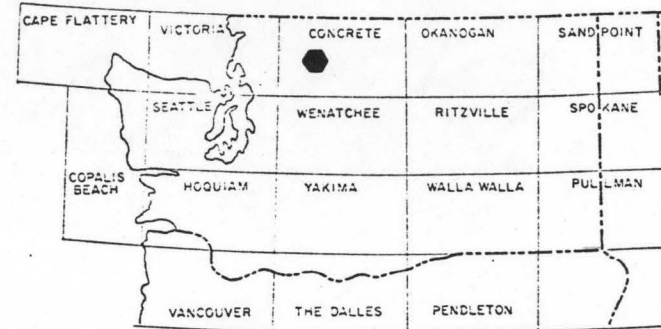
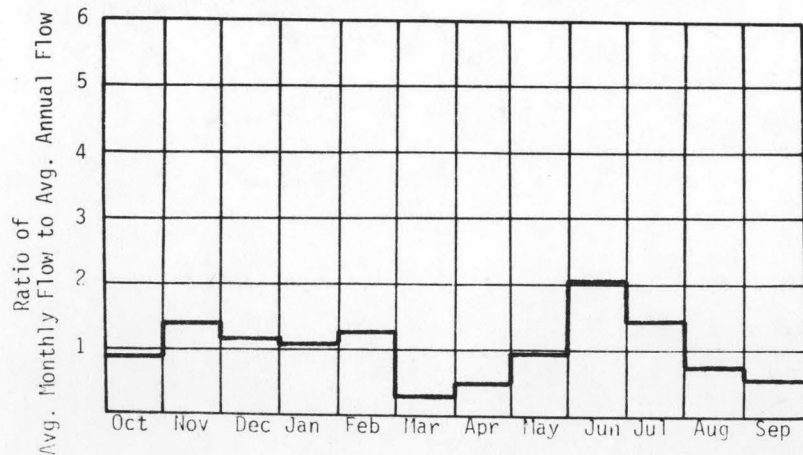
A. Upstream Elevation of Reach	<u>970</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>875</u>	Ft. MSL
C. Total Available Head in Reach	<u>95</u>	Ft.
D. Average Slope in Reach	<u>47.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>61.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

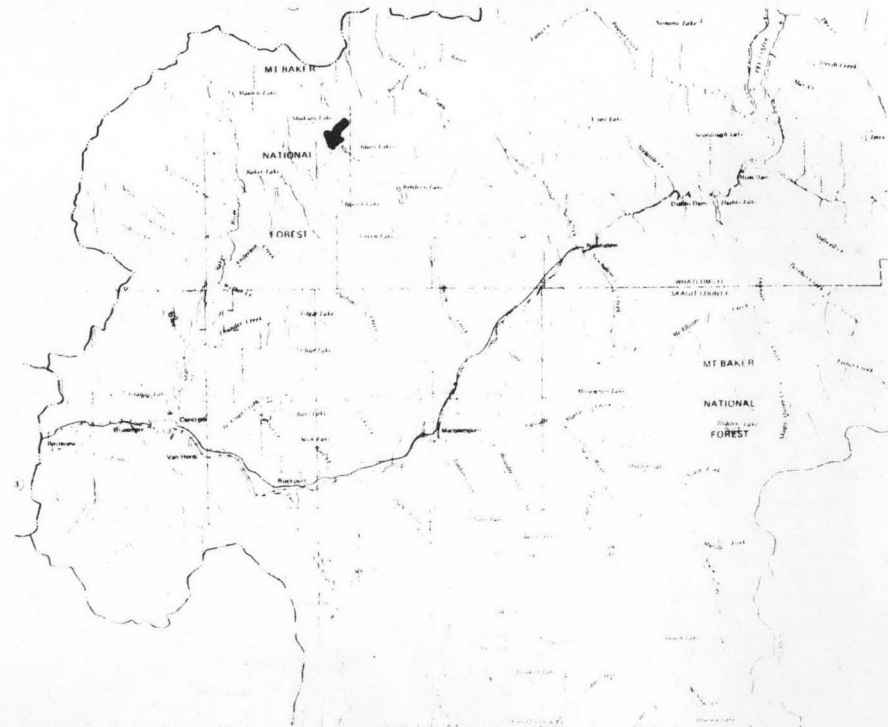
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	160	1.28	11.3	1.00
80	255	2.05	17.2	0.96
50	474	3.81	27.0	0.81
30	663	5.33	32.7	0.70
10	1150	9.23	38.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 592 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0033

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T38N R10E  
 D. Latitude, Longitude 48°48' 121°29'  
 E. Stream Name Baker River  
 F. Major Basin Name Skagit  
 G. River Mile 27.3/29.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

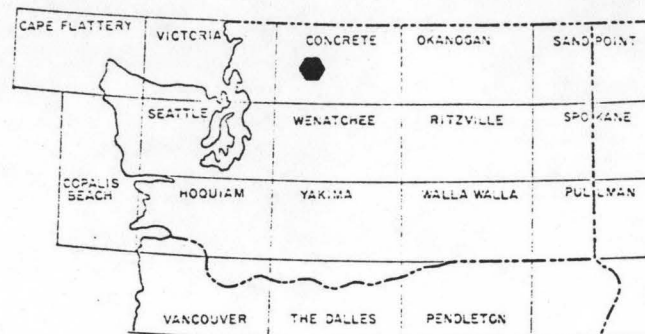
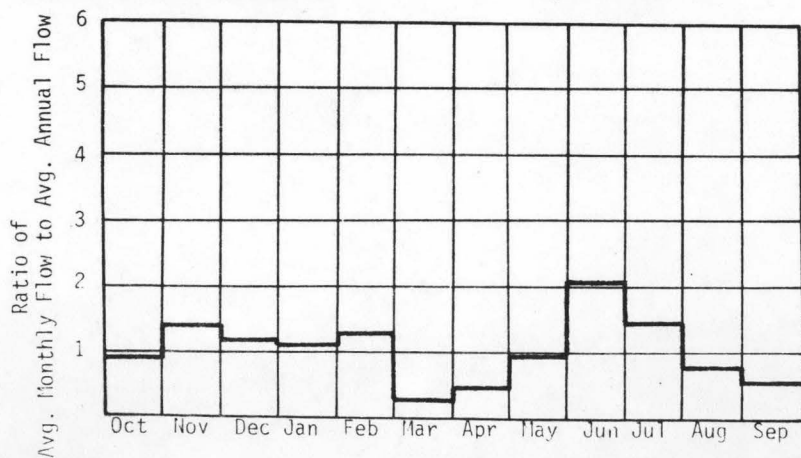
A. Upstream Elevation of Reach 1120 Ft. MSL  
 B. Downstream Elevation of Reach 970 Ft. MSL  
 C. Total Available Head in Reach 150 Ft.  
 D. Average Slope in Reach 68.2 Ft./Mi.  
 E. Drainage Area above Reach Mouth 54.3 Sq.Mi.  
 F. Inflow Classification Natural

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

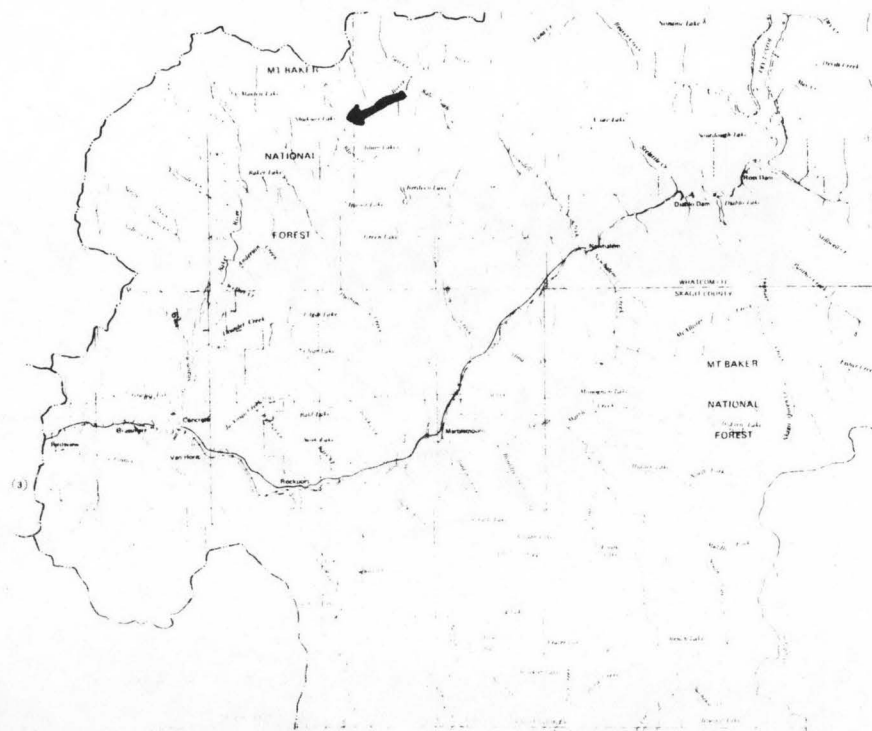
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	135	1.71	15.0	1.00
80	215	2.73	22.9	0.96
50	400	5.08	36.0	0.81
30	560	7.11	43.6	0.70
10	970	12.3	51.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 500 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0034

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R10E</u>
D. Latitude, Longitude	<u>48°48' 121°28'</u>
E. Stream Name	<u>Baker River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>29.5/30.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

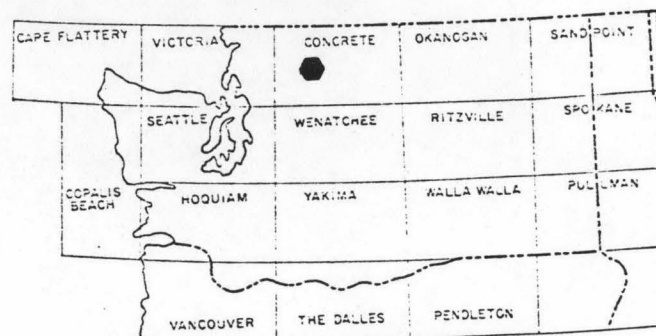
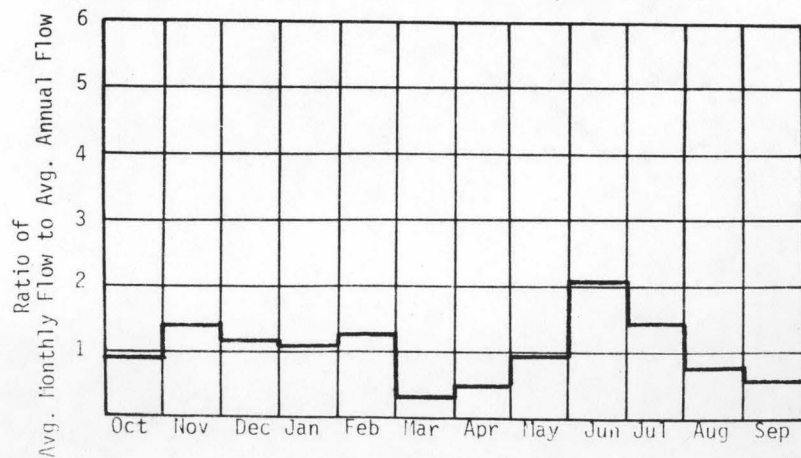
A. Upstream Elevation of Reach	<u>1200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1120</u>	Ft. MSL
C. Total Available Head in Reach	<u>80</u>	Ft.
D. Average Slope in Reach	<u>88.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>30.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

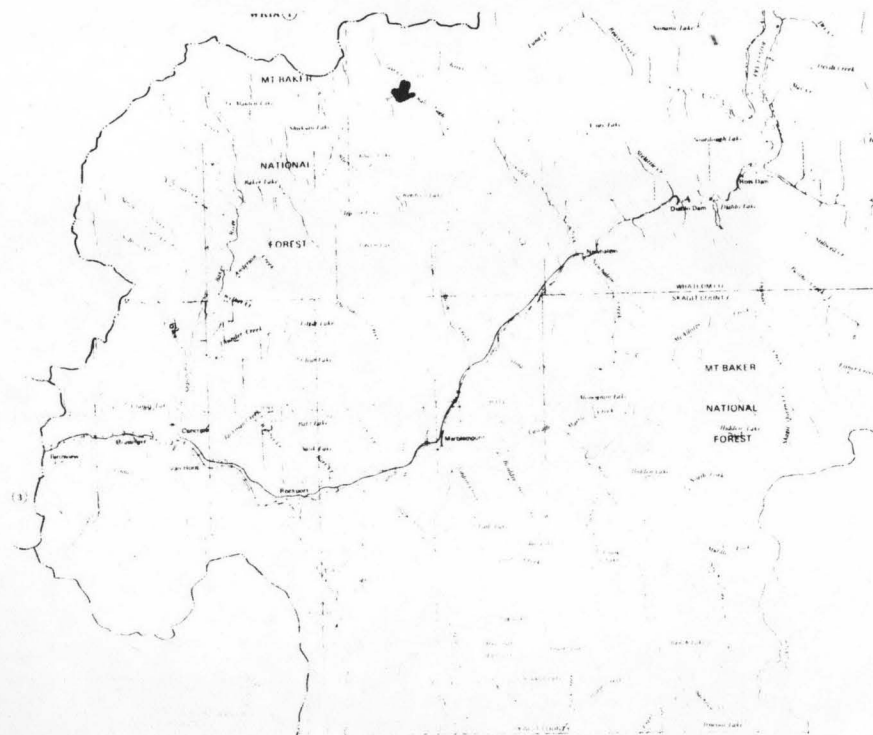
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	65.6	0.44	3.89	1.00
80	105	0.71	5.95	0.96
50	194	1.32	9.34	0.81
30	272	1.84	11.3	0.70
10	471	3.19	13.4	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 234 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0035

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T28N R10E</u>
D. Latitude, Longitude	<u>48°49' 121°25'</u>
E. Stream Name	<u>Baker River</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>30.4/32.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

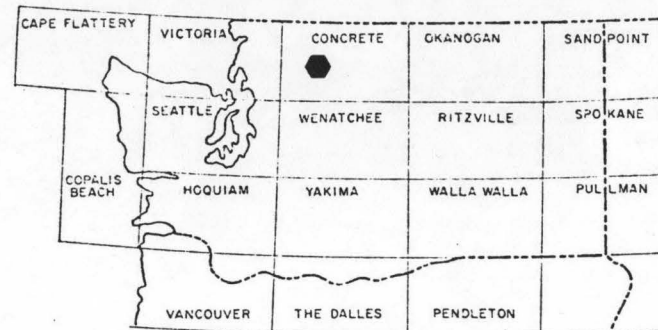
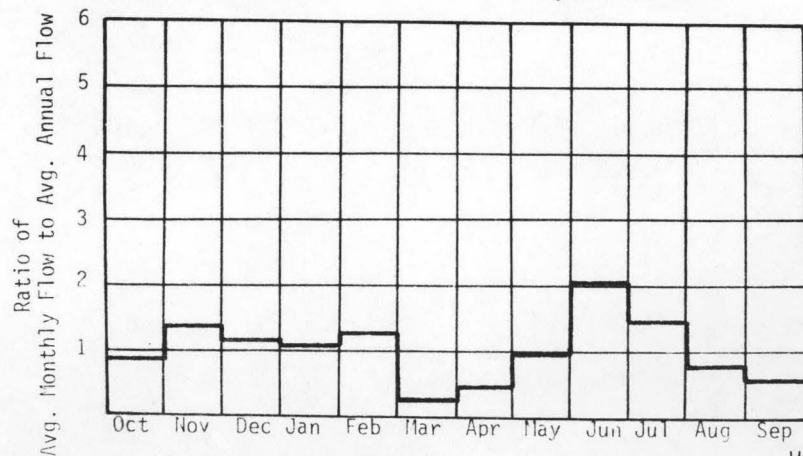
A. Upstream Elevation of Reach	<u>1730</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1200</u>	Ft. MSL
C. Total Available Head in Reach	<u>530</u>	Ft.
D. Average Slope in Reach	<u>252</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>19.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

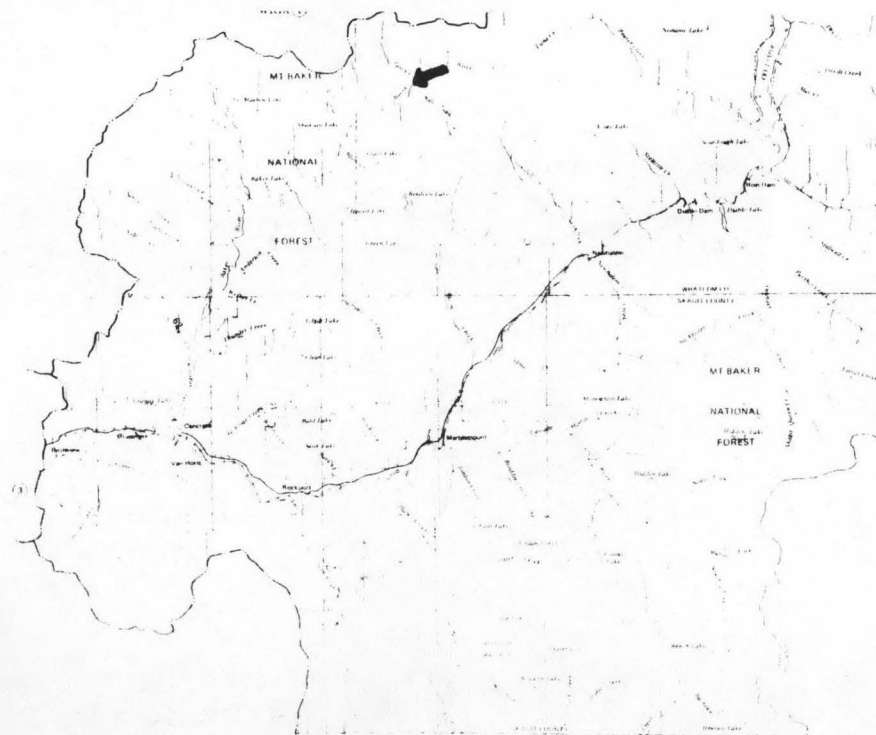
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	45.9	2.06	18.0	1.00
80	73.1	3.28	27.6	0.96
50	136	6.10	43.3	0.81
30	190	8.54	52.4	0.70
10	330	14.8	62.2	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 170 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0036

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T39N R10E  
 D. Latitude, Longitude 48°50' 121°25'  
 E. Stream Name Baker River  
 F. Major Basin Name Skagit  
 G. River Mile 32.5/33.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

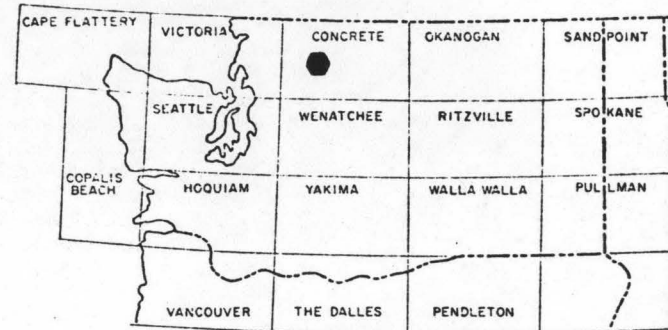
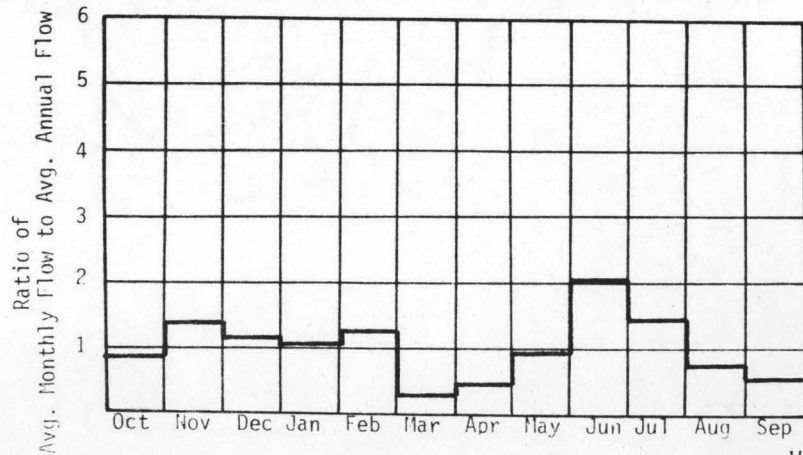
A. Upstream Elevation of Reach 2400 Ft. MSL  
 B. Downstream Elevation of Reach 1730 Ft. MSL  
 C. Total Available Head in Reach 670 + 66 = 736 Ft.  
 D. Average Slope in Reach 957 Ft./Mi.  
 E. Drainage Area above Reach Mouth 15.8 Sq.Mi.  
 F. Inflow Classification Natural

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

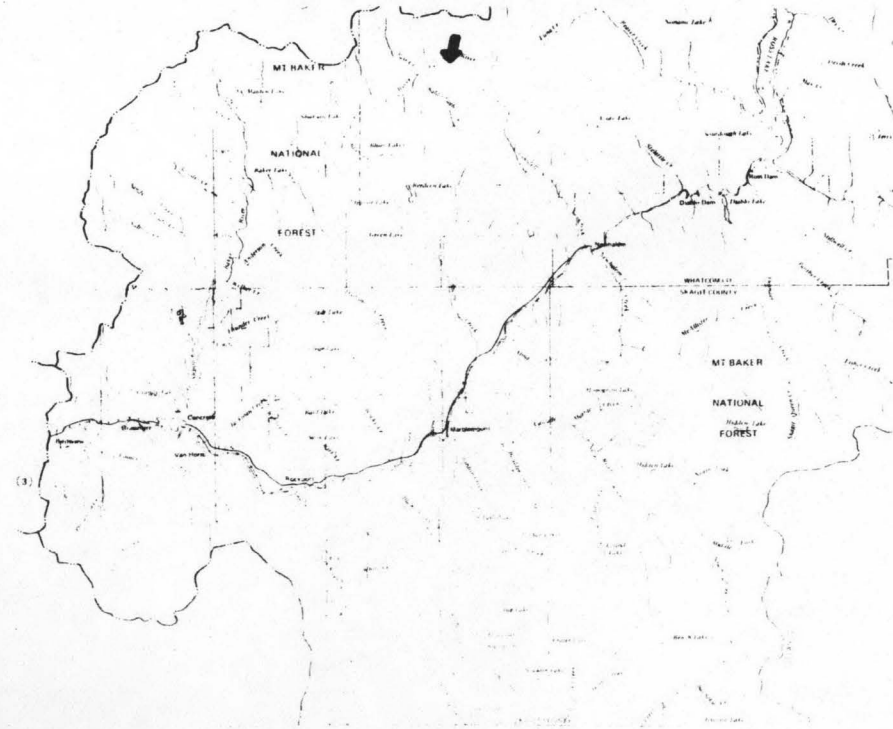
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.9	1.18	10.3	1.00
80	30.1	1.87	15.8	0.96
50	56.0	3.49	24.7	0.81
30	78.4	4.88	29.9	0.70
10	136	8.46	35.6	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 70 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0037

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T36N R9E</u>
D. Latitude, Longitude	<u>48°37' 121°38'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/5.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

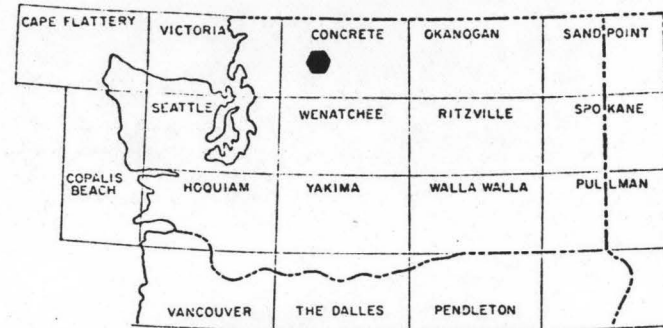
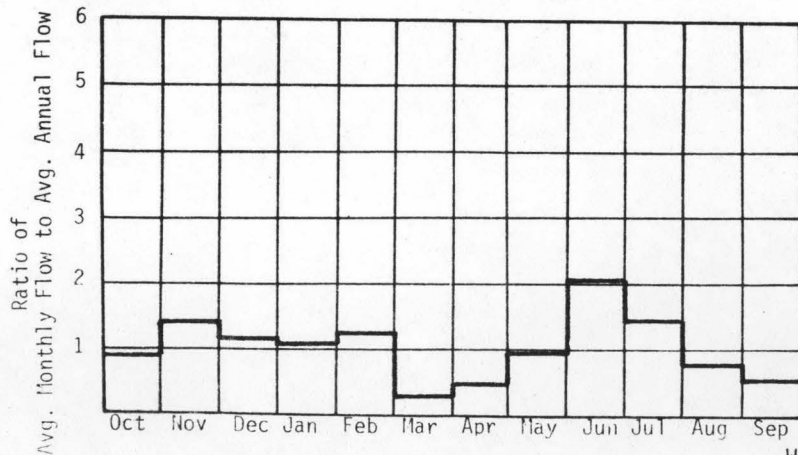
A. Upstream Elevation of Reach	<u>1990</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>436</u>	Ft. MSL
C. Total Available Head in Reach	<u>1554</u>	Ft.
D. Average Slope in Reach	<u>288</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>23.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

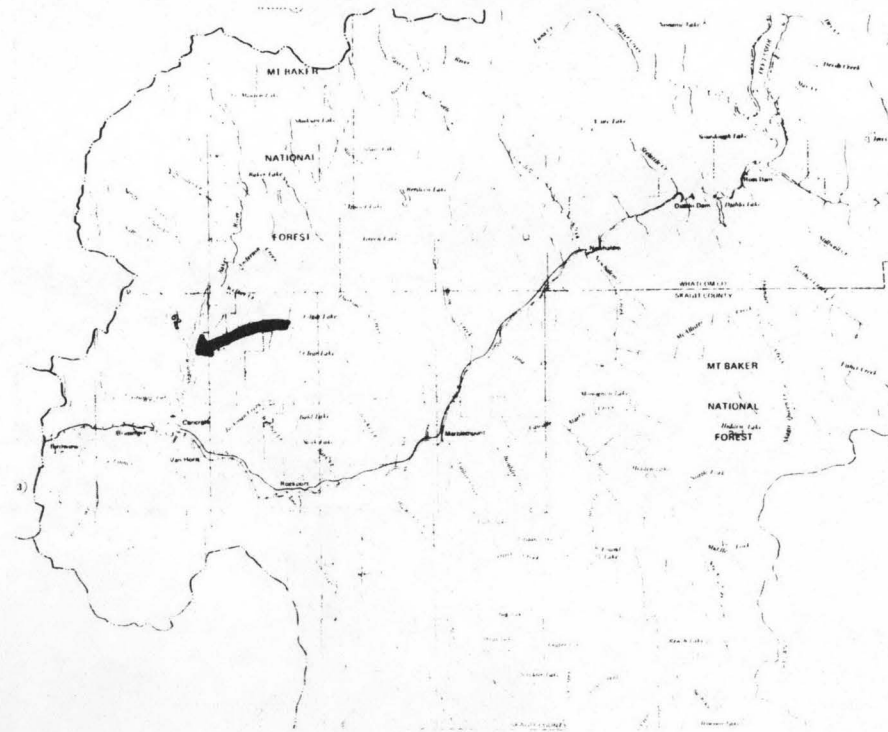
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	31.9	4.19	36.7	1.00
80	50.7	6.67	56.1	0.96
50	94.4	12.4	88.1	0.81
30	132	17.4	107	0.70
10	229	30.1	127	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 118 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0038

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T36N R9E</u>
D. Latitude, Longitude	<u>48°37' 121°35'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>5.4/6.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

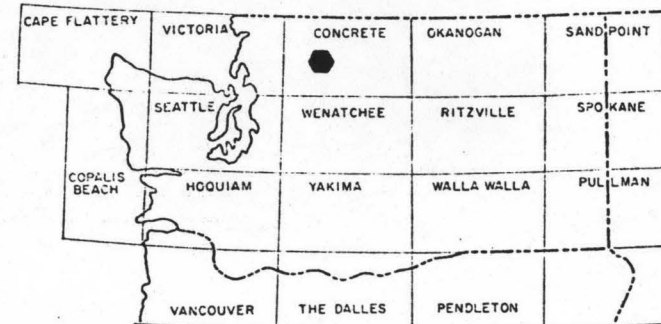
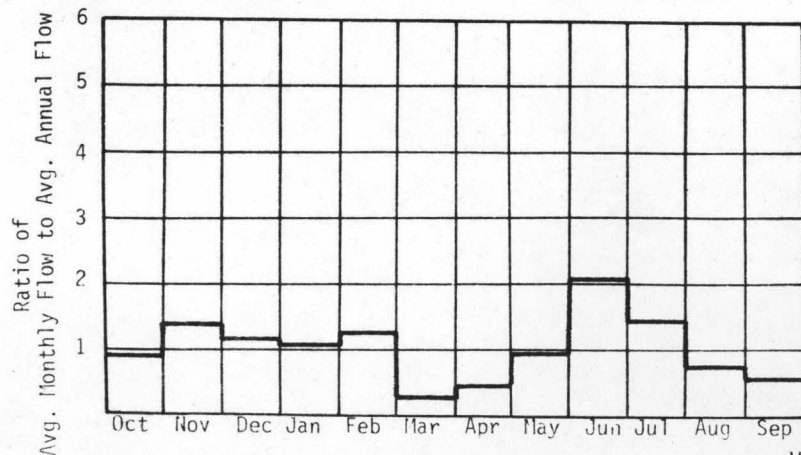
A. Upstream Elevation of Reach	<u>2400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1990</u>	Ft. MSL
C. Total Available Head in Reach	<u>410 + 66 = 476</u>	Ft.
D. Average Slope in Reach	<u>513</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>7.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

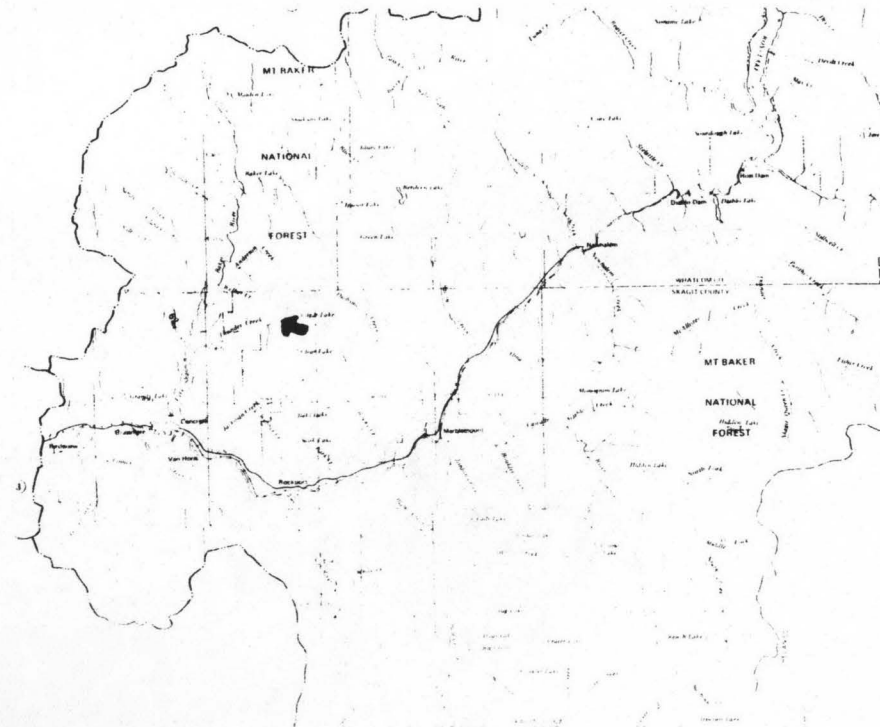
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.0	0.52	4.57	1.00
80	20.6	0.83	6.99	0.96
50	38.4	1.55	11.0	0.81
30	53.8	2.16	13.3	0.70
10	93.1	3.75	15.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 48 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0039

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T36N R9E  
 D. Latitude, Longitude 48°37' 121°36'  
 E. Stream Name Watson Creek  
 F. Major Basin Name Skagit  
 G. River Mile 0/0.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

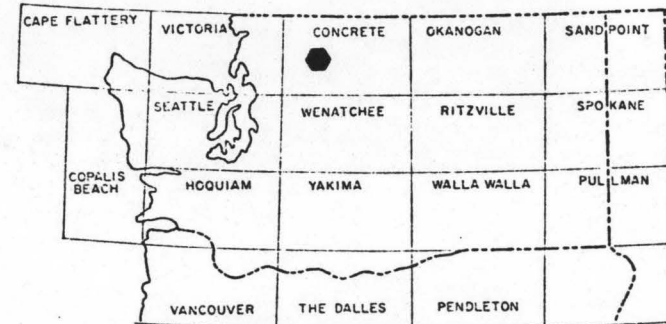
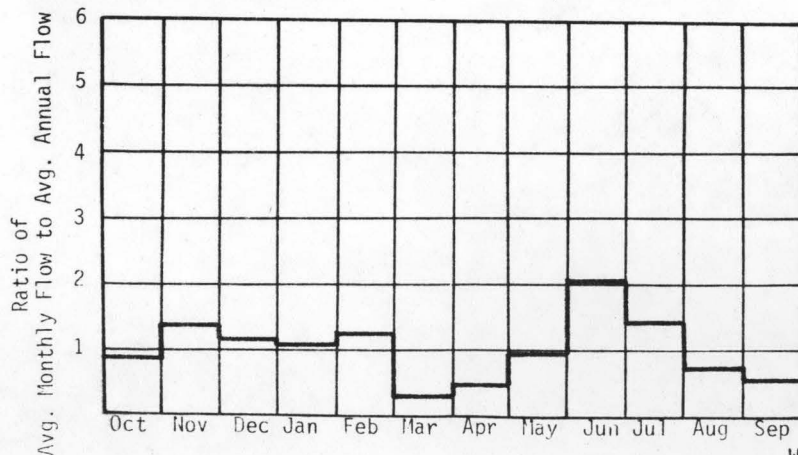
A. Upstream Elevation of Reach 2500 Ft. MSL  
 B. Downstream Elevation of Reach 1990 Ft. MSL  
 C. Total Available Head in Reach 510 + 66 = 576 Ft.  
 D. Average Slope in Reach 638 Ft./Mi.  
 E. Drainage Area above Reach Mouth 4.6 Sq.Mi.  
 F. Inflow Classification Natural

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

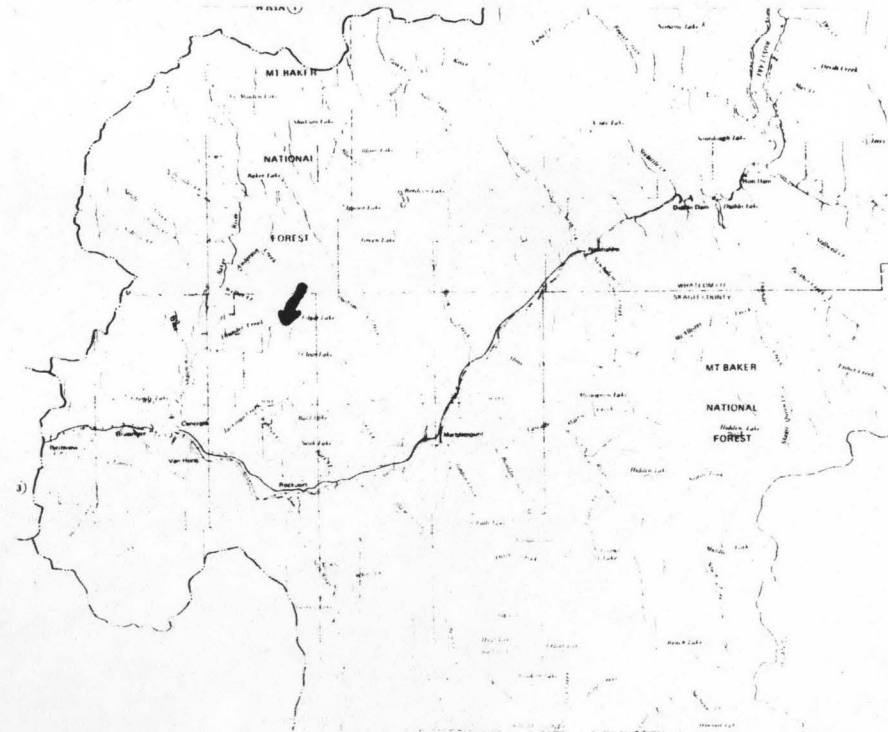
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.4	0.61	5.30	1.00
80	19.8	0.96	8.11	0.96
50	36.8	1.79	12.7	0.81
30	51.5	2.51	15.4	0.70
10	89.2	4.35	18.3	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 46 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0040

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T36N R8E  
 D. Latitude, Longitude 48°37' 121°44'  
 E. Stream Name Bear Creek  
 F. Major Basin Name Skagit  
 G. River Mile 0/0.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

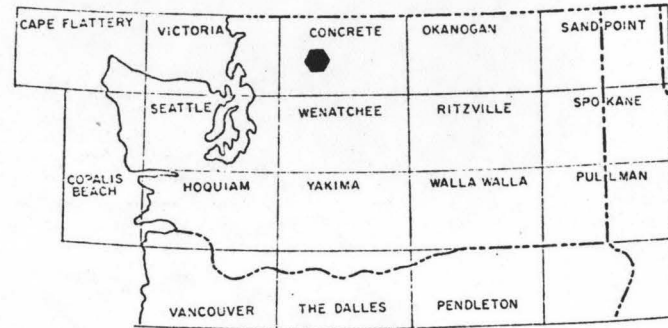
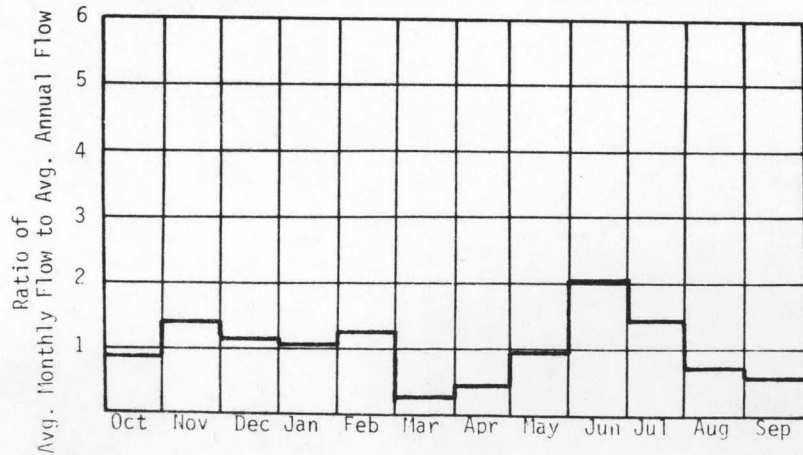
A. Upstream Elevation of Reach 912 Ft. MSL  
 B. Downstream Elevation of Reach 436 Ft. MSL  
 C. Total Available Head in Reach 476 + 66 = 542 Ft.  
 D. Average Slope in Reach 680 Ft./Mi.  
 E. Drainage Area above Reach Mouth 14.9 Sq.Mi.  
 F. Inflow Classification Regulated

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

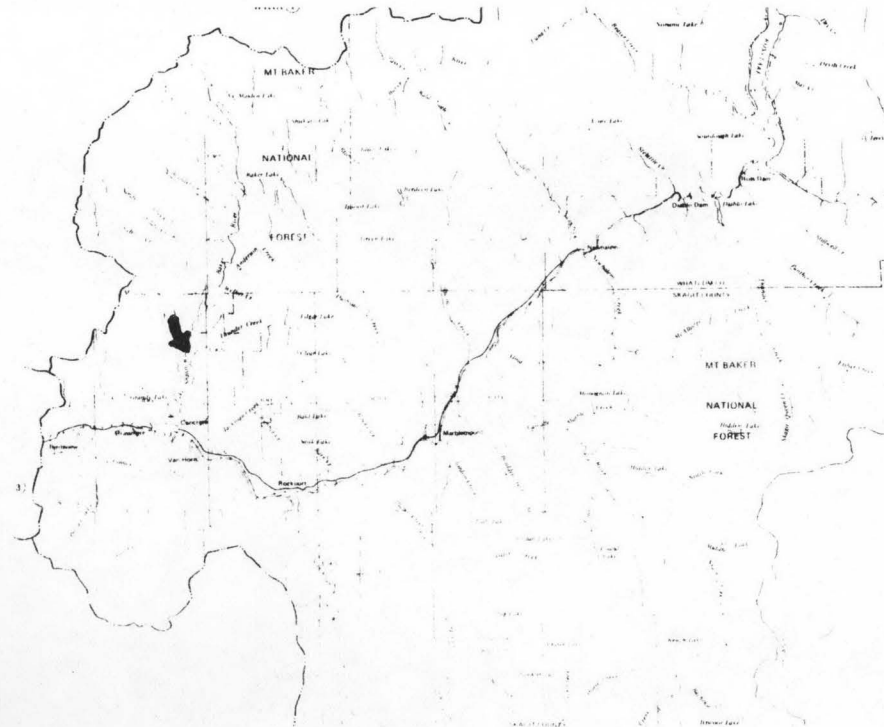
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.8	1.09	9.54	1.00
80	37.8	1.74	14.6	0.96
50	70.4	3.23	22.9	0.81
30	98.6	4.52	27.7	0.70
10	171	7.83	32.9	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 88 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0041

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R8E</u>
D. Latitude, Longitude	<u>48°38' 121°43'</u>
E. Stream Name	<u>Rocky Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

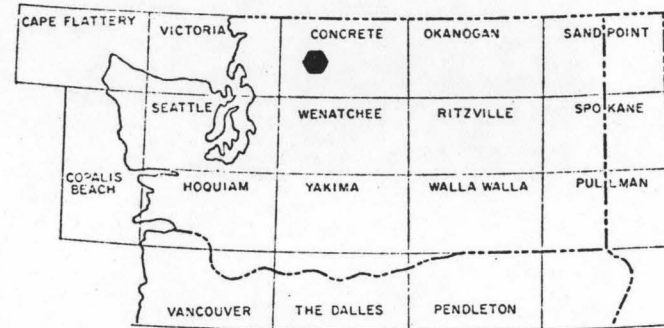
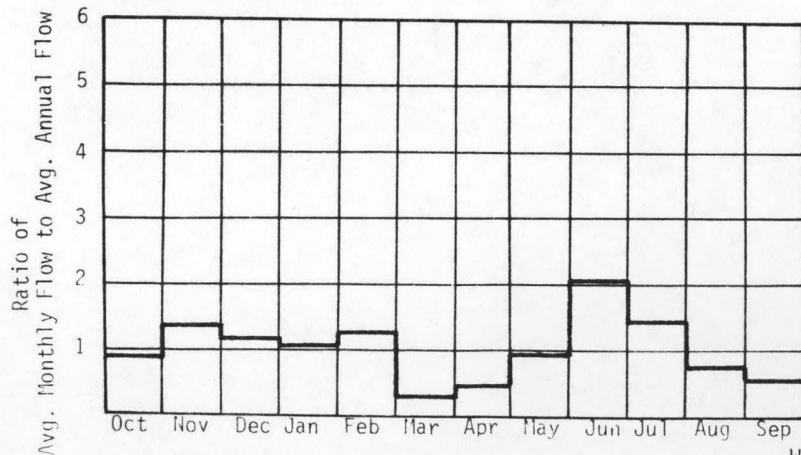
A. Upstream Elevation of Reach	<u>1050</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>436</u>	Ft. MSL
C. Total Available Head in Reach	<u>614</u>	Ft.
D. Average Slope in Reach	<u>279</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>12.2</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

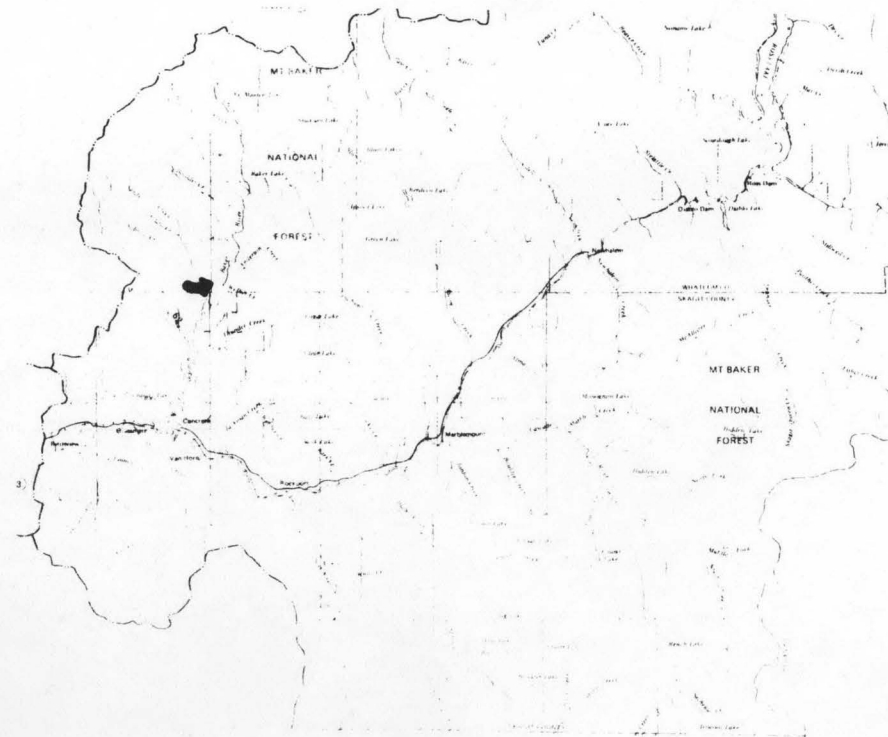
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	24.0	1.25	10.9	1.00
80	38.3	1.99	16.7	0.96
50	71.2	3.70	26.2	0.81
30	99.7	5.18	31.8	0.70
10	173	8.97	37.7	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 89 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0042

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R8E</u>
D. Latitude, Longitude	<u>48°41' 121°44'</u>
E. Stream Name	<u>Rocky Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.2/5.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

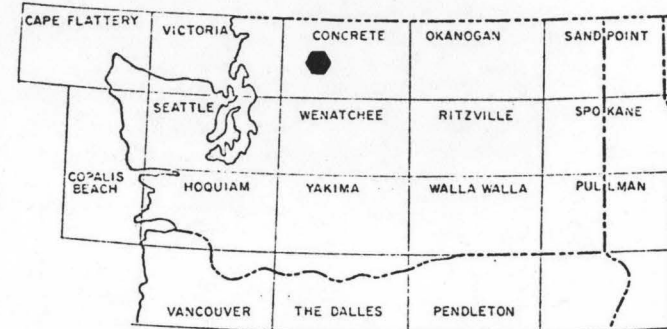
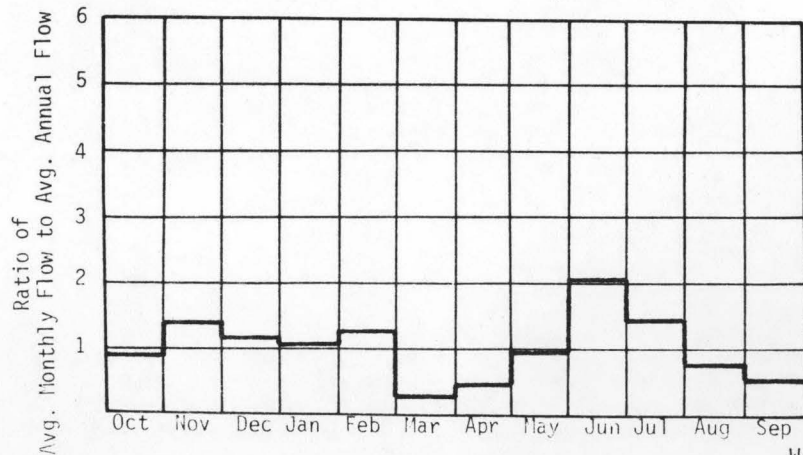
A. Upstream Elevation of Reach	<u>2100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1050</u>	Ft. MSL
C. Total Available Head in Reach	<u>1050 + 66 = 1116</u>	Ft.
D. Average Slope in Reach	<u>309</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.8</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

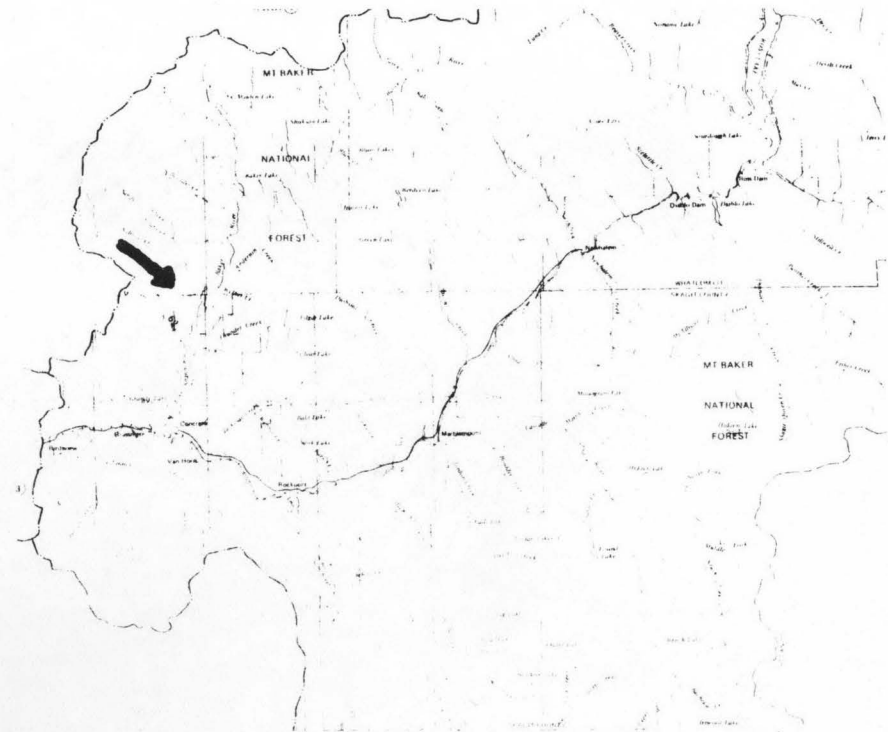
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	31.7	2.99	26.2	1.00
80	41.0	3.87	32.9	0.97
50	59.0	5.57	42.5	0.87
30	77.8	7.34	48.9	0.76
10	128	12.1	57.2	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 72 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0043

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T37N R8E
D. Latitude, Longitude	48°40' 121°43'
E. Stream Name	Sulphur Creek
F. Major Basin Name	Skagit
G. River Mile	0/3.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

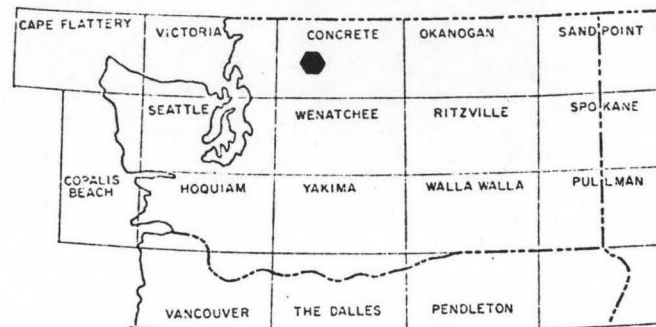
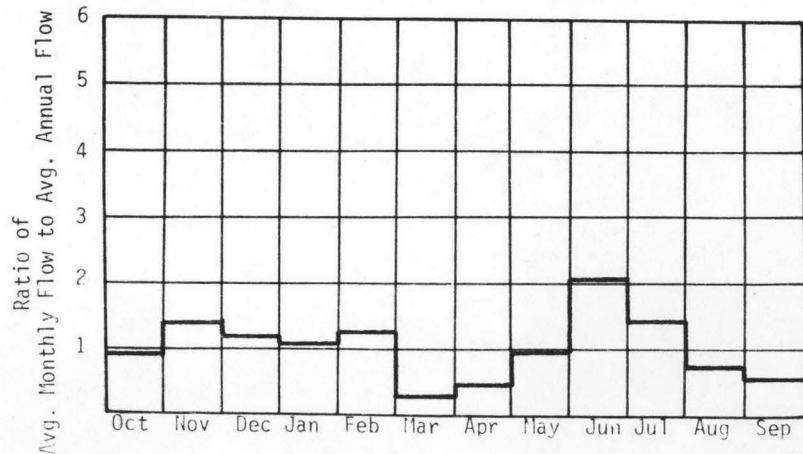
A. Upstream Elevation of Reach	1675	Ft.	MSL
B. Downstream Elevation of Reach	436	Ft.	MSL
C. Total Available Head in Reach	1239	Ft.	
D. Average Slope in Reach	354	Ft./Mi.	
E. Drainage Area above Reach Mouth	10.1	Sq.Mi.	
F. Inflow Classification	Regulated		

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

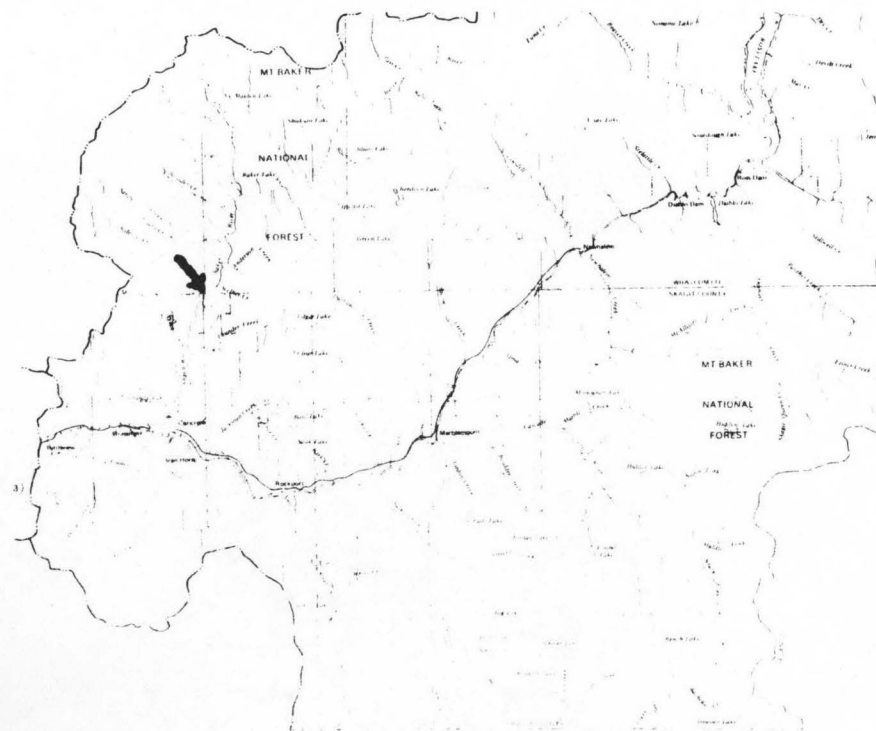
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.1	2.21	19.4	1.00
80	27.4	2.87	24.4	0.97
50	39.4	4.13	31.4	0.87
30	51.8	5.43	36.2	0.76
10	58.4	8.96	42.4	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 48 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0044

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R8E</u>
D. Latitude, Longitude	<u>46°42' 121°47'</u>
E. Stream Name	<u>Sulphur Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>3.5/8.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

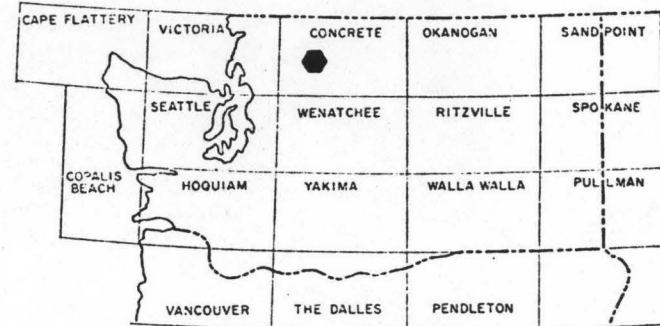
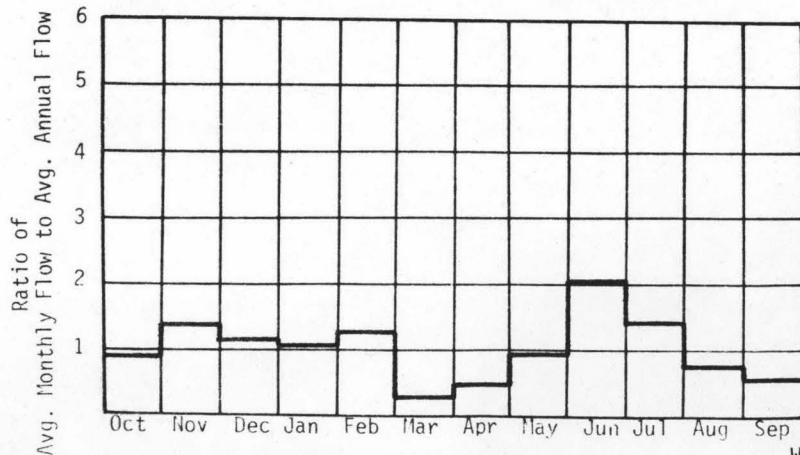
A. Upstream Elevation of Reach	<u>3400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1675</u>	Ft. MSL
C. Total Available Head in Reach	<u>1725 + 66 = 1791</u>	Ft.
D. Average Slope in Reach	<u>359</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.5</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

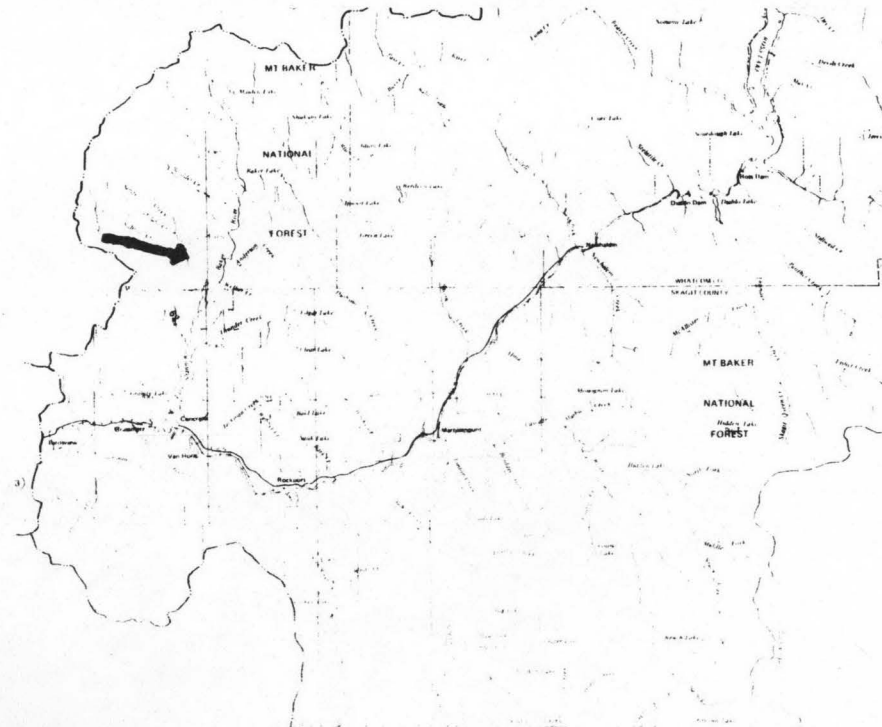
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	26.8	4.07	35.6	1.00
80	34.8	5.27	44.8	0.97
50	50.0	7.58	57.8	0.87
30	65.9	9.98	66.5	0.76
10	109	16.5	77.8	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 61 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0045

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R9E</u>
D. Latitude, Longitude	<u>48°39' 121°40'</u>
E. Stream Name	<u>Anderson Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

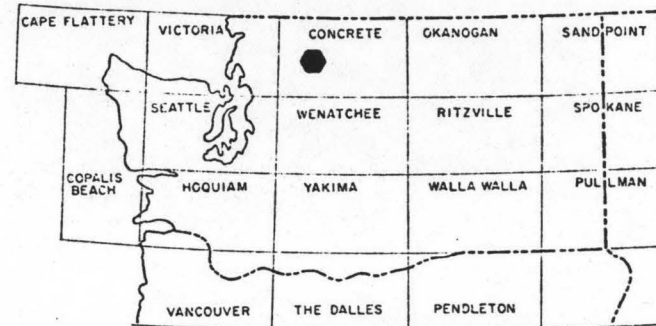
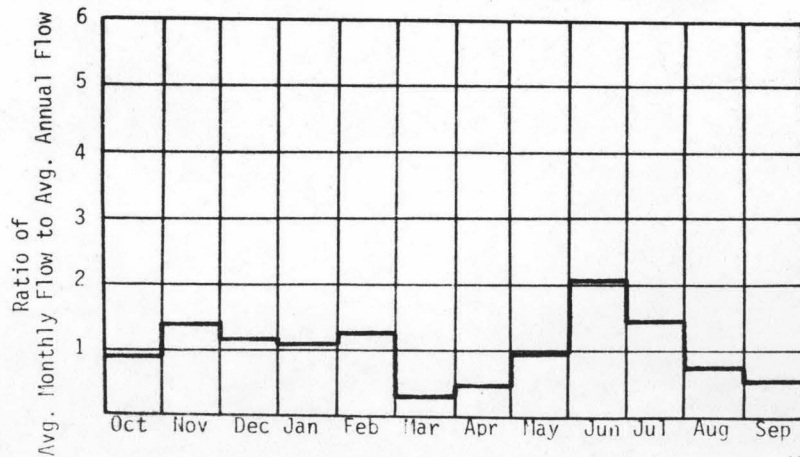
A. Upstream Elevation of Reach	<u>1400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>530</u>	Ft. MSL
C. Total Available Head in Reach	<u>870 + 66 = 936</u>	Ft.
D. Average Slope in Reach	<u>870</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>5.7</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

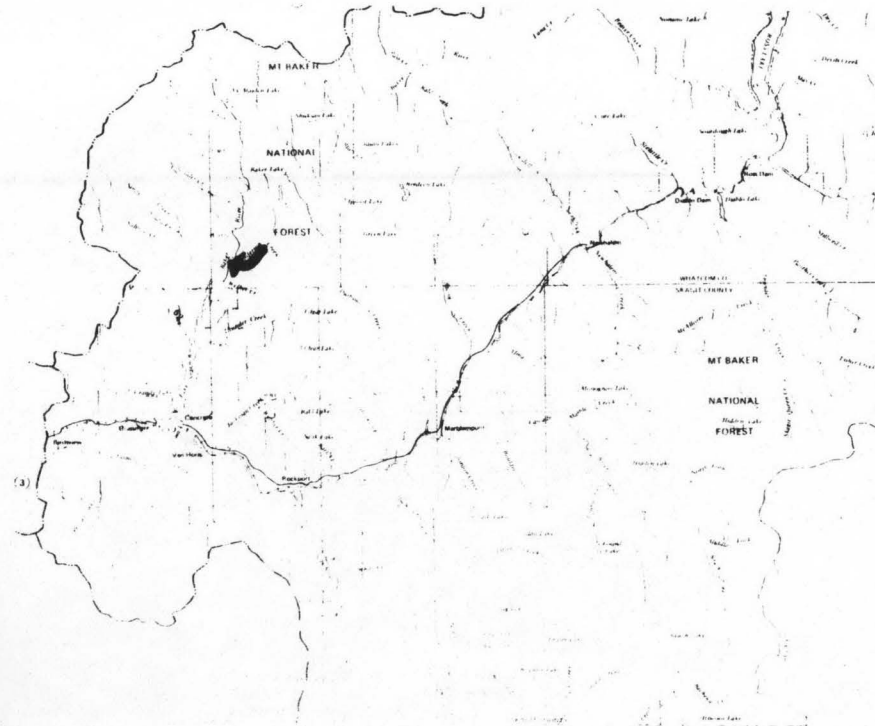
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.0	1.11	9.74	1.00
80	22.4	1.77	14.9	0.96
50	41.6	3.29	23.4	0.81
30	58.2	4.61	28.3	0.70
10	101	7.99	33.6	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 52 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0046

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R8E</u>
D. Latitude, Longitude	<u>48°42' 121°43'</u>
E. Stream Name	<u>Sandy Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

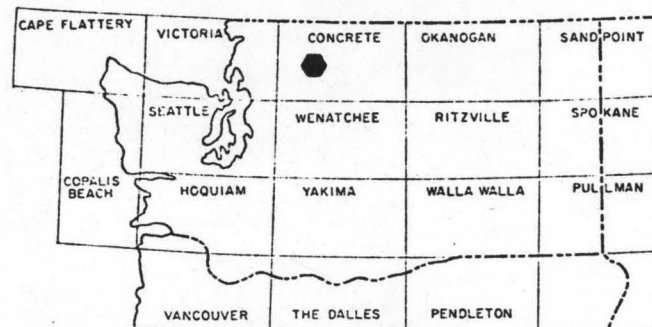
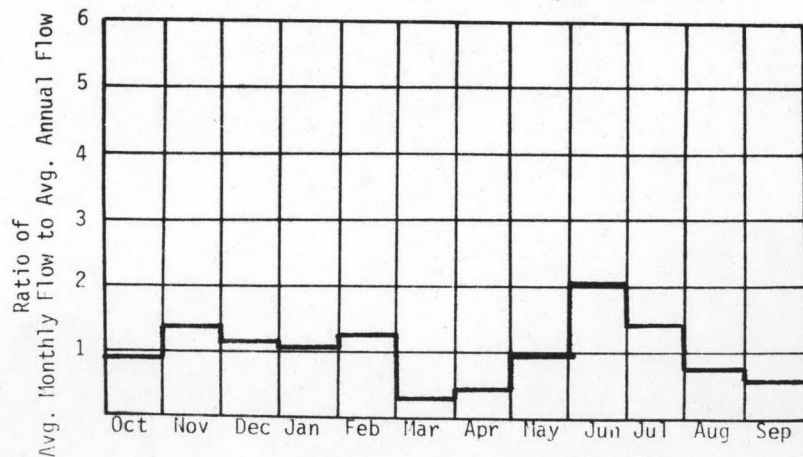
A. Upstream Elevation of Reach	<u>1450</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>610</u>	Ft. MSL
C. Total Available Head in Reach	<u>840</u>	Ft.
D. Average Slope in Reach	<u>215</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.6</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

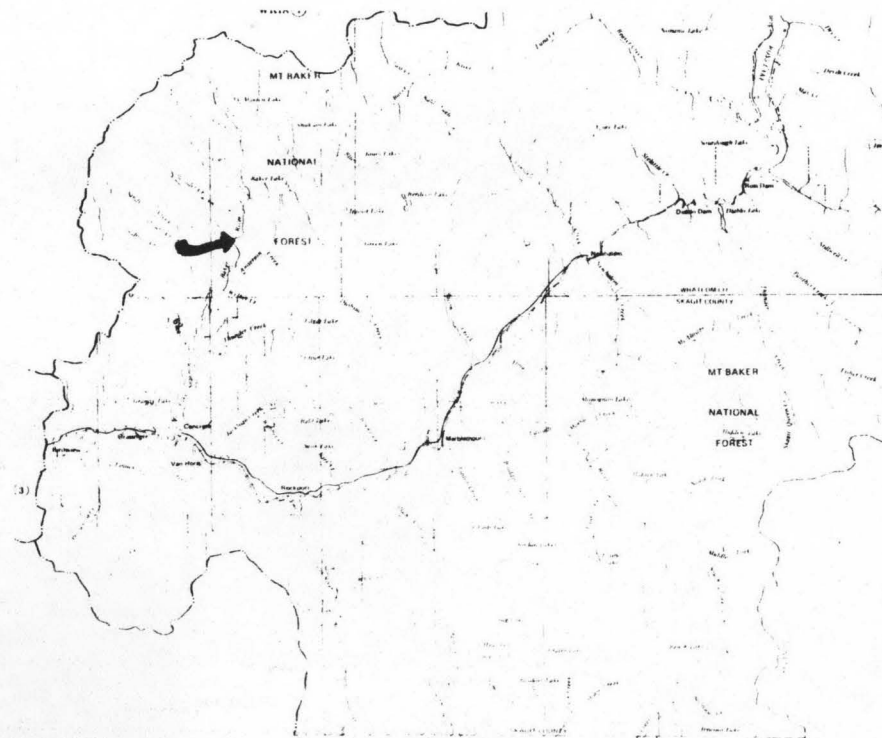
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	54.1	3.85	33.7	1.00
80	70.1	4.98	42.3	0.97
50	101	7.17	54.6	0.87
30	133	9.44	62.9	0.76
10	219	15.6	73.6	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 123 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0047

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T38N R8E
D. Latitude, Longitude	48°43' 121°44'
E. Stream Name	Sandy Creek
F. Major Basin Name	Sandia
G. River Mile	3.9/6.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

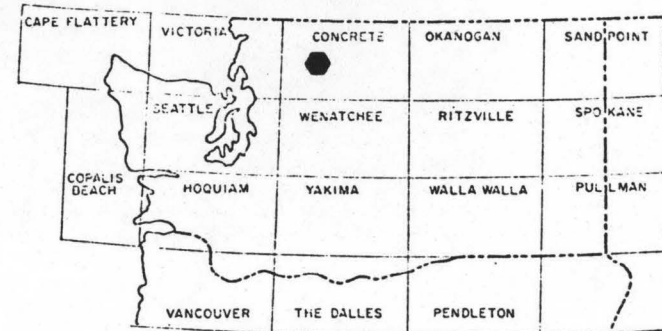
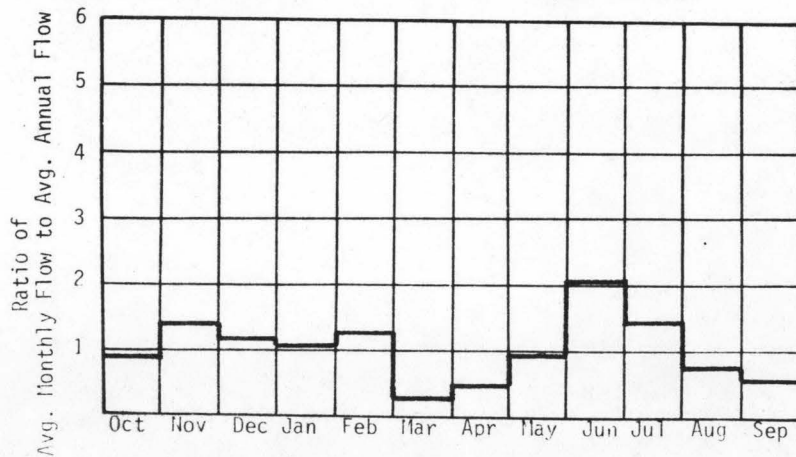
A. Upstream Elevation of Reach	2400	Ft.	MSL
B. Downstream Elevation of Reach	1450	Ft.	MSL
C. Total Available Head in Reach	950 + 66 = 1016	Ft.	
D. Average Slope in Reach	380	Ft./Mi.	
E. Drainage Area above Reach Mouth	6.9	Sq.Mi.	
F. Inflow Classification	Natural		

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

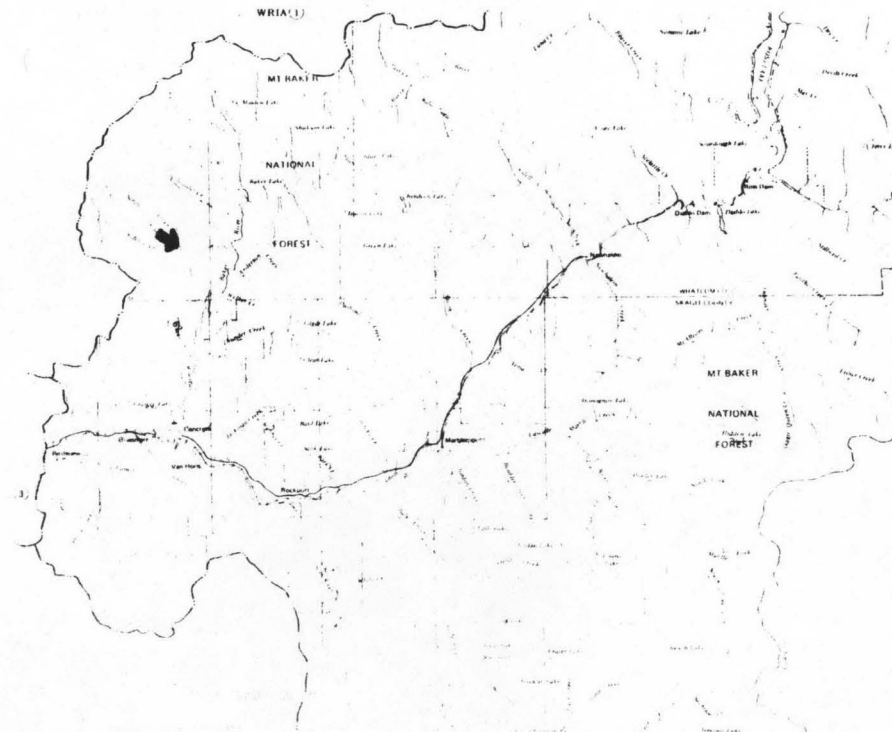
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.8	2.04	17.9	1.00
80	30.8	2.65	22.5	0.97
50	44.3	3.81	29.0	0.87
30	58.3	5.01	33.4	0.76
10	96.1	8.26	39.1	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 54 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0048

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R8E</u>
D. Latitude, Longitude	<u>48°42' 121°44'</u>
E. Stream Name	<u>Dillard Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/0.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

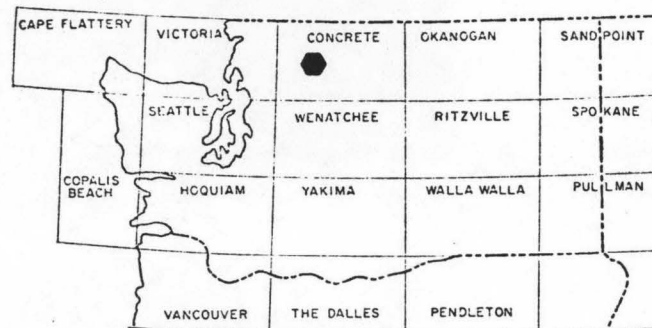
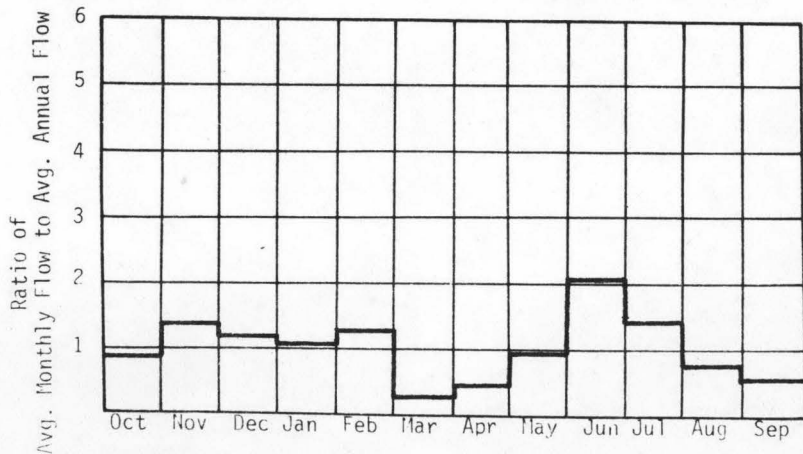
A. Upstream Elevation of Reach	<u>2000</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1450</u>	Ft. MSL
C. Total Available Head in Reach	<u>550 + 66 = 616</u>	Ft.
D. Average Slope in Reach	<u>786</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>2.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

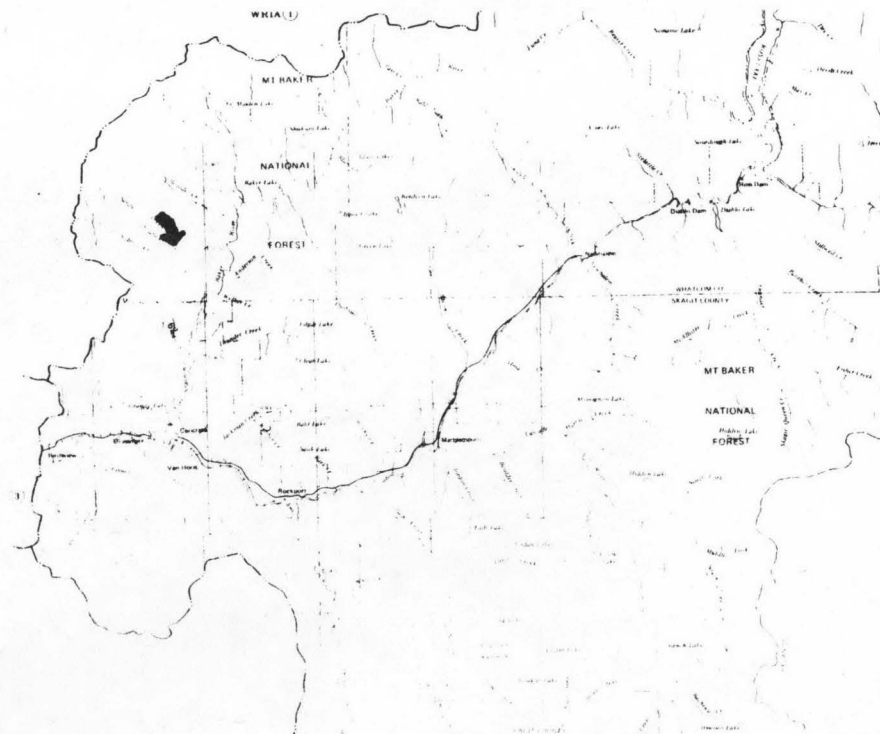
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.6	1.12	9.84	1.00
80	27.9	1.46	12.4	0.97
50	40.2	2.09	16.0	0.87
30	52.9	2.76	18.4	0.76
10	87.2	4.55	21.5	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 49 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0049

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R9E</u>
D. Latitude, Longitude	<u>48°43' 121°42'</u>
E. Stream Name	<u>Boulder Creek</u>
F. Major Basin Name	<u>Sakqit</u>
G. River Mile	<u>0/4.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

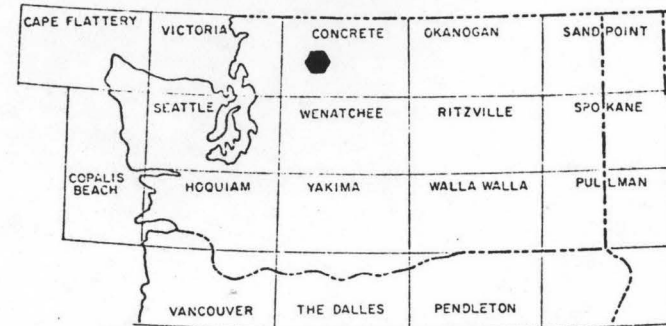
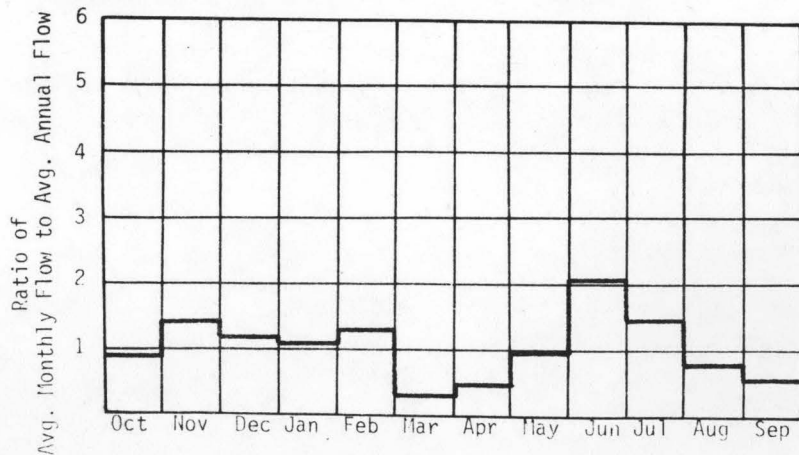
A. Upstream Elevation of Reach	<u>1900</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>650</u>	Ft. MSL
C. Total Available Head in Reach	<u>1250</u>	Ft.
D. Average Slope in Reach	<u>291</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

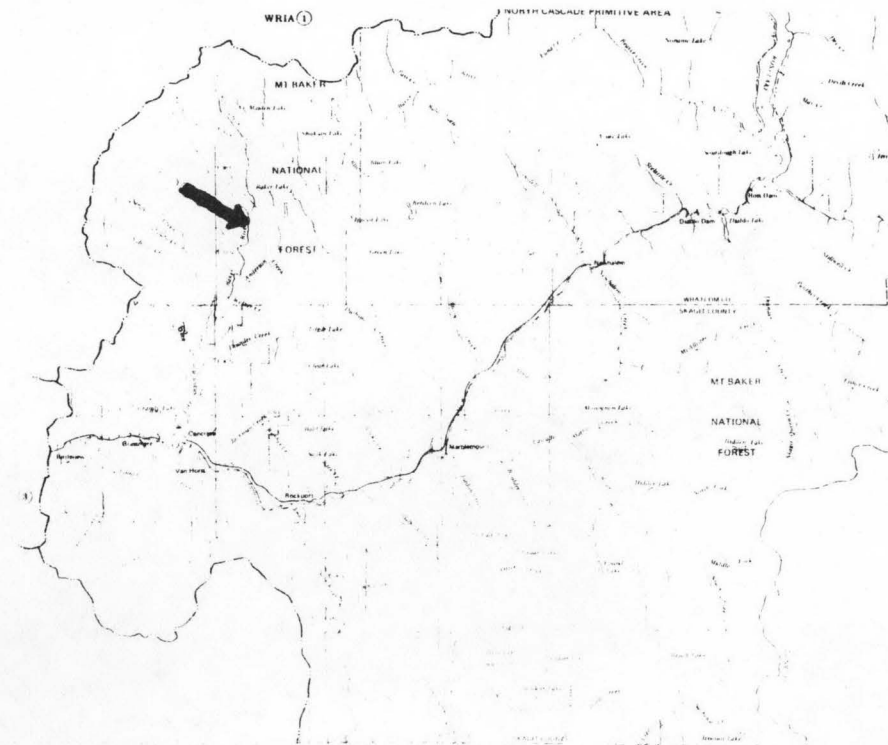
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	39.2	4.14	36.3	1.00
80	50.7	5.36	45.6	0.97
50	73.0	7.72	58.8	0.87
30	96.1	10.2	67.7	0.76
10	158	16.8	79.3	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 89 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0050

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R8E</u>
D. Latitude, Longitude	<u>48°44' 121°44'</u>
E. Stream Name	<u>Boulder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.3/5.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

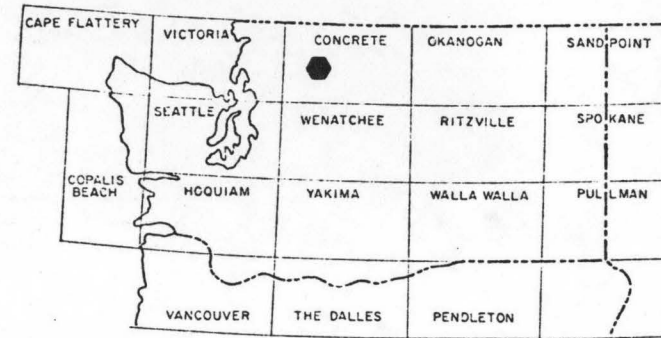
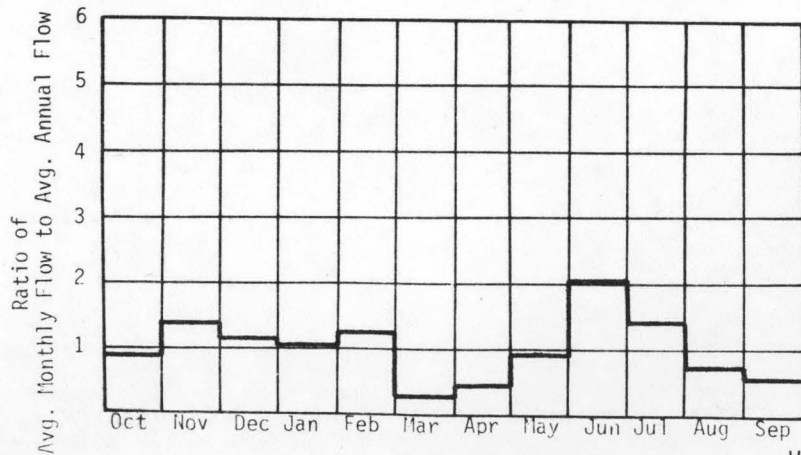
A. Upstream Elevation of Reach	<u>2250</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1900</u>	Ft. MSL
C. Total Available Head in Reach	<u>350 + 66 = 416</u>	Ft.
D. Average Slope in Reach	<u>500</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>5.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

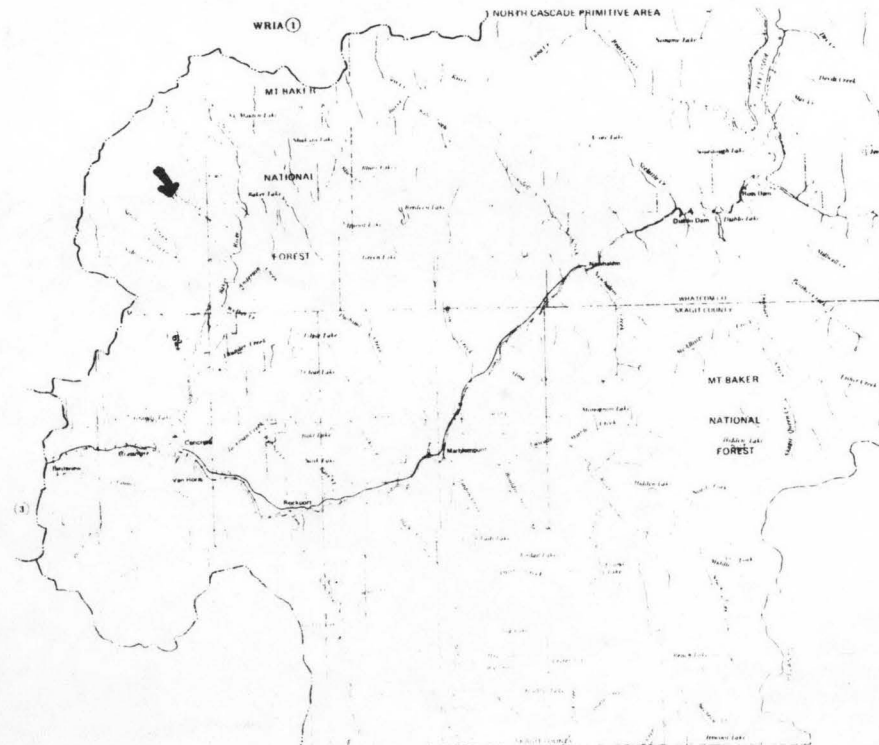
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.0	0.77	6.78	1.00
80	28.5	1.00	8.52	0.97
50	41.0	1.44	11.0	0.87
30	54.0	1.90	12.7	0.76
10	89.0	3.31	14.8	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 50 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0051

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R9E</u>
D. Latitude, Longitude	<u>48°44' 121°41'</u>
E. Stream Name	<u>Park Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/5.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

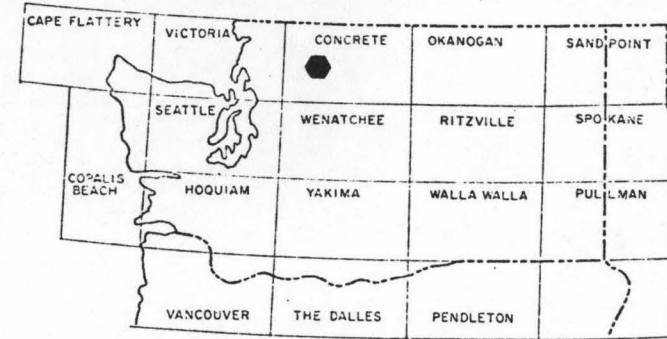
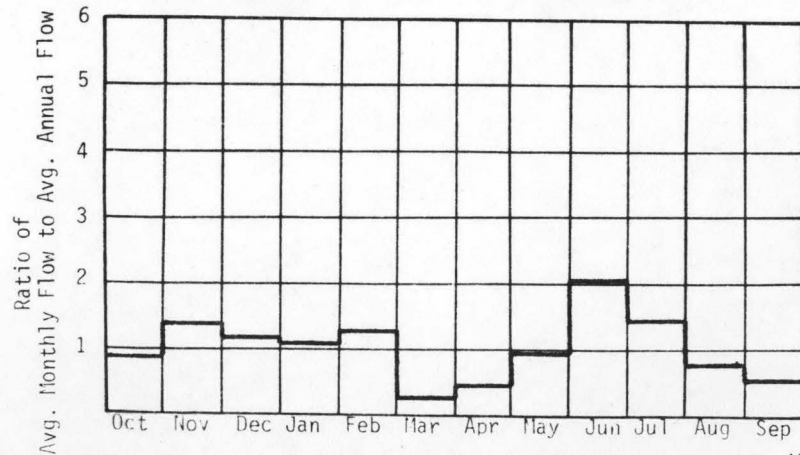
A. Upstream Elevation of Reach	<u>2000</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>600</u>	Ft. MSL
C. Total Available Head in Reach	<u>1400 + 66 = 1466</u>	Ft.
D. Average Slope in Reach	<u>275</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

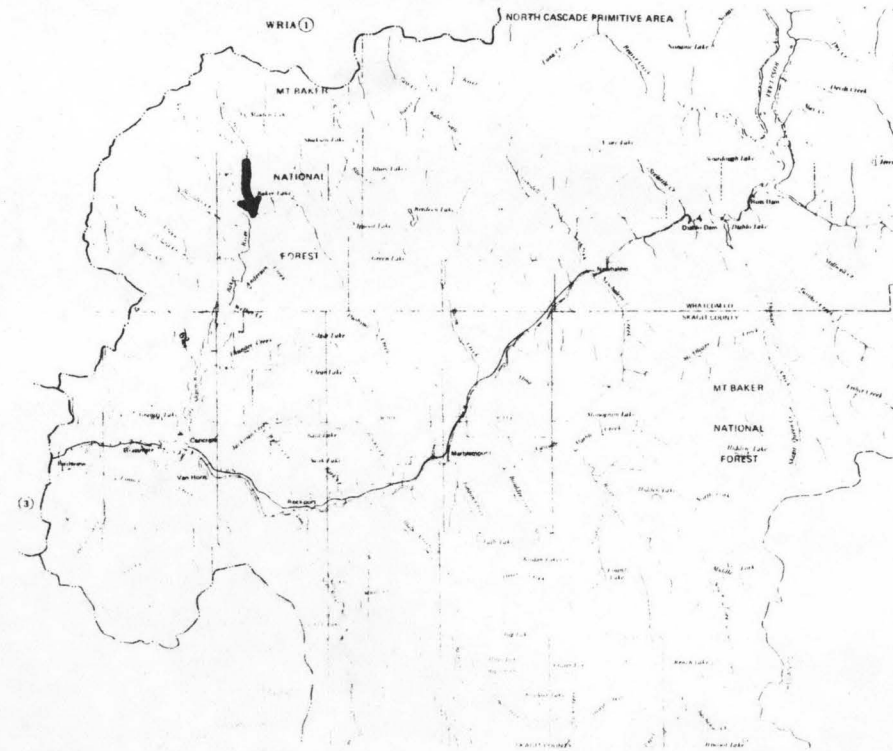
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	31.2	3.87	33.9	1.00
80	40.5	5.02	42.7	0.97
50	58.2	7.22	55.0	0.87
30	76.6	9.51	63.3	0.76
10	126	15.7	74.1	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 71 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0052

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R9E</u>
D. Latitude, Longitude	<u>48°44' 121°40'</u>
E. Stream Name	<u>Swift Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/5.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

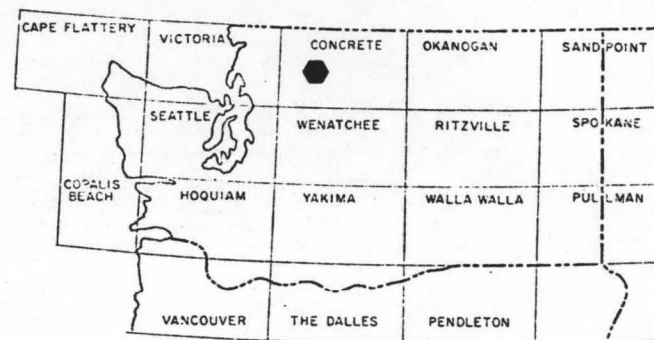
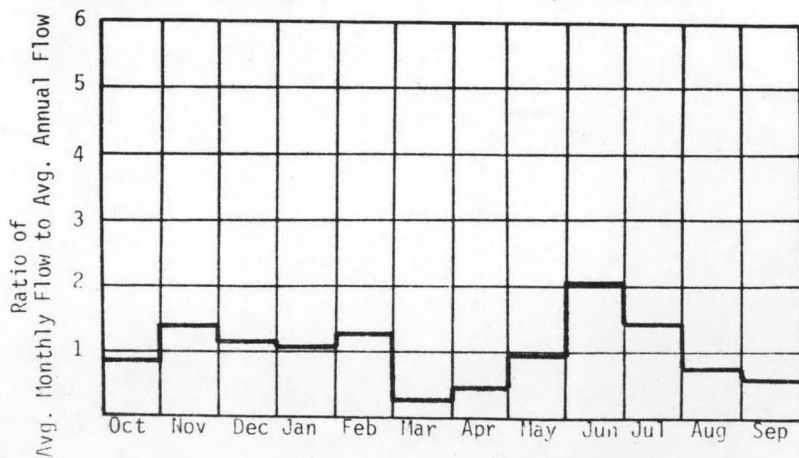
A. Upstream Elevation of Reach	<u>1190</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>600</u>	Ft. MSL
C. Total Available Head in Reach	<u>590</u>	Ft.
D. Average Slope in Reach	<u>102</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>37.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

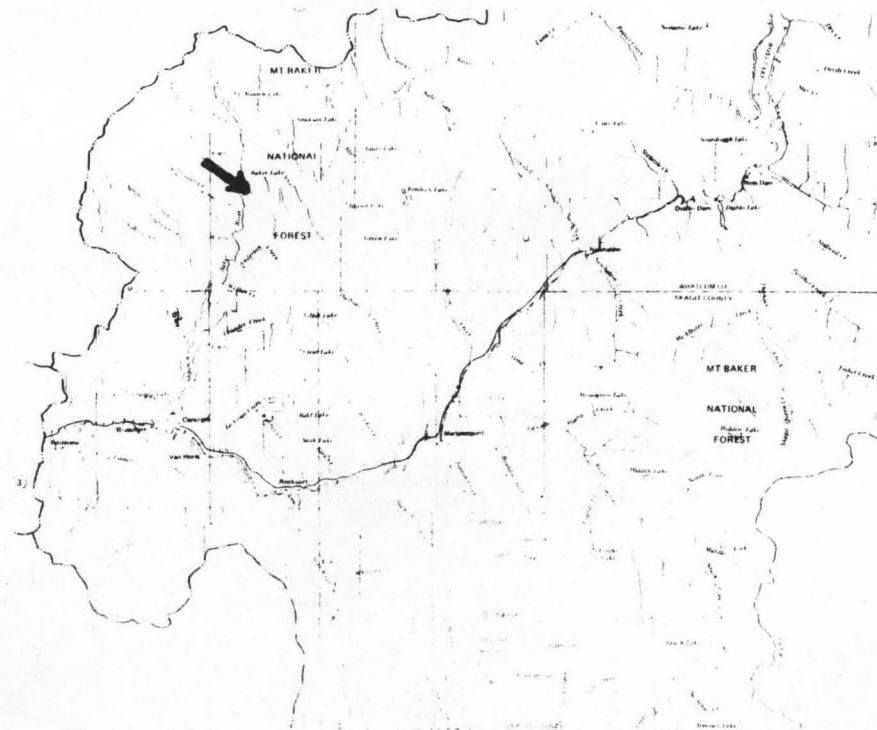
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	80.7	4.03	35.3	1.00
80	129	6.42	54.0	0.96
50	239	11.9	84.7	0.81
30	335	16.7	103	0.70
10	580	29.0	122	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 299 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0053

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T38N R9E
D. Latitude, Longitude	48°46' 121°40'
E. Stream Name	Swift Creek
F. Major Basin Name	Skagit
G. River Mile	5.8/6.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

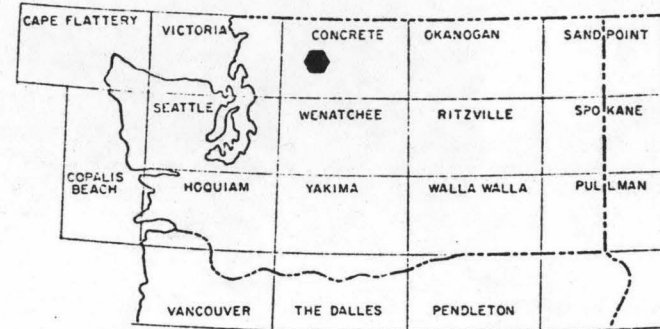
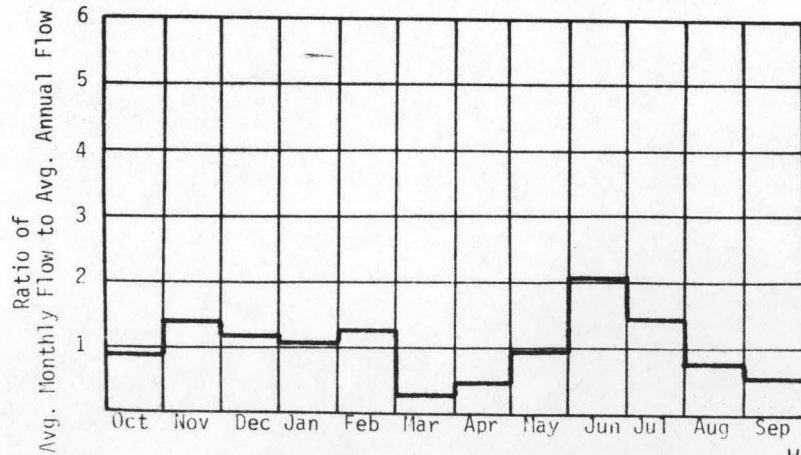
A. Upstream Elevation of Reach	1240	Ft.	MSL
B. Downstream Elevation of Reach	1190	Ft.	MSL
C. Total Available Head in Reach	50	Ft.	
D. Average Slope in Reach	100	Ft./Mi.	
E. Drainage Area above Reach Mouth	22.6	Sq.Mi.	
F. Inflow Classification	Natural		

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

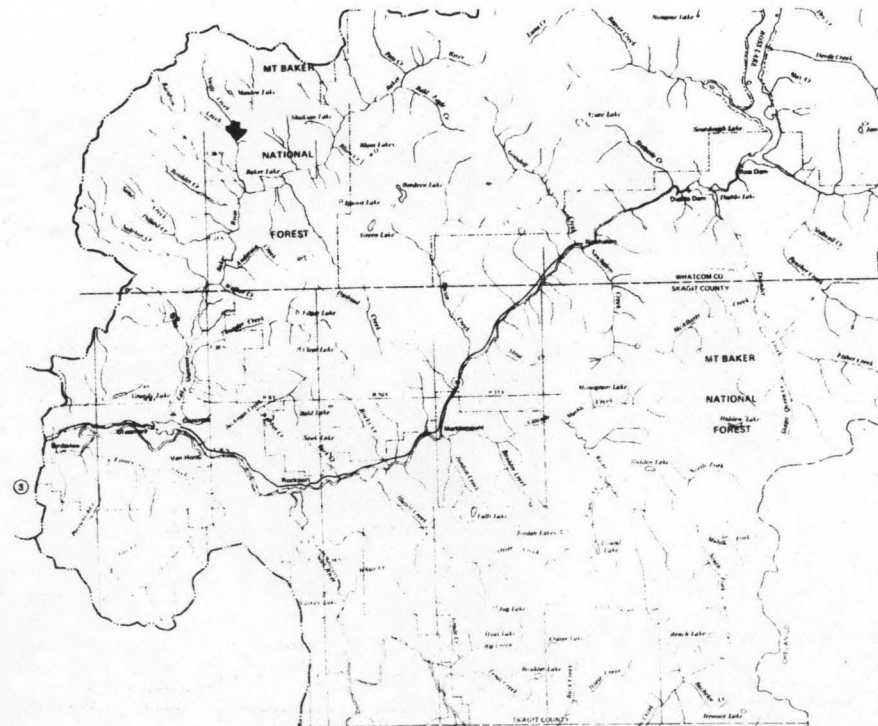
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	52.3	0.22	1.94	1.00
80	83.4	0.35	2.97	0.96
50	155	0.66	4.66	0.81
30	217	0.92	5.64	0.70
10	376	1.59	6.69	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 194 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0054

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T38N R9E
D. Latitude, Longitude	48°48' 121°41'
E. Stream Name	Swift Creek
F. Major Basin Name	Skagit
G. River Mile	6.3/10.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

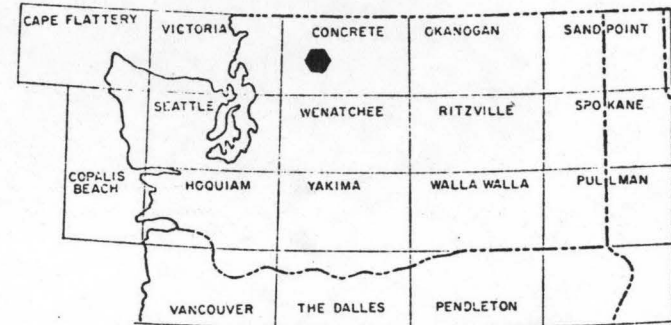
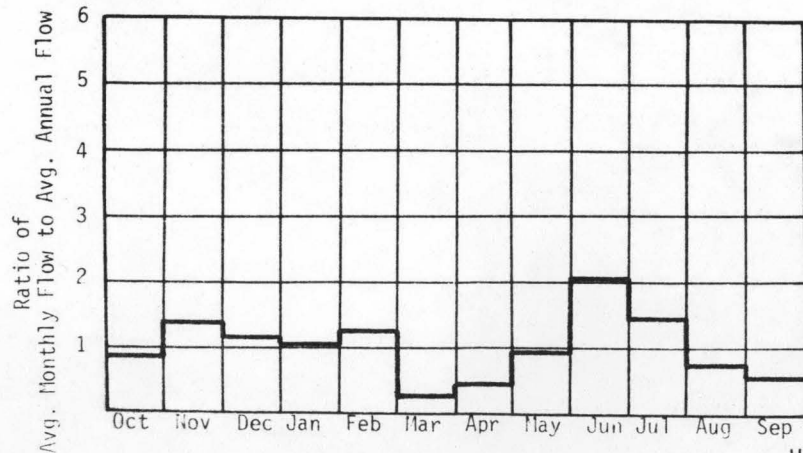
A. Upstream Elevation of Reach	2700	Ft. MSL
B. Downstream Elevation of Reach	1240	Ft. MSL
C. Total Available Head in Reach	1460 + 66 = 1526	Ft.
D. Average Slope in Reach	348	Ft./Mi.
E. Drainage Area above Reach Mouth	12.9	Sq.Mi.
F. Inflow Classification	Natural	

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

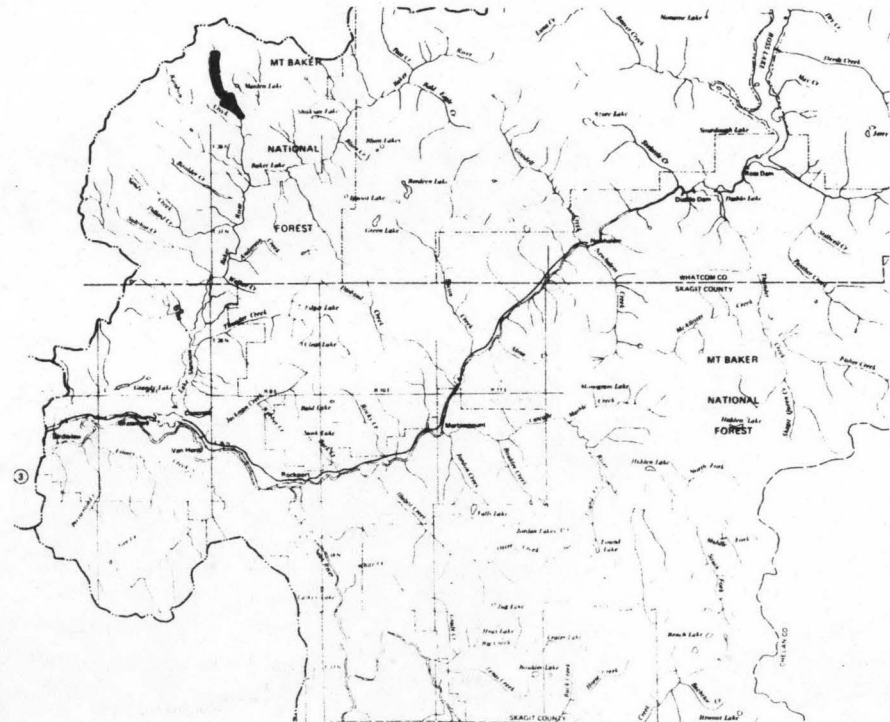
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	37.8	4.89	42.8	1.00
80	49.0	6.33	53.8	0.97
50	70.5	9.10	69.4	0.87
30	92.9	12.0	79.8	0.76
10	153	19.8	93.5	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 86 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0055

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R9E</u>
D. Latitude, Longitude	<u>48°47' 121°41'</u>
E. Stream Name	<u>Rainbow Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

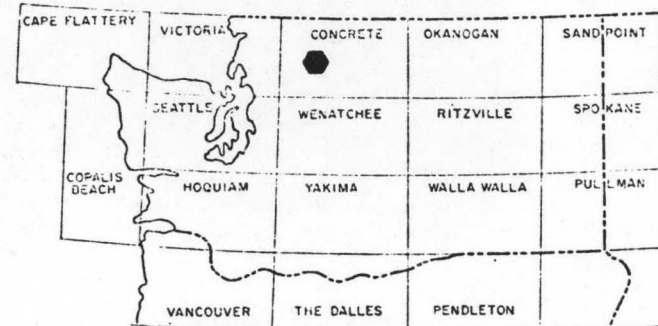
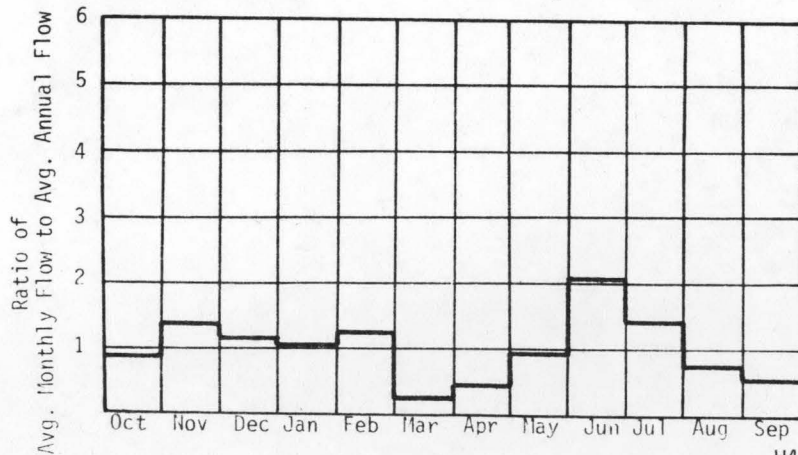
A. Upstream Elevation of Reach	<u>2480</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1190</u>	Ft. MSL
C. Total Available Head in Reach	<u>1290 + 66 = 1356</u>	Ft.
D. Average Slope in Reach	<u>445</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>9.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

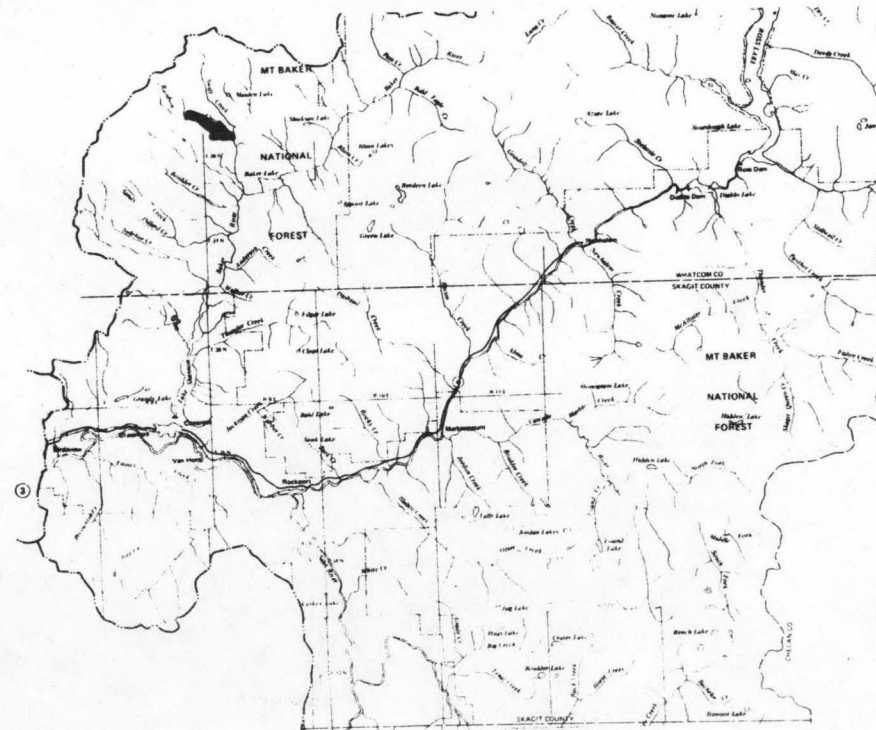
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	20.5	2.35	20.6	1.00
80	32.7	3.75	31.5	0.96
50	60.8	6.97	49.5	0.81
30	85.1	9.76	59.9	0.70
10	147	16.9	71.1	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 76 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0056

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T38N R9E
D. Latitude, Longitude	48°47' 121°38'
E. Stream Name	Shuksan Creek
F. Major Basin Name	Skagit
G. River Mile	0/2.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

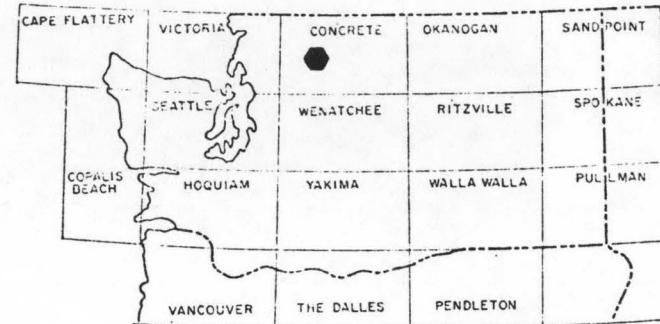
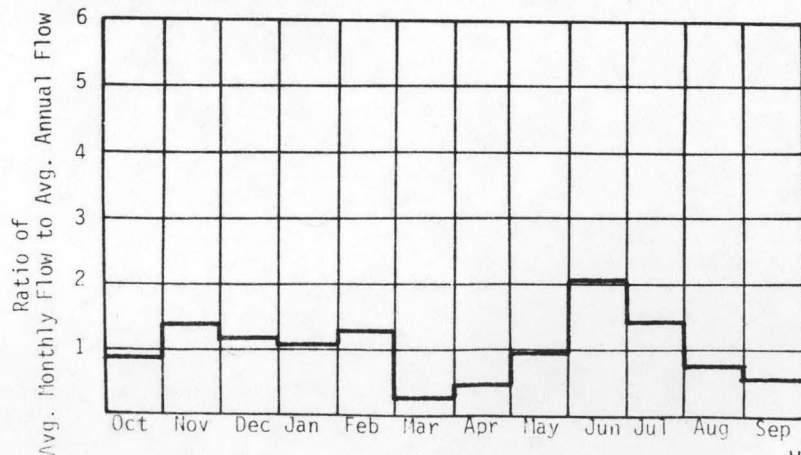
A. Upstream Elevation of Reach	1820	Ft.	MSL
B. Downstream Elevation of Reach	1240	Ft.	MSL
C. Total Available Head in Reach	580 + 66 = 646	Ft.	
D. Average Slope in Reach	290	Ft./Mi.	
E. Drainage Area above Reach Mouth	9.6	Sq.Mi.	
F. Inflow Classification	Natural		

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

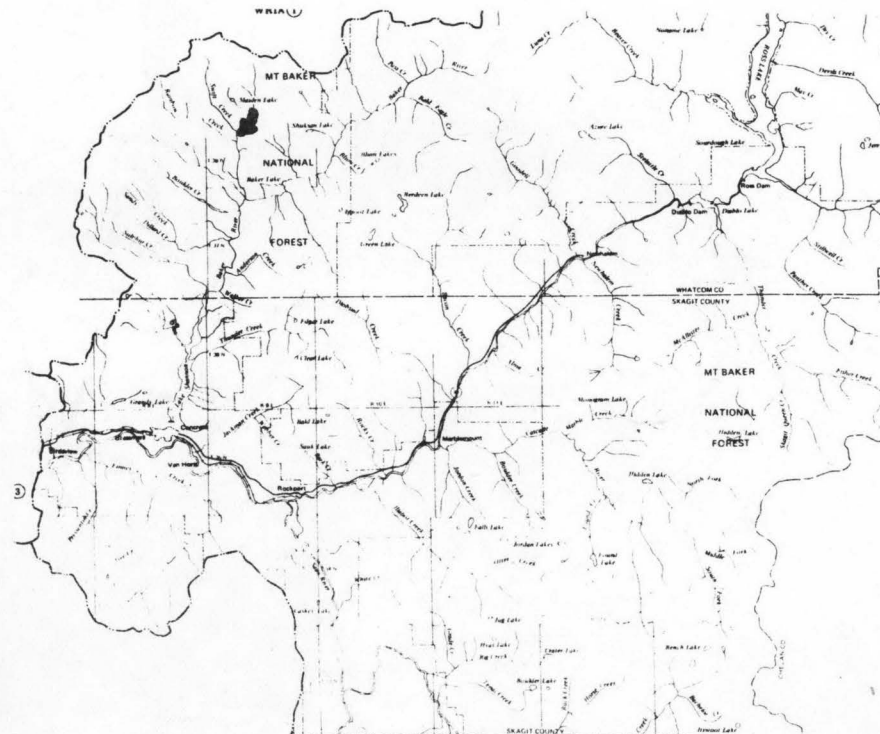
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	20.0	1.09	9.57	1.00
80	31.8	1.74	14.6	0.96
50	59.2	3.24	23.0	0.81
30	82.9	4.53	27.8	0.70
10	144	7.85	33.0	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 74 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0057

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T37N R9E
D. Latitude, Longitude	48°43' 121°35'
E. Stream Name	Noisy Creek
F. Major Basin Name	Skagit
G. River Mile	0/3.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

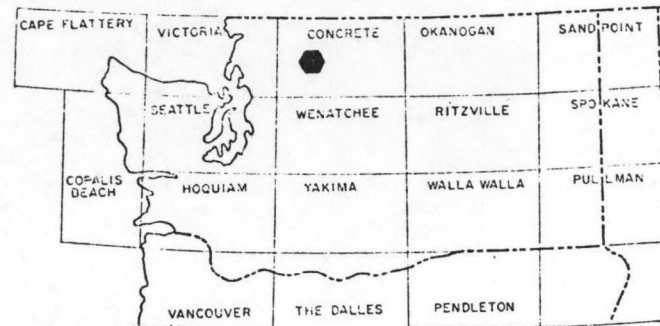
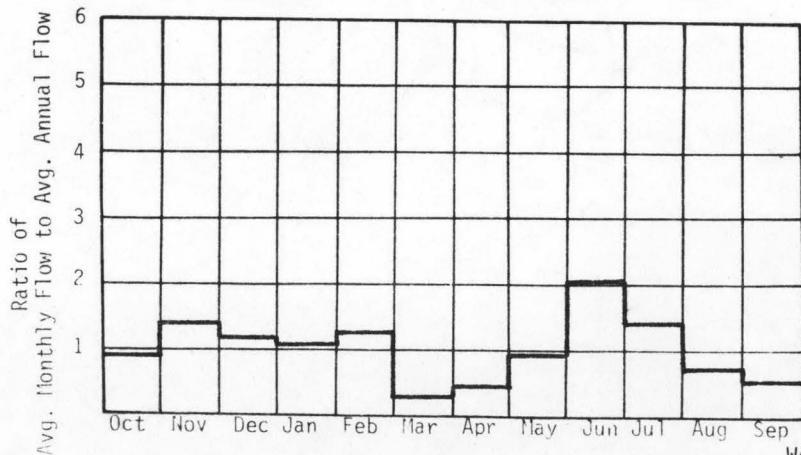
A. Upstream Elevation of Reach	1900	Ft.	MSL
B. Downstream Elevation of Reach	663	Ft.	MSL
C. Total Available Head in Reach	1237 + 66 = 1303	Ft.	
D. Average Slope in Reach	317	Ft./Mi.	
E. Drainage Area above Reach Mouth	14.3	Sq.Mi.	
F. Inflow Classification	Natural		

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

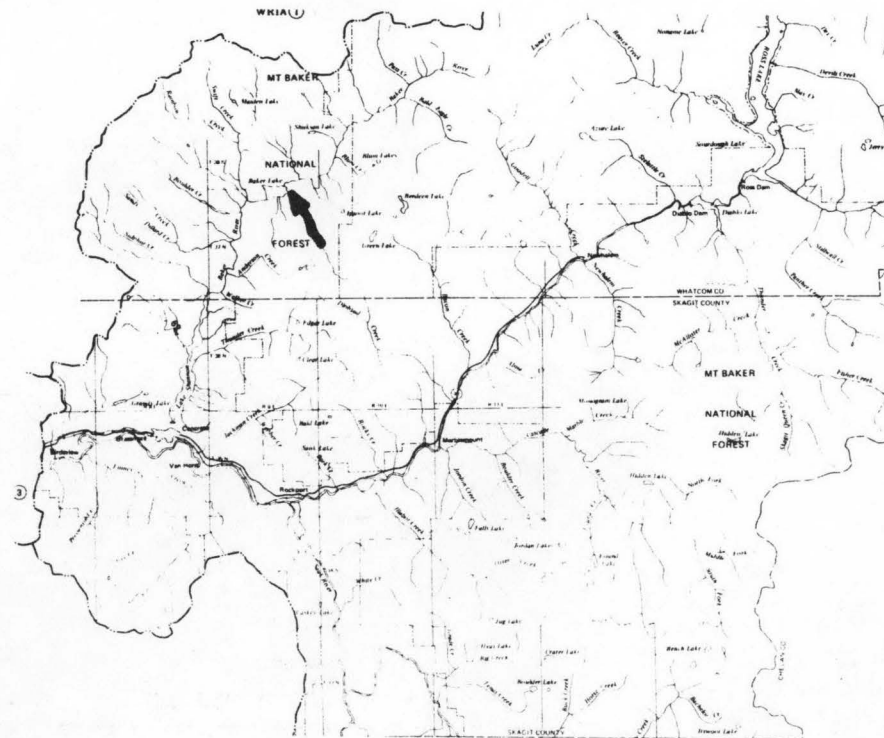
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	47.5	5.24	45.9	1.00
80	61.6	6.79	57.7	0.97
50	88.6	9.76	74.4	0.87
30	117	12.9	85.6	0.76
10	192	21.2	100	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 108 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0058

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R10E</u>
D. Latitude, Longitude	<u>48°47' 121°32'</u>
E. Stream Name	<u>Sulphide Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

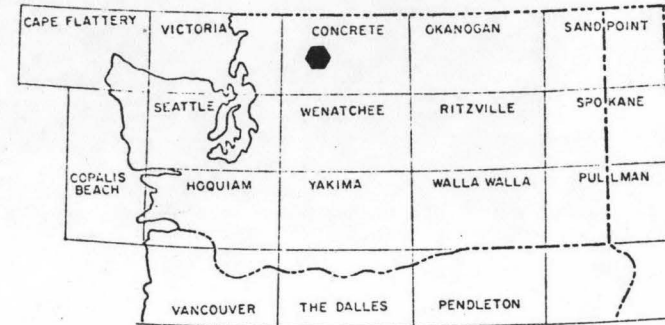
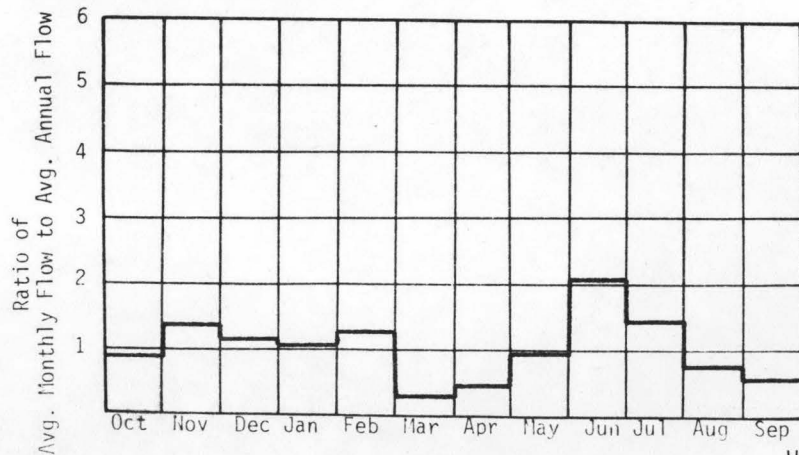
A. Upstream Elevation of Reach	<u>1160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>875</u>	Ft. MSL
C. Total Available Head in Reach	<u>285</u>	Ft.
D. Average Slope in Reach	<u>204</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

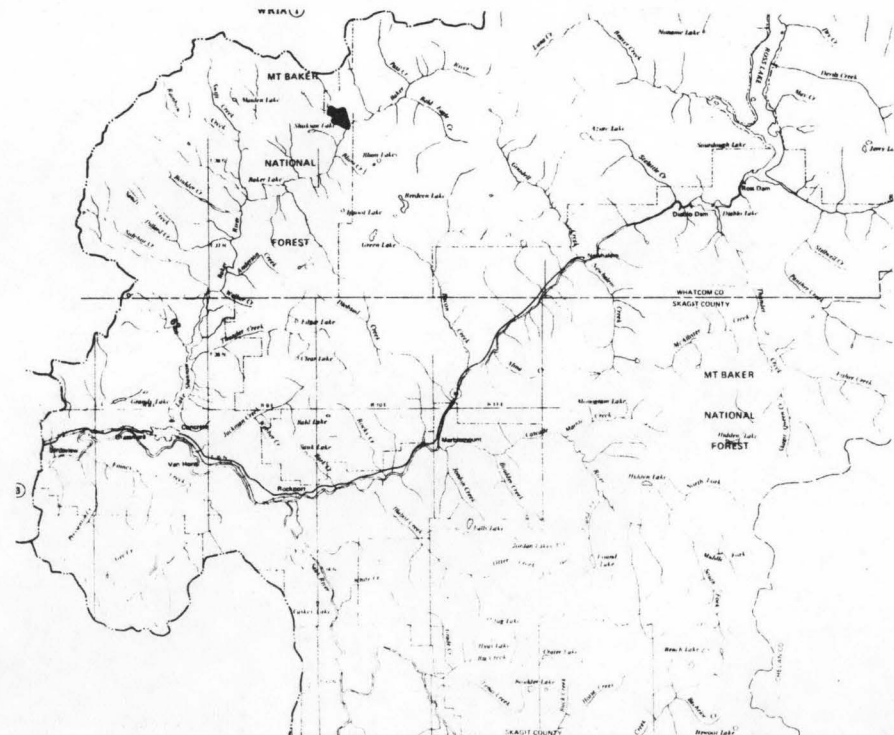
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	26.5	0.64	5.59	1.00
80	42.1	1.02	8.54	0.96
50	78.4	1.89	13.4	0.81
30	110	2.65	16.2	0.70
10	190	4.58	19.3	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 98 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0059

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R10E</u>
D. Latitude, Longitude	<u>48°47' 121°33'</u>
E. Stream Name	<u>Sulphide Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>1.4/2.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

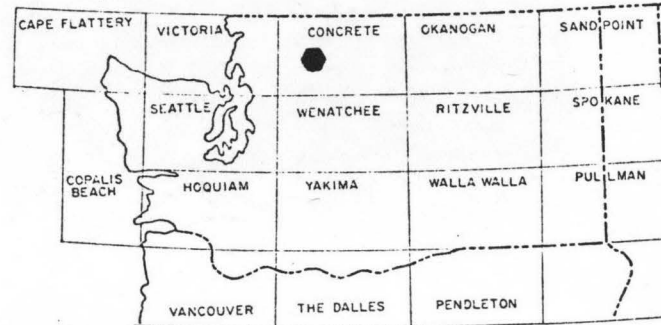
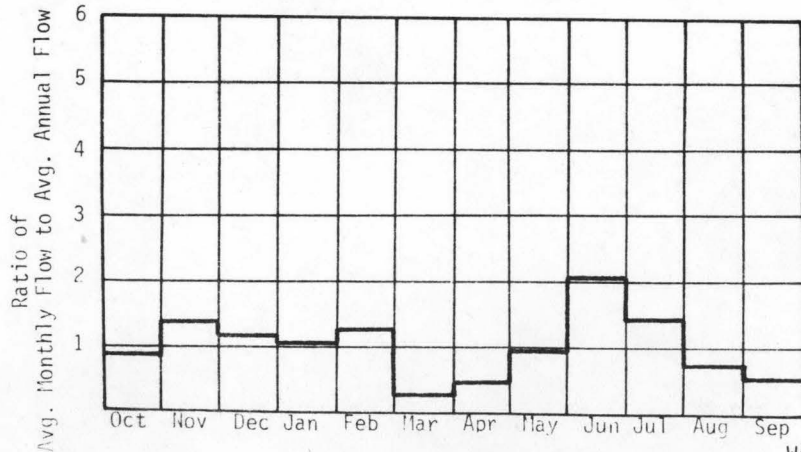
A. Upstream Elevation of Reach	<u>1520</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1160</u>	Ft. MSL
C. Total Available Head in Reach	<u>360 + 66 = 426</u>	Ft.
D. Average Slope in Reach	<u>300</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>6.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

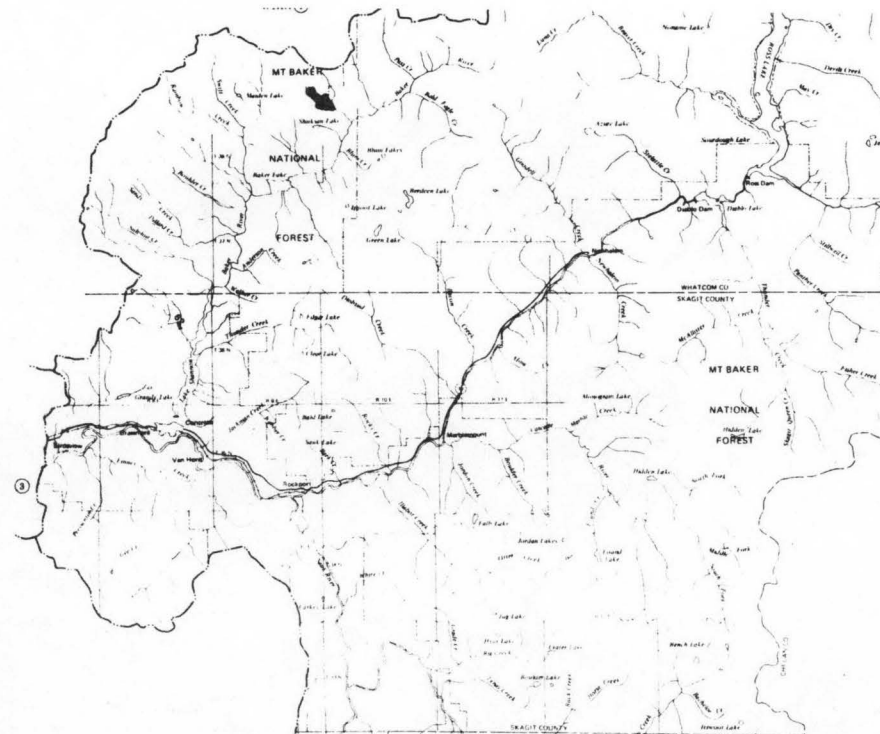
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.7	0.60	5.28	1.00
80	26.7	0.96	8.08	0.96
50	49.6	1.79	12.7	0.81
30	69.4	2.50	15.4	0.70
10	120	4.33	18.2	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0060

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R9E</u>
D. Latitude, Longitude	<u>48°47' 121°25'</u>
E. Stream Name	<u>Bald Eagle Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

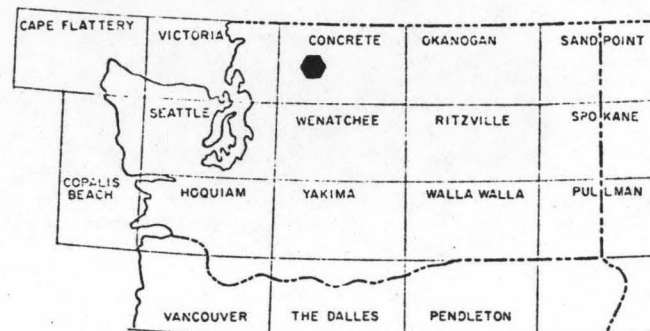
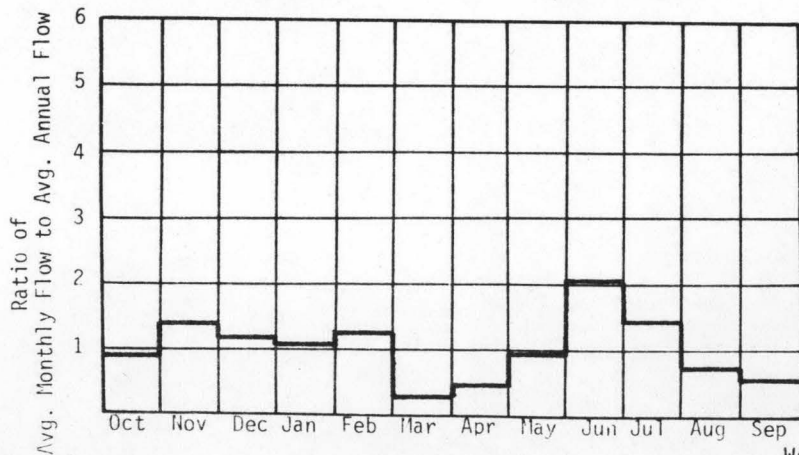
A. Upstream Elevation of Reach	<u>2395</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1120</u>	Ft. MSL
C. Total Available Head in Reach	<u>1275</u>	Ft.
D. Average Slope in Reach	<u>304</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>17.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

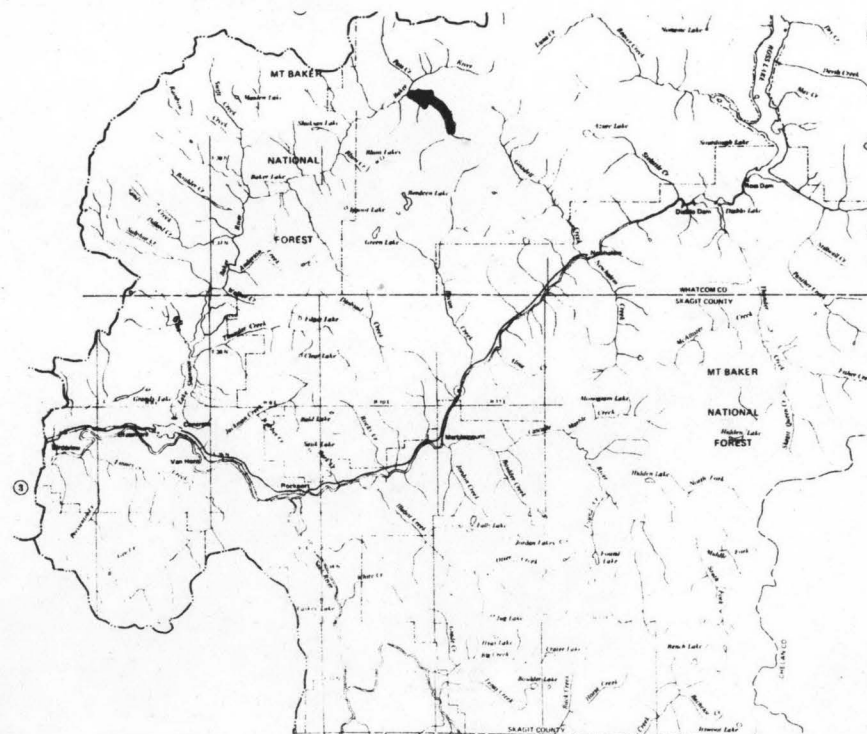
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	37.3	4.02	35.2	1.00
80	59.3	6.40	53.8	0.96
50	110	11.9	84.5	0.81
30	155	16.7	102	0.70
10	268	28.9	121	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 138 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0061

### I. LOCATION

A. State Washington  
 B. County Whatcom  
 C. Township, Range T38N R9E  
 D. Latitude, Longitude 48°46' 121°25'  
 E. Stream Name Bald Eagle Creek  
 F. Major Basin Name Skagit  
 G. River Mile 4.2/4.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

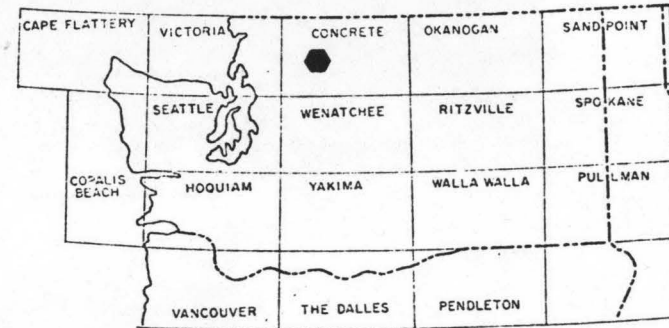
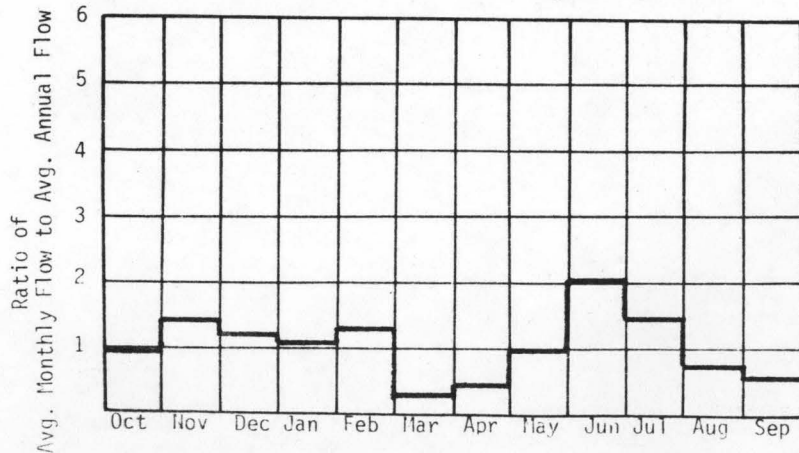
A. Upstream Elevation of Reach 2480 Ft. MSL  
 B. Downstream Elevation of Reach 2395 Ft. MSL  
 C. Total Available Head in Reach 85 + 66 = 151 Ft.  
 D. Average Slope in Reach 425 Ft./Mi.  
 E. Drainage Area above Reach Mouth 4.8 Sq.Mi.  
 F. Inflow Classification Natural

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

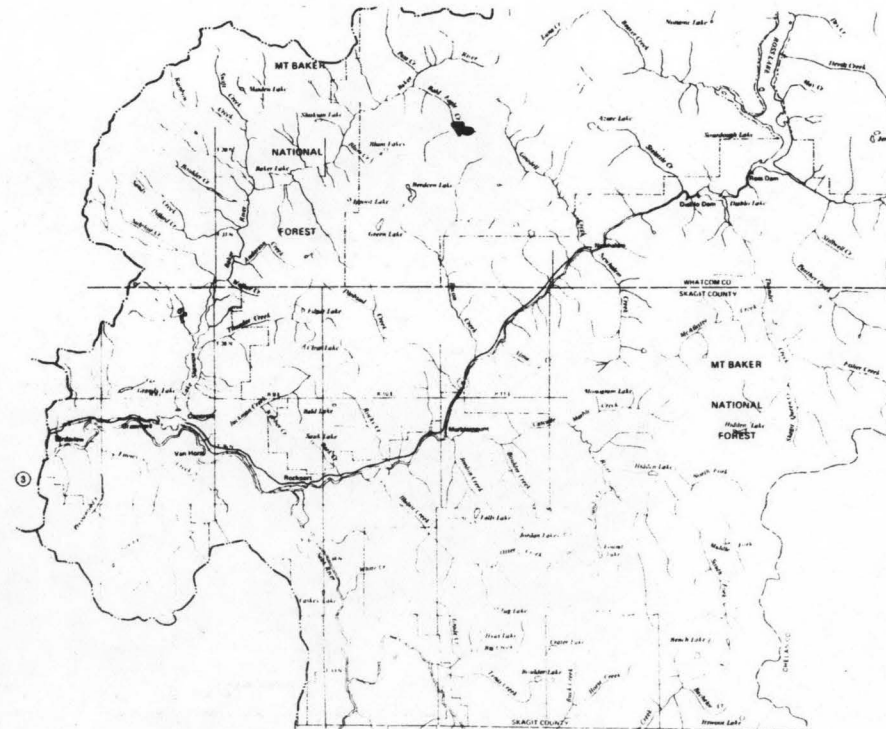
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.4	0.16	1.39	1.00
80	19.8	0.25	2.12	0.96
50	36.8	0.47	3.34	0.81
30	51.5	0.66	4.04	0.70
10	89.2	1.14	4.79	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 46 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0062

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R10E</u>
D. Latitude, Longitude	<u>48°46' 121°25'</u>
E. Stream Name	<u>Lonesome Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

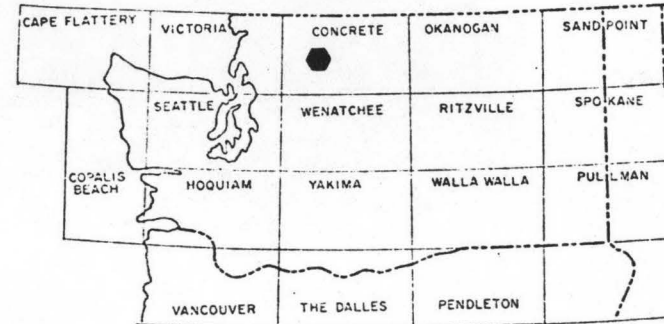
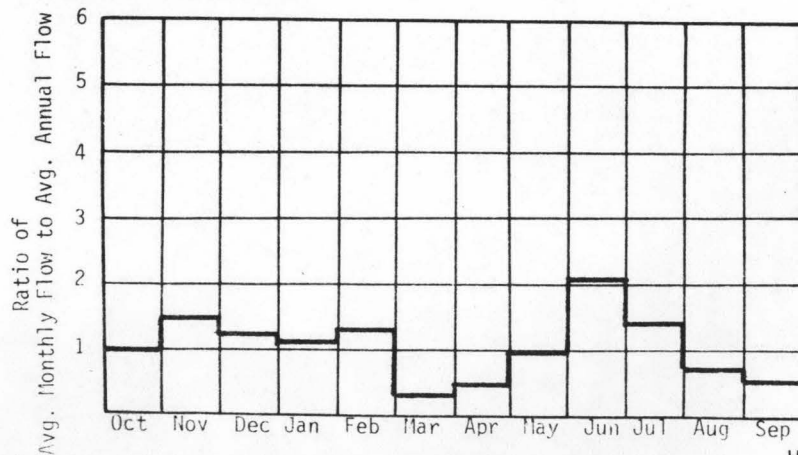
A. Upstream Elevation of Reach	<u>2880</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2395</u>	Ft. MSL
C. Total Available Head in Reach	<u>485 + 66 = 551</u>	Ft.
D. Average Slope in Reach	<u>139</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>4.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

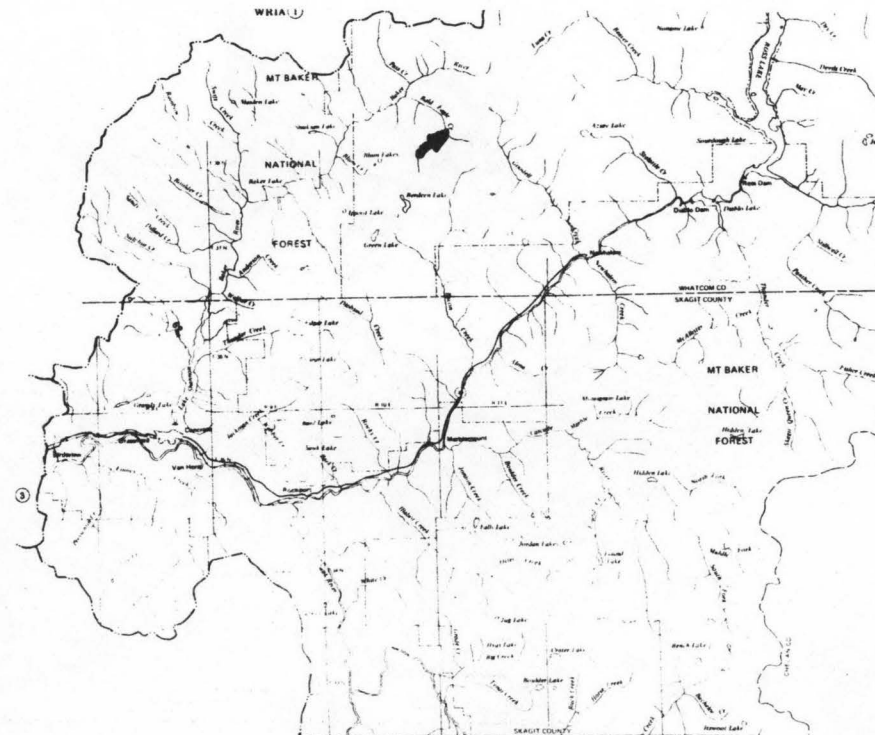
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.8	0.64	5.62	1.00
80	21.9	1.02	8.60	0.96
50	40.8	1.90	13.5	0.81
30	57.1	2.66	16.3	0.70
10	98.9	4.61	19.4	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 51 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0063

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R10E</u>
D. Latitude, Longitude	<u>48°49' 121°29'</u>
E. Stream Name	<u>Pass Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

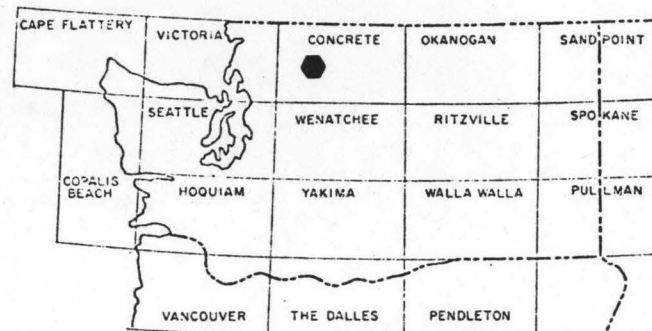
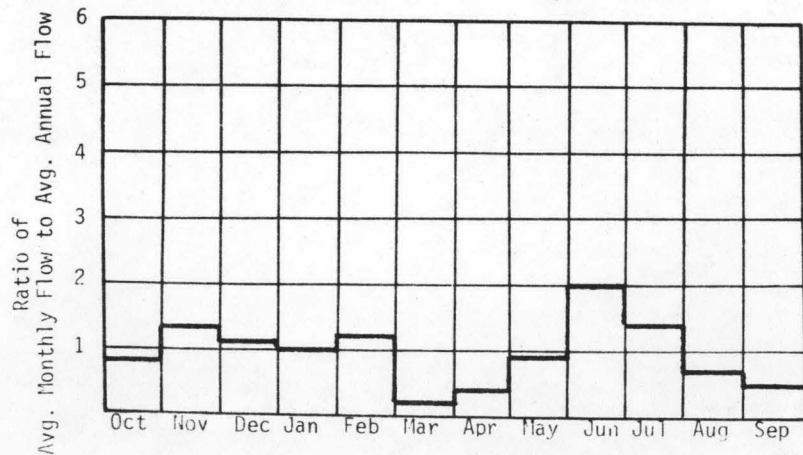
A. Upstream Elevation of Reach	<u>2800</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1200</u>	Ft. MSL
C. Total Available Head in Reach	<u>1600 + 66 = 1666</u>	Ft.
D. Average Slope in Reach	<u>457</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>9.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

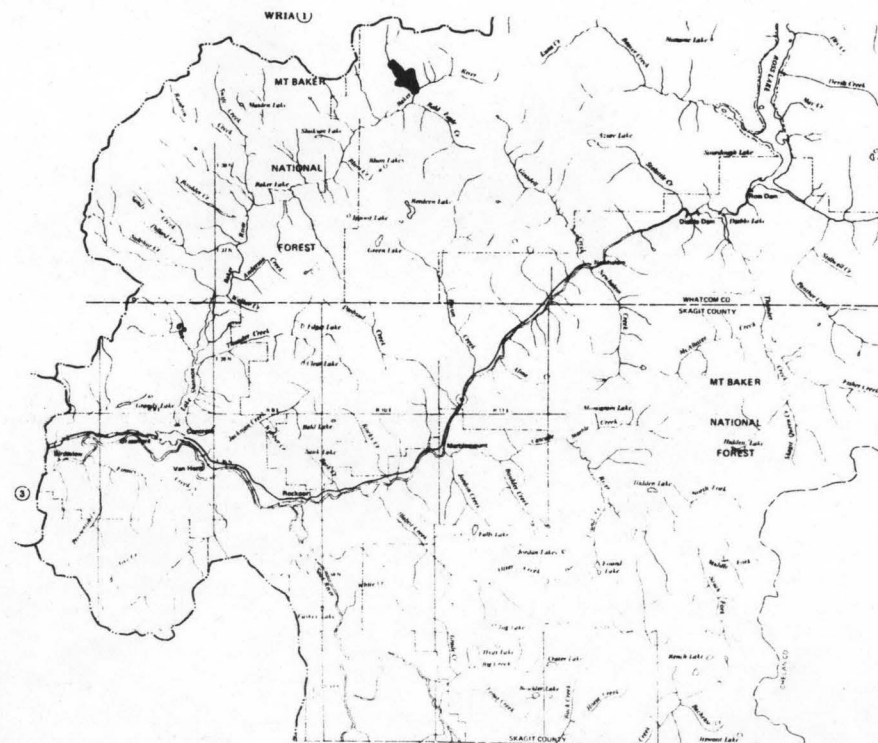
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	19.2	2.70	23.7	1.00
80	30.5	4.30	36.2	0.96
50	56.8	8.01	56.8	0.81
30	79.5	11.2	68.7	0.70
10	138	19.4	81.6	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 71 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0064

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R11E</u>
D. Latitude, Longitude	<u>48°49' 121°23'</u>
E. Stream Name	<u>Picker Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

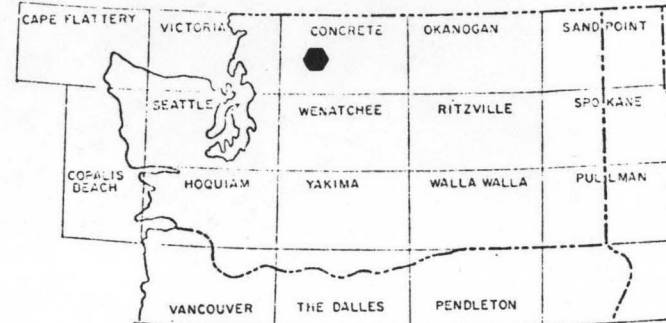
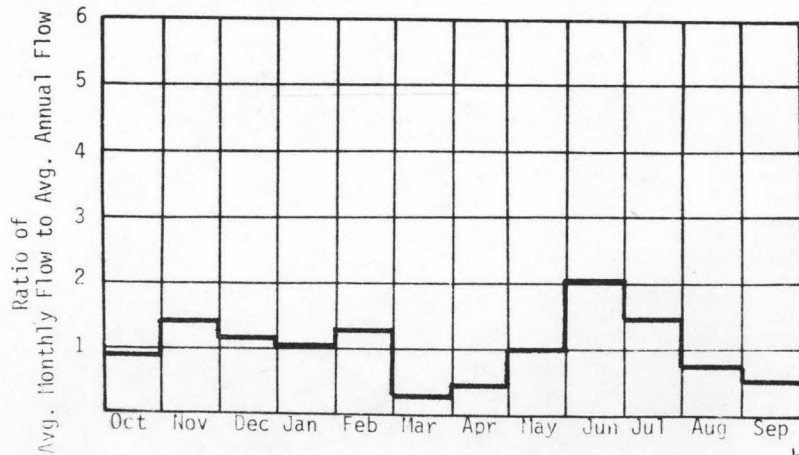
A. Upstream Elevation of Reach	<u>2720</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1730</u>	Ft. MSL
C. Total Available Head in Reach	<u>990 + 66 = 1056</u>	Ft.
D. Average Slope in Reach	<u>413</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>7.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

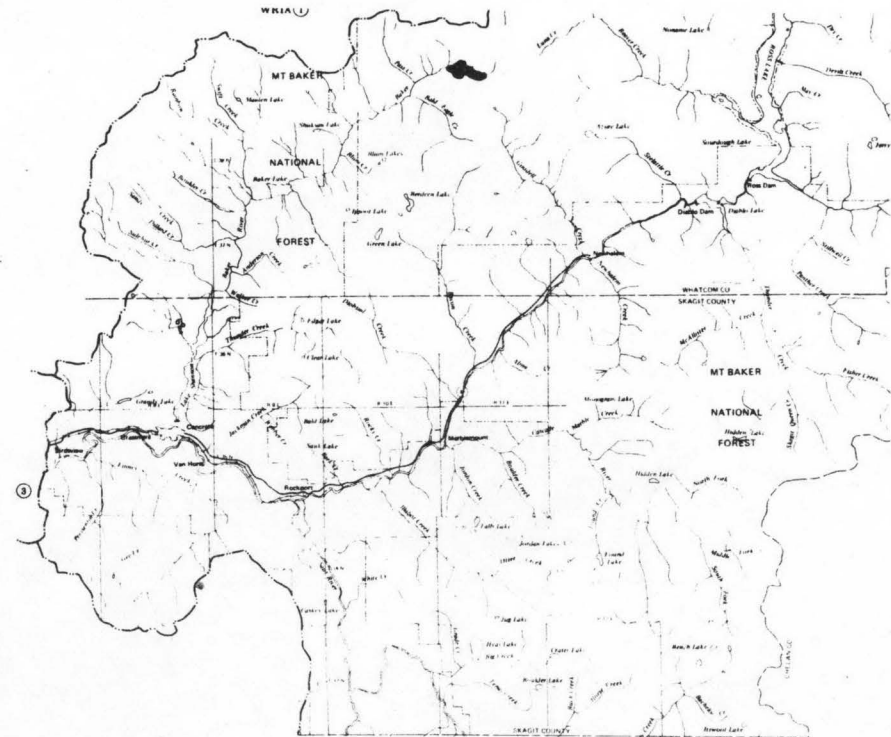
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.2	1.45	1.27	1.00
80	25.8	2.30	19.4	0.96
50	48.0	4.29	30.4	0.81
30	67.2	6.00	36.8	0.70
10	116	10.4	43.7	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 60 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0065

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R9E</u>
D. Latitude, Longitude	<u>48°33' 121°38'</u>
E. Stream Name	<u>Jackman Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/7.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

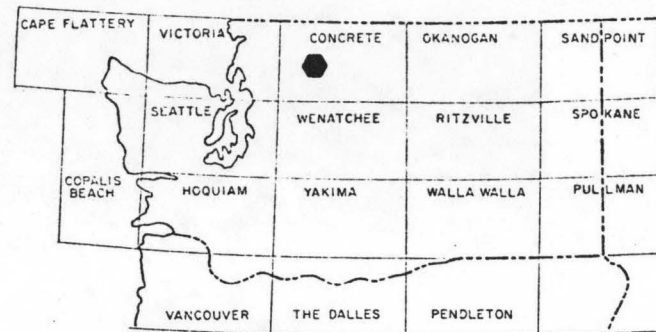
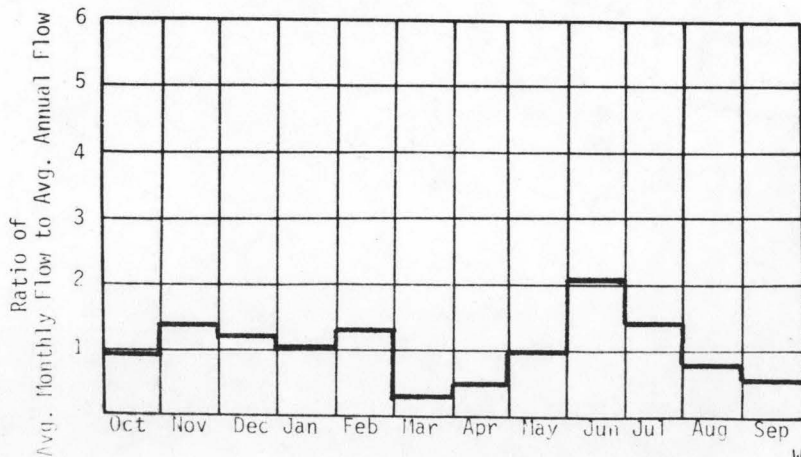
A. Upstream Elevation of Reach	<u>1980</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>175</u>	Ft. MSL
C. Total Available Head in Reach	<u>1805 + 66 = 1871</u>	Ft.
D. Average Slope in Reach	<u>241</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>24.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

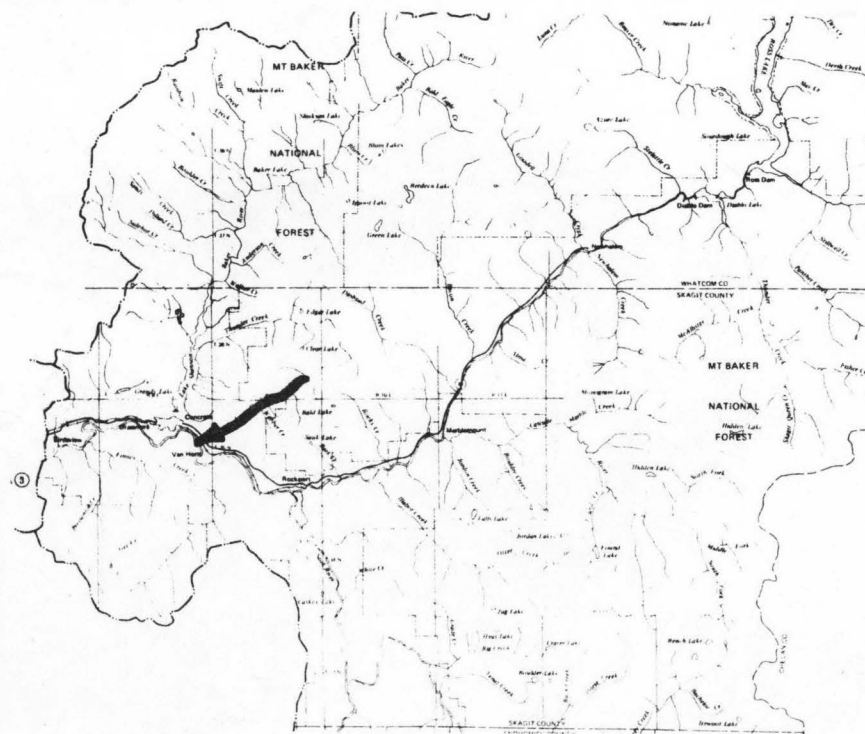
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.9	2.04	17.9	1.00
80	30.4	4.82	38.8	0.92
50	81.9	13.0	86.3	0.76
30	137	21.7	116	0.61
10	255	40.4	149	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 117 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0066

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T34N R10E
D. Latitude, Longitude	48°25' 121°33'
E. Stream Name	Sauk River
F. Major Basin Name	Skagit
G. River Mile	0/12.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

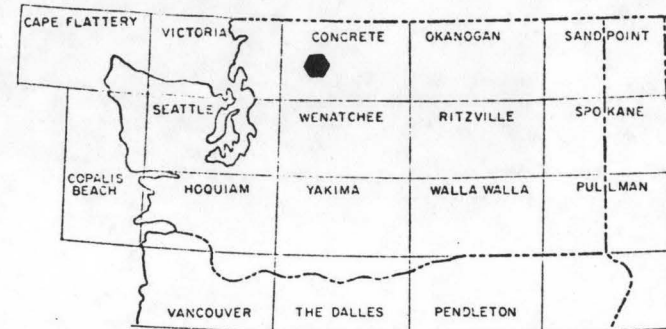
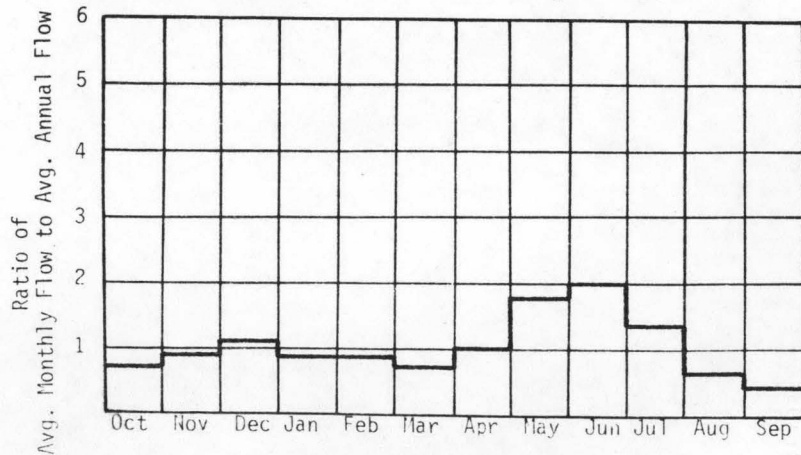
A. Upstream Elevation of Reach	375	Ft. MSL
B. Downstream Elevation of Reach	200	Ft. MSL
C. Total Available Head in Reach	175	Ft.
D. Average Slope in Reach	14.0	Ft./Mi.
E. Drainage Area above Reach Mouth	733	Sq.Mi.
F. Inflow Classification	Natural	

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

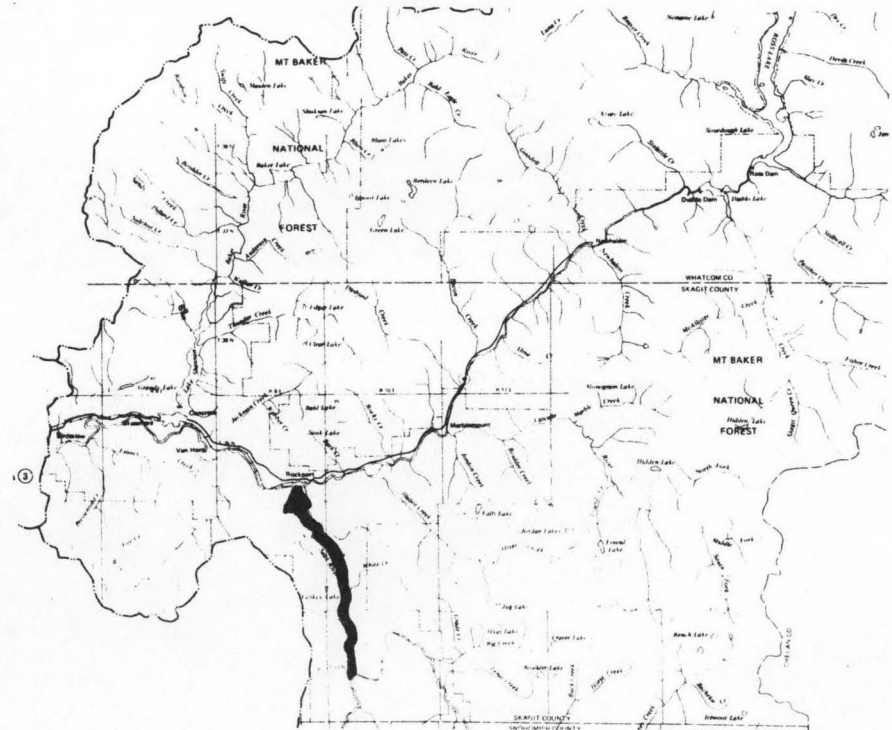
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1260	18.6	163	1.00
80	1910	28.3	238	0.96
50	3340	49.5	360	0.83
30	4990	73.9	447	0.69
10	8420	125	524	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 4341 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0067

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R10E</u>
D. Latitude, Longitude	<u>48°18' 121°33'</u>
E. Stream Name	<u>Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>12.5/18.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

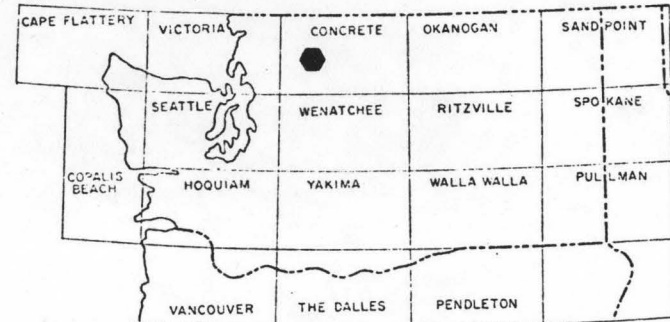
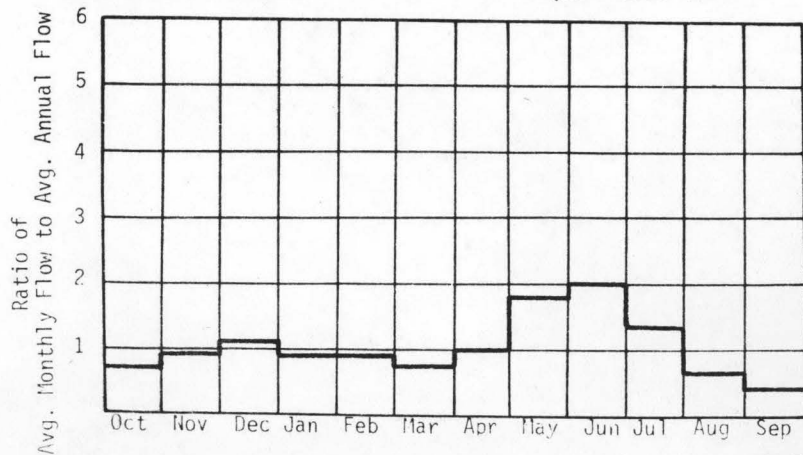
A. Upstream Elevation of Reach	<u>445</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>375</u>	Ft. MSL
C. Total Available Head in Reach	<u>70</u>	Ft.
D. Average Slope in Reach	<u>12.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>344</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	520	3.08	27.0	1.00
80	836	4.95	41.2	0.95
50	1610	9.50	66.6	0.80
30	2580	15.3	86.9	0.65
10	4570	27.0	107	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2260 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0068

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R10E</u>
D. Latitude, Longitude	<u>48°15' 121°36'</u>
E. Stream Name	<u>Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>18.0/24.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

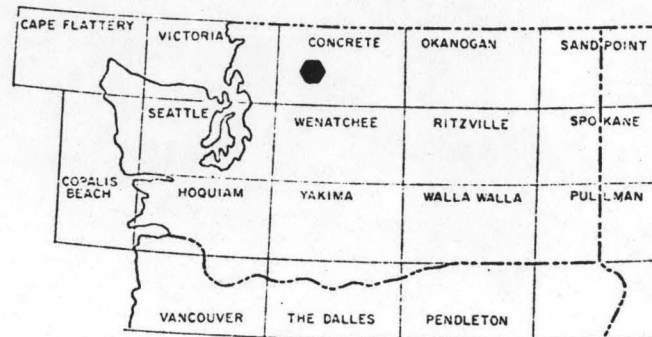
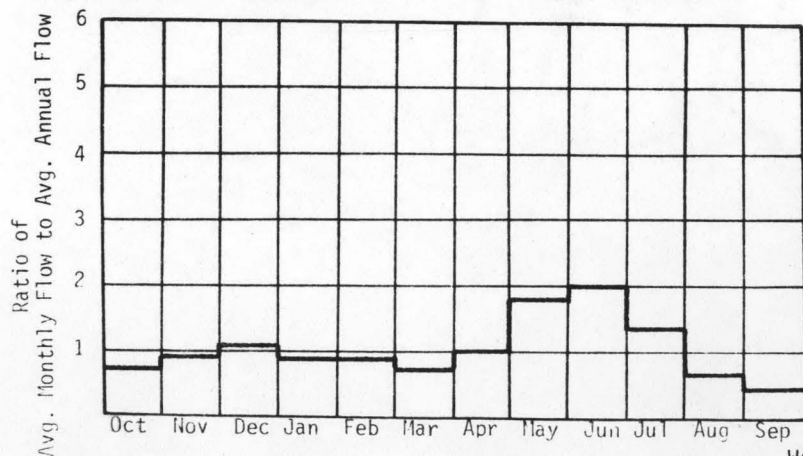
A. Upstream Elevation of Reach	<u>595</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>445</u>	Ft. MSL
C. Total Available Head in Reach	<u>150</u>	Ft.
D. Average Slope in Reach	<u>22.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>303</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

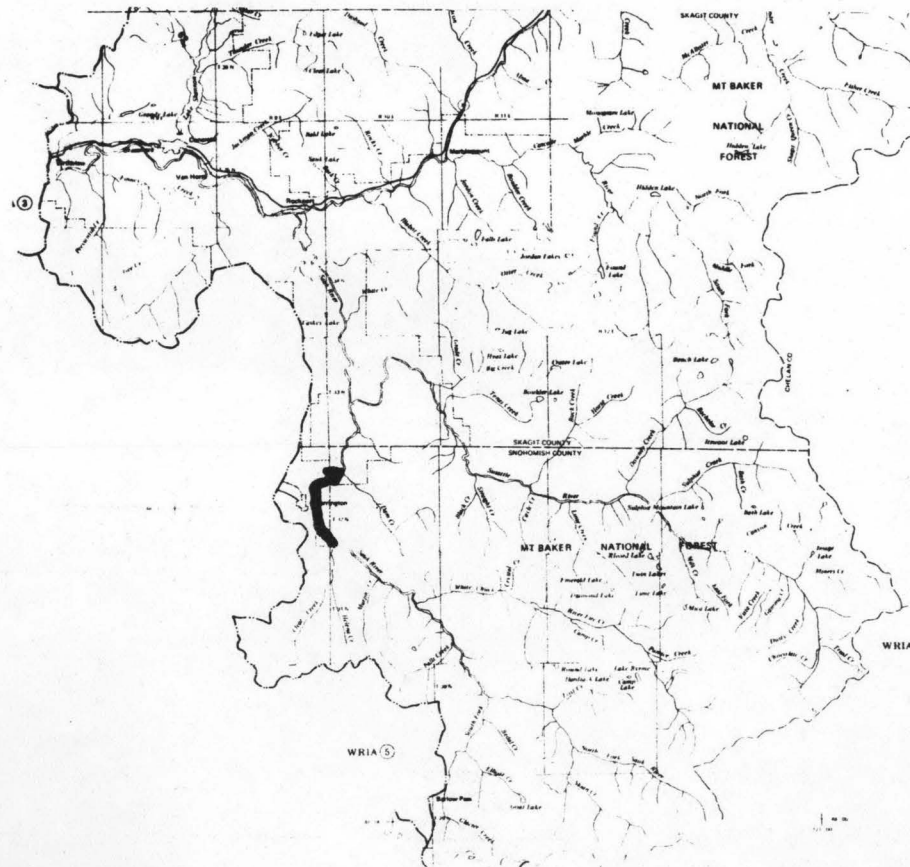
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	486	6.17	54.0	1.00
80	782	9.92	82.6	0.95
50	1500	19.0	133	0.80
30	2410	30.6	174	0.65
10	4270	54.2	214	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2113 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0069

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R10E</u>
D. Latitude, Longitude	<u>48°12' 121°32'</u>
E. Stream Name	<u>Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>24.7/31.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

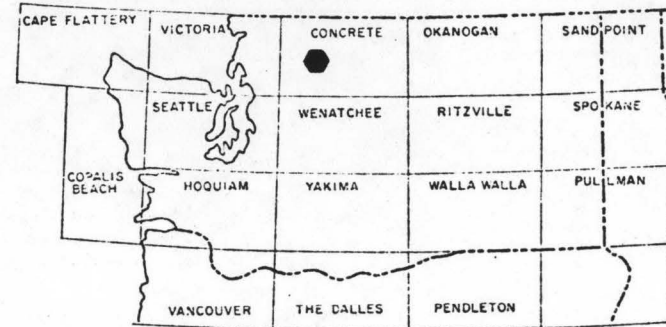
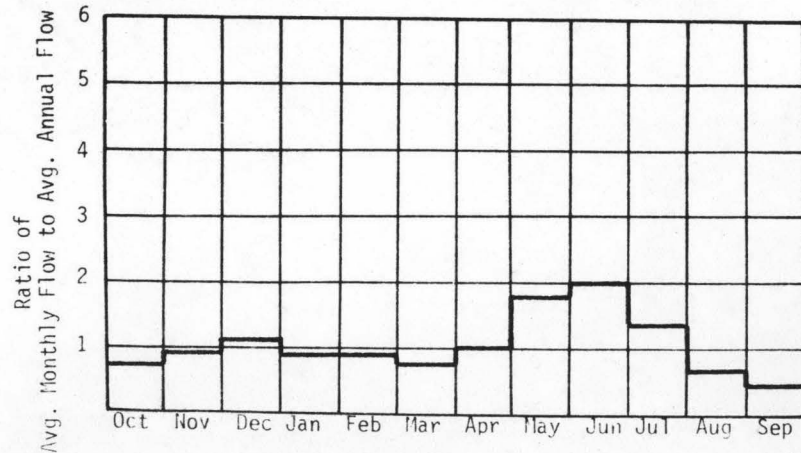
A. Upstream Elevation of Reach	<u>910</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>595</u>	Ft. MSL
C. Total Available Head in Reach	<u>315</u>	Ft.
D. Average Slope in Reach	<u>45</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>259</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

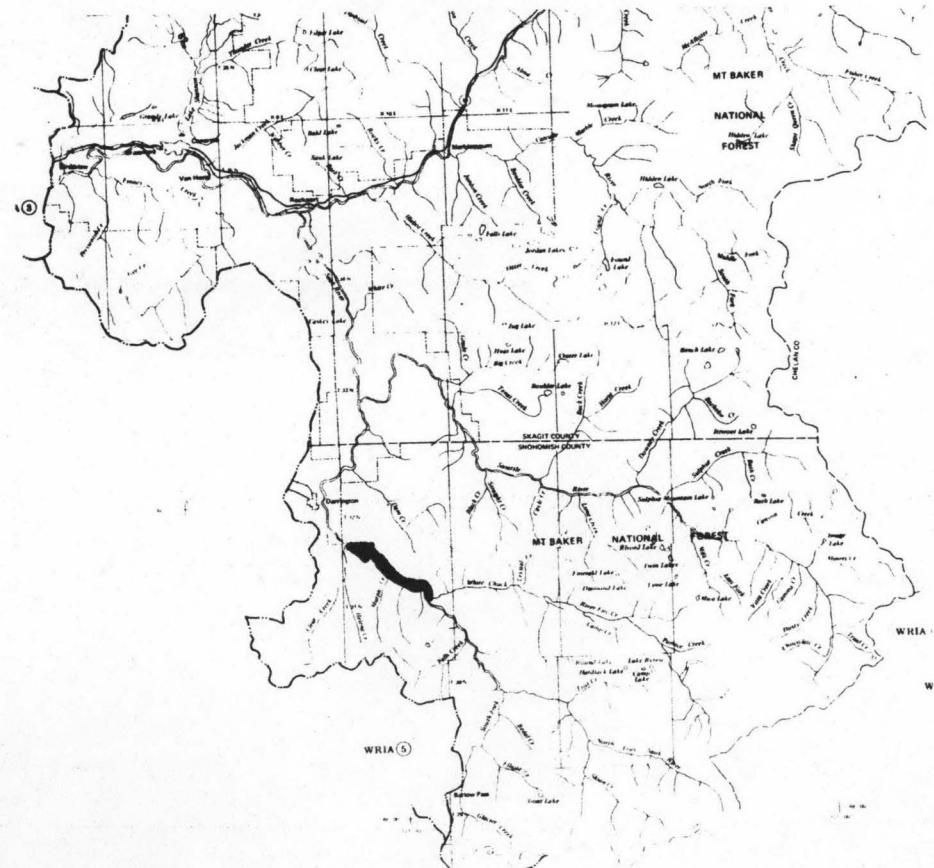
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	423	11.3	98.7	1.00
80	680	18.1	151	0.95
50	1310	34.8	244	0.80
30	2100	55.9	318	0.65
10	3710	99.0	390	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1839 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0070

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R10E</u>
D. Latitude, Longitude	<u>48°09' 121°26'</u>
E. Stream Name	<u>Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>31.7/34.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

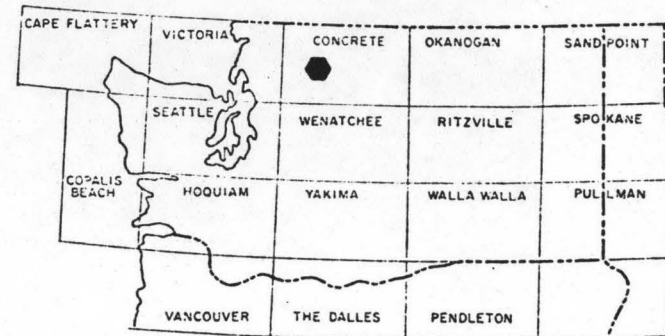
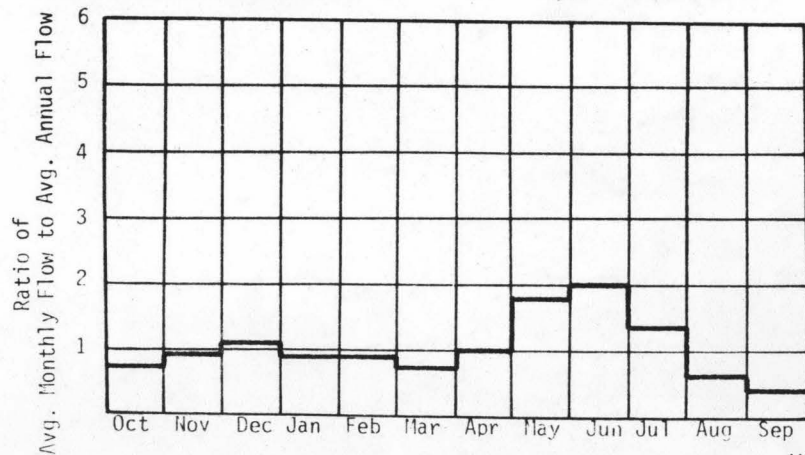
A. Upstream Elevation of Reach	<u>995</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>910</u>	Ft. MSL
C. Total Available Head in Reach	<u>85</u>	Ft.
D. Average Slope in Reach	<u>28.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>151</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

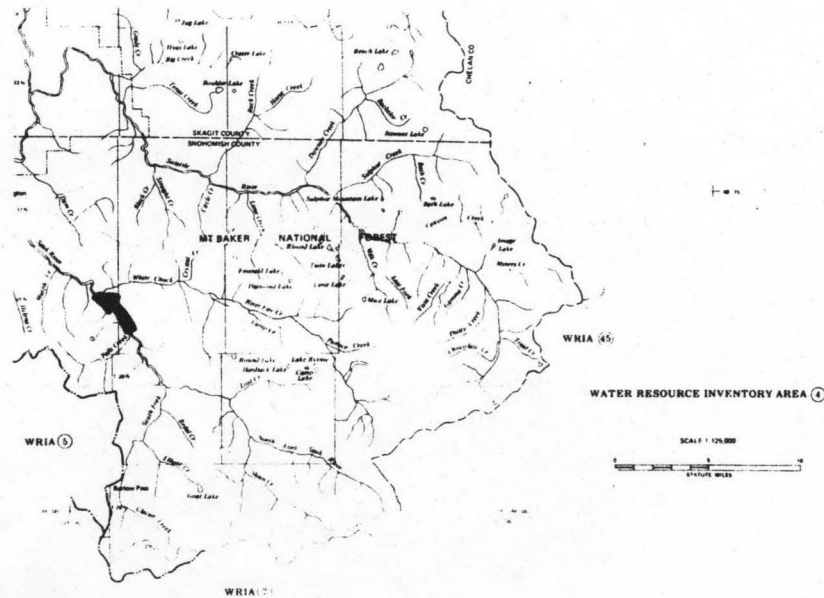
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	244	1.76	15.4	1.00
80	389	2.79	23.5	0.96
50	799	5.75	39.8	0.79
30	1340	9.66	53.3	0.63
10	2260	16.3	65.6	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1110 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0071

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R11E</u>
D. Latitude, Longitude	<u>48°06' 121°23'</u>
E. Stream Name	<u>Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>34.7/40.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

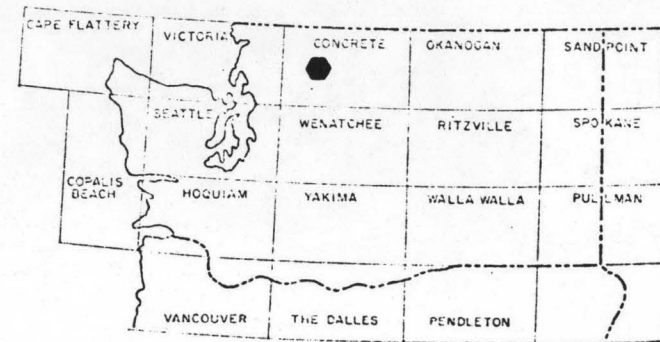
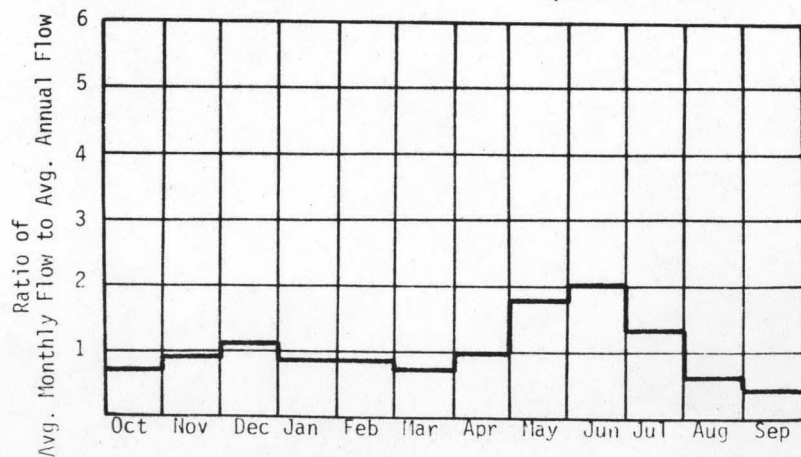
A. Upstream Elevation of Reach	<u>1315</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>995</u>	Ft. MSL
C. Total Available Head in Reach	<u>320</u>	Ft.
D. Average Slope in Reach	<u>59.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>145</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

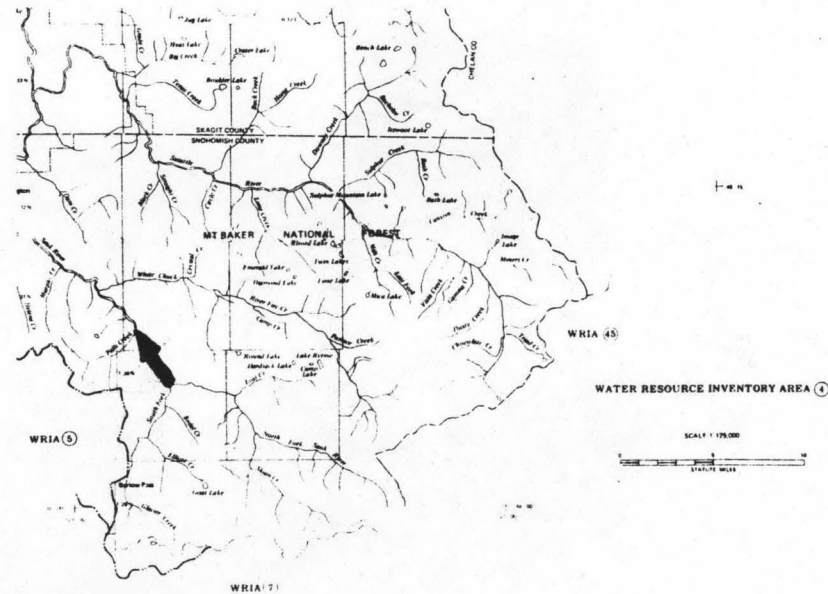
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	223	6.03	52.8	1.00
80	354	9.59	80.6	0.96
50	729	19.7	137	0.79
30	1220	33.2	183	0.63
10	2060	55.9	225	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1012 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0072

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R12E</u>
D. Latitude, Longitude	<u>48°05' 121°19'</u>
E. Stream Name	<u>N.F. Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>40.1/50.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

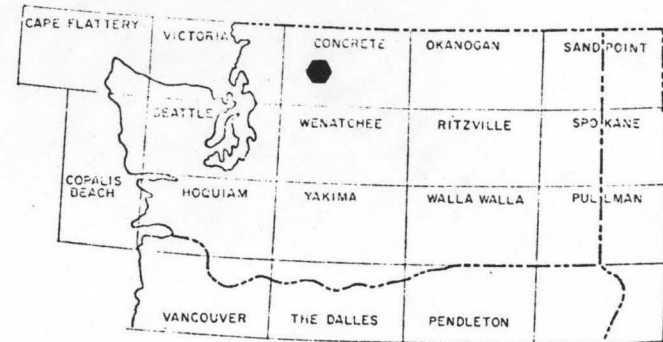
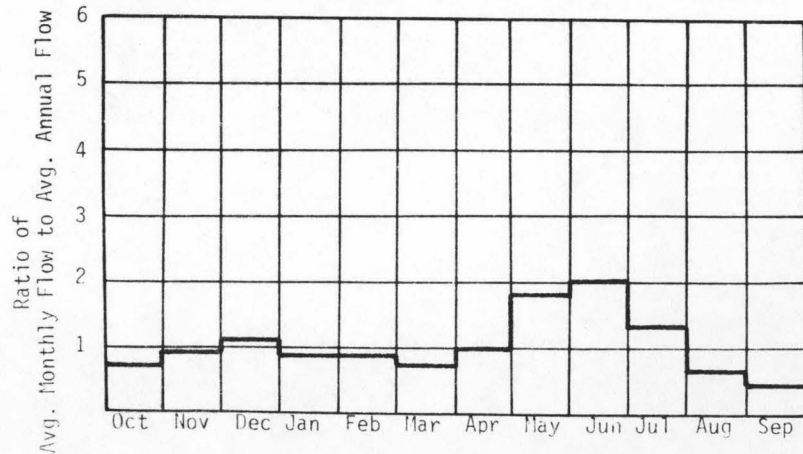
A. Upstream Elevation of Reach	<u>2020</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1215</u>	Ft. MSL
C. Total Available Head in Reach	<u>805</u>	Ft.
D. Average Slope in Reach	<u>75.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>78.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

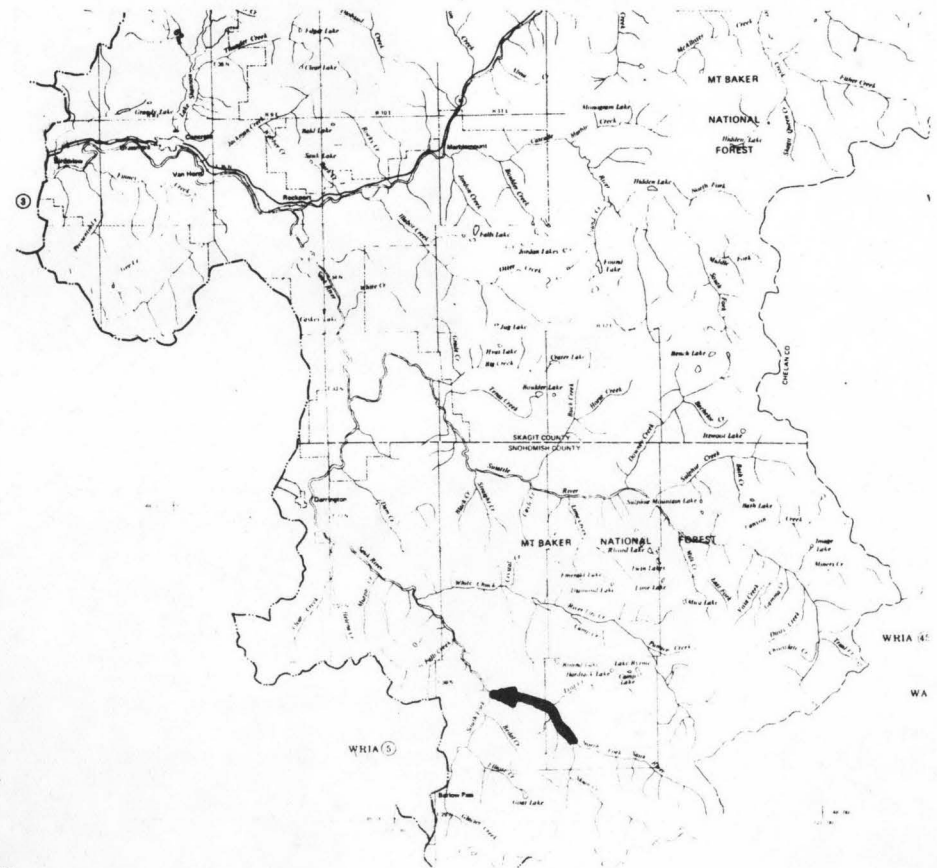
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	100	2.72	23.8	1.00
80	160	4.32	36.3	0.96
50	328	8.89	61.5	0.79
30	552	14.9	82.4	0.63
10	930	25.2	101	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 456 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0073

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R10E</u>
D. Latitude, Longitude	<u>48°22' 121°30'</u>
E. Stream Name	<u>Suiattle River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/8.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

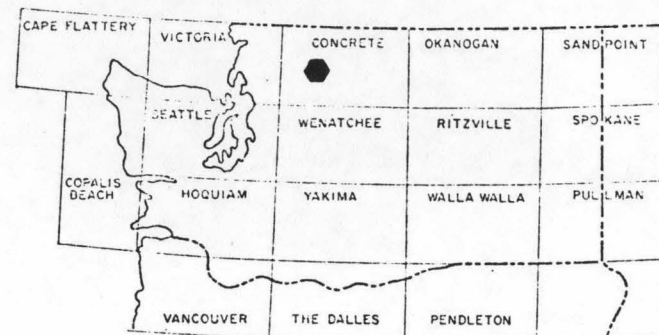
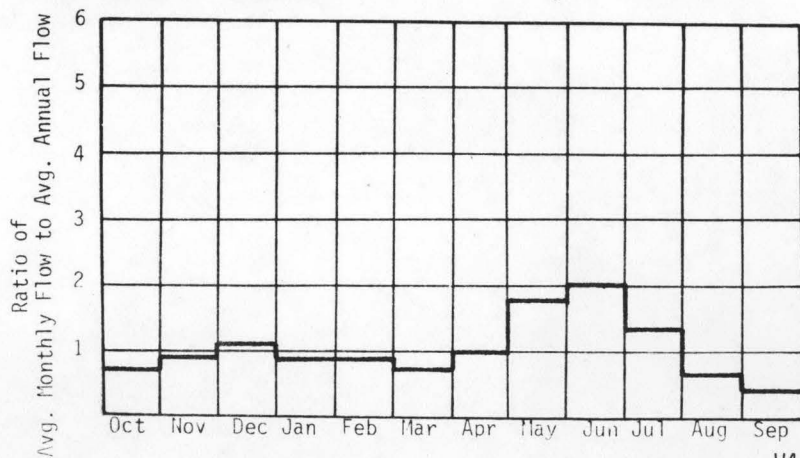
A. Upstream Elevation of Reach	<u>630</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>375</u>	Ft. MSL
C. Total Available Head in Reach	<u>255</u>	Ft.
D. Average Slope in Reach	<u>30.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>341</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	667	14.4	126	1.00
80	915	19.8	168	0.97
50	1410	30.4	227	0.85
30	2080	44.8	279	0.71
10	3700	79.8	336	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1907 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0074

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R10E</u>
D. Latitude, Longitude	<u>48°20' 121°27'</u>
E. Stream Name	<u>Suiattle River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>8.4/10.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

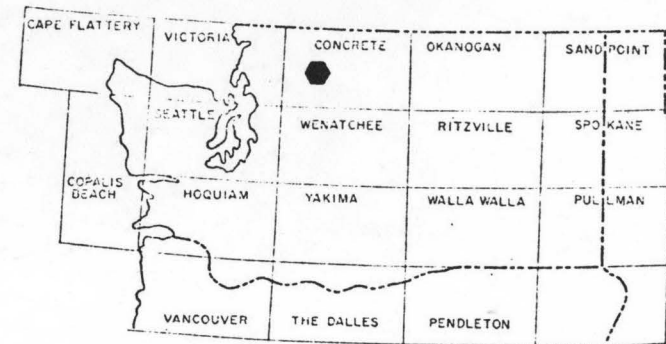
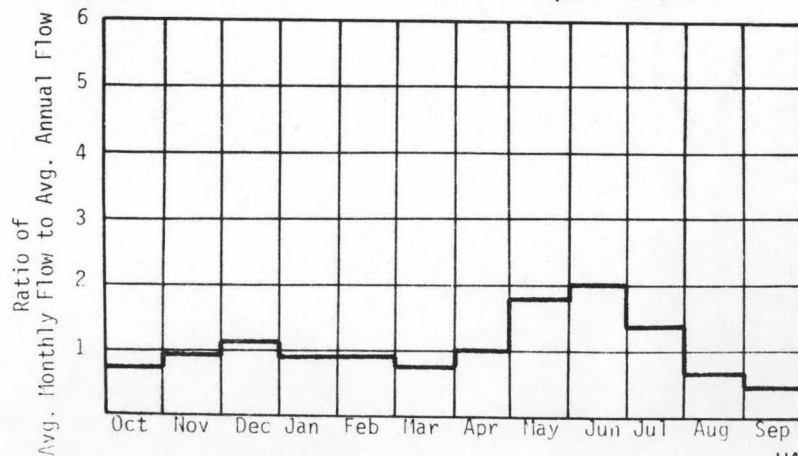
A. Upstream Elevation of Reach	<u>695</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>630</u>	Ft. MSL
C. Total Available Head in Reach	<u>65</u>	Ft.
D. Average Slope in Reach	<u>34.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>304</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	601	3.30	28.9	1.00
80	824	4.53	38.5	0.97
50	1270	6.98	52.0	0.85
30	1870	10.3	64.0	0.71
10	3330	18.3	77.0	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1716 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0075

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T32N R11E
D. Latitude, Longitude	48°18' 121°25'
E. Stream Name	Suiattle River
F. Major Basin Name	Skagit
G. River Mile	10.3/15.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

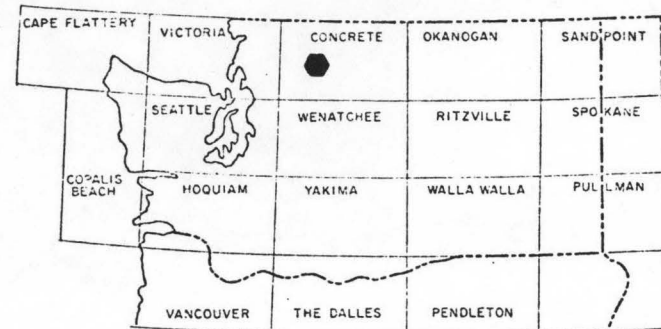
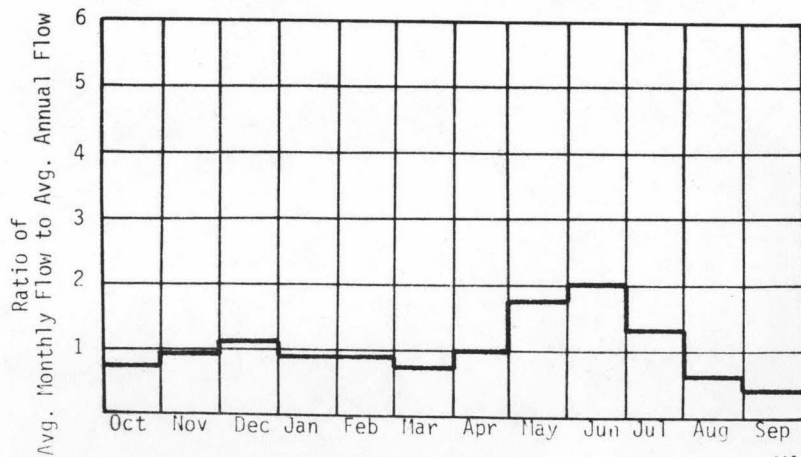
A. Upstream Elevation of Reach	840	Ft.	MSL
B. Downstream Elevation of Reach	695	Ft.	MSL
C. Total Available Head in Reach	145	Ft.	
D. Average Slope in Reach	29.6	Ft./Mi.	
E. Drainage Area above Reach Mouth	291	Sq.Mi.	
F. Inflow Classification	Natural		

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

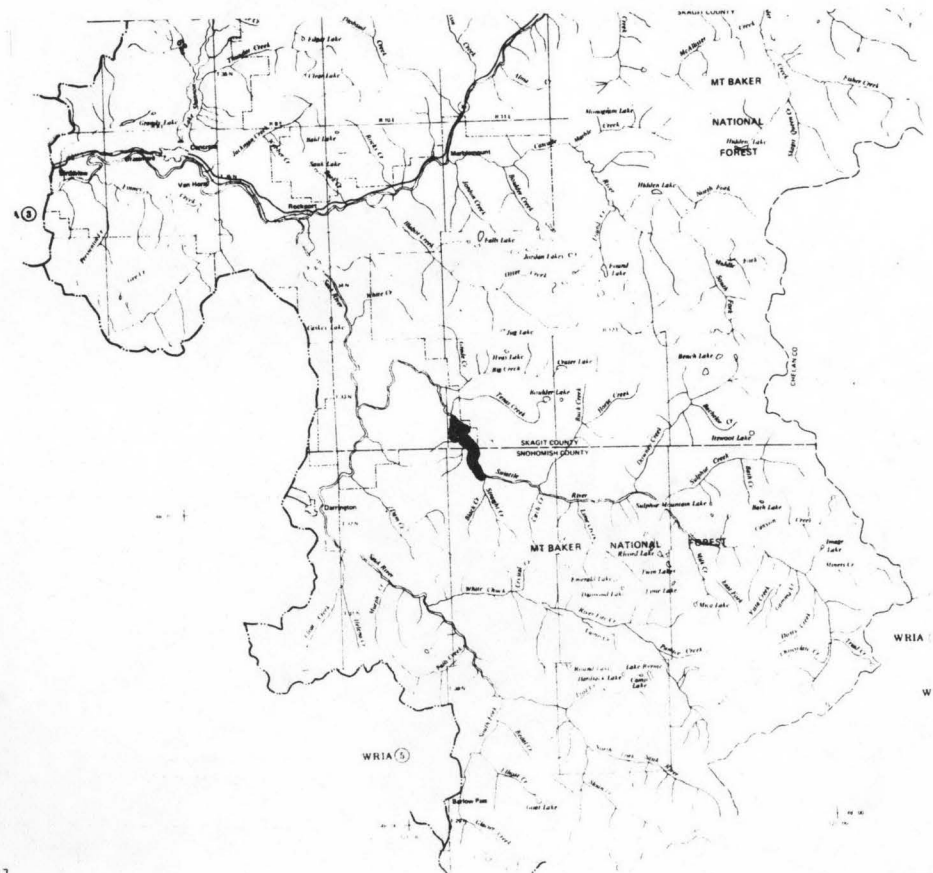
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	656	6.93	60.7	1.00
80	774	9.50	80.7	0.97
50	1190	14.6	109	0.85
30	1760	12.6	134	0.71
10	3130	38.4	161	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1613 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0076

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R11E</u>
D. Latitude, Longitude	<u>48°16' 121°22'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>15.2/18.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

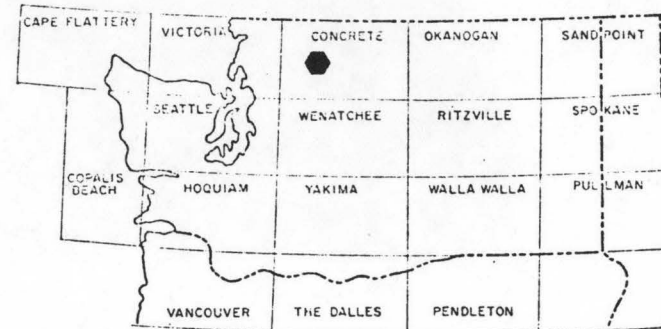
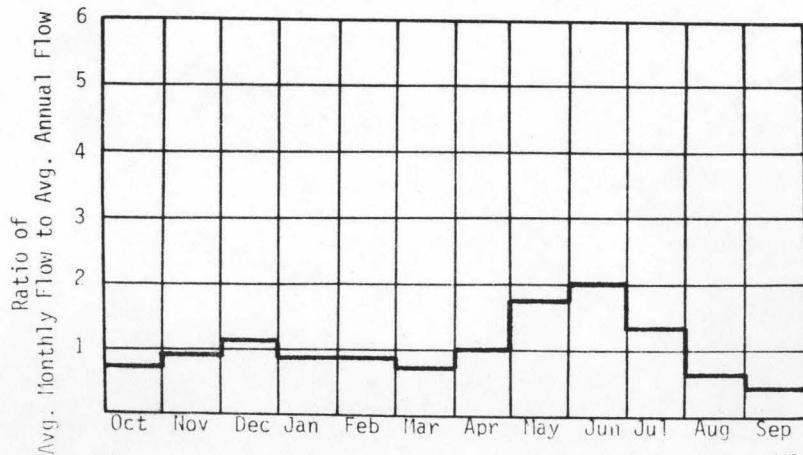
A. Upstream Elevation of Reach	<u>990</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>860</u>	Ft. MSL
C. Total Available Head in Reach	<u>130</u>	Ft.
D. Average Slope in Reach	<u>39.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>260</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	521	5.73	50.2	1.00
80	715	7.85	66.8	0.97
50	1100	12.1	90.2	0.85
30	1620	17.9	111	0.71
10	2890	31.8	134	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1489 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0077

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R11E</u>
D. Latitude, Longitude	<u>48°16' 121°18'</u>
E. Stream Name	<u>Skiatlet River</u>
F. Major Basin Name	<u>Skiagit</u>
G. River Mile	<u>18.5/21.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

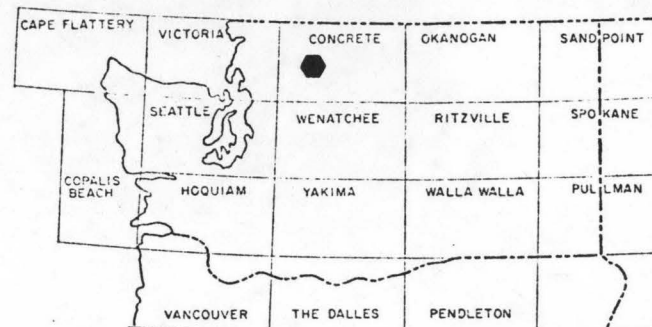
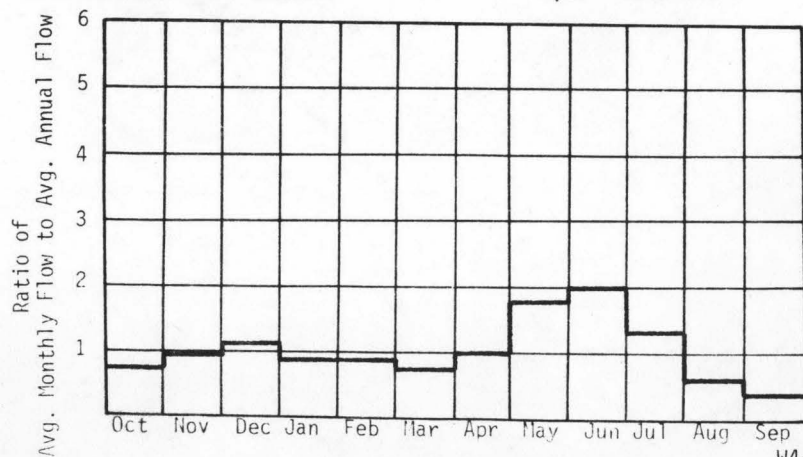
A. Upstream Elevation of Reach	<u>1140</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>990</u>	Ft. MSL
C. Total Available Head in Reach	<u>150</u>	Ft.
D. Average Slope in Reach	<u>53.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>218</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	434	5.51	48.3	1.00
80	595	7.55	64.2	0.97
50	918	11.6	86.7	0.85
30	1350	17.2	107	0.71
10	2410	30.5	128	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1240 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0078

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R12E</u>
D. Latitude, Longitude	<u>48°16' 121°16'</u>
E. Stream Name	<u>Suiattle River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>21.3/25.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

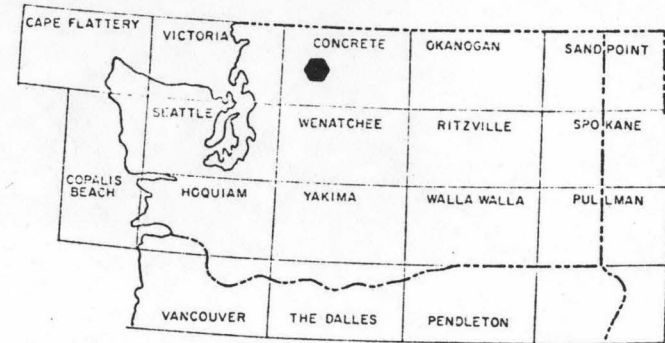
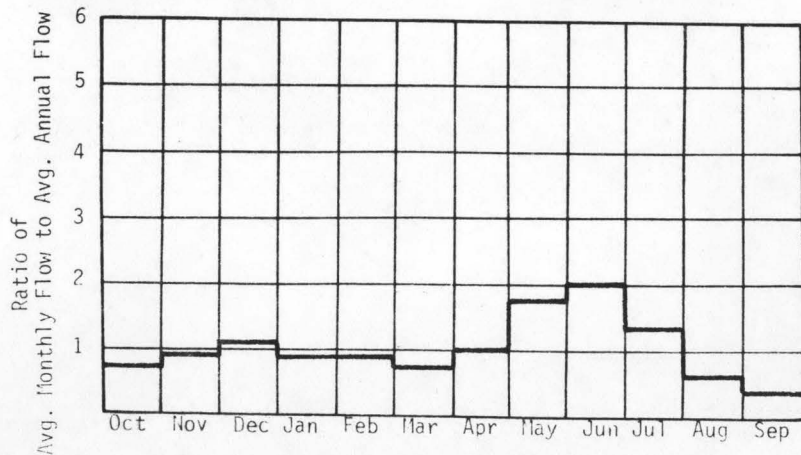
A. Upstream Elevation of Reach	<u>1390</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1140</u>	Ft. MSL
C. Total Available Head in Reach	<u>250</u>	Ft.
D. Average Slope in Reach	<u>67.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>190</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	379	8.02	70.2	1.00
80	520	11.0	93.4	0.97
50	801	17.0	126	0.85
30	1180	25.0	155	0.71
10	2100	44.4	187	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1083 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0079

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R12E</u>
D. Latitude, Longitude	<u>48°16' 121°12'</u>
E. Stream Name	<u>Suiattle River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>25.0/26.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

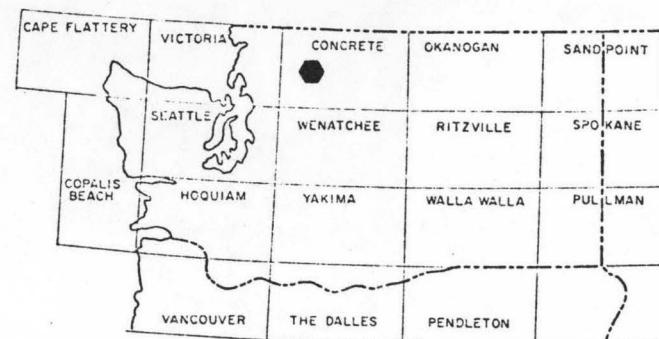
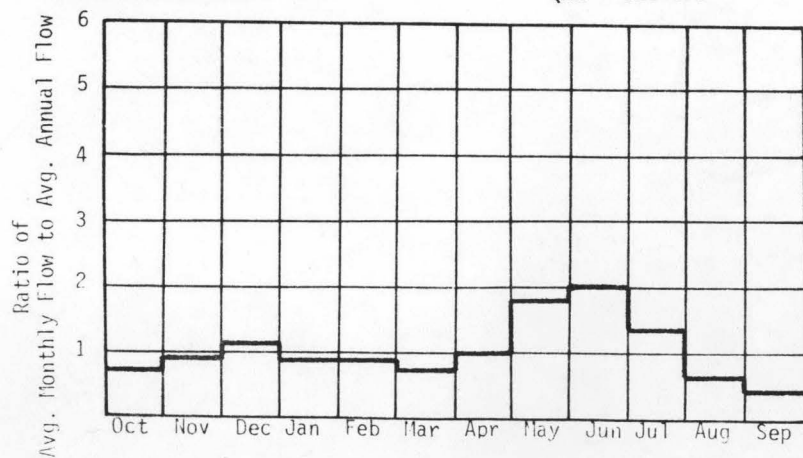
A. Upstream Elevation of Reach	<u>1520</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1390</u>	Ft. MSL
C. Total Available Head in Reach	<u>130</u>	Ft.
D. Average Slope in Reach	<u>72.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

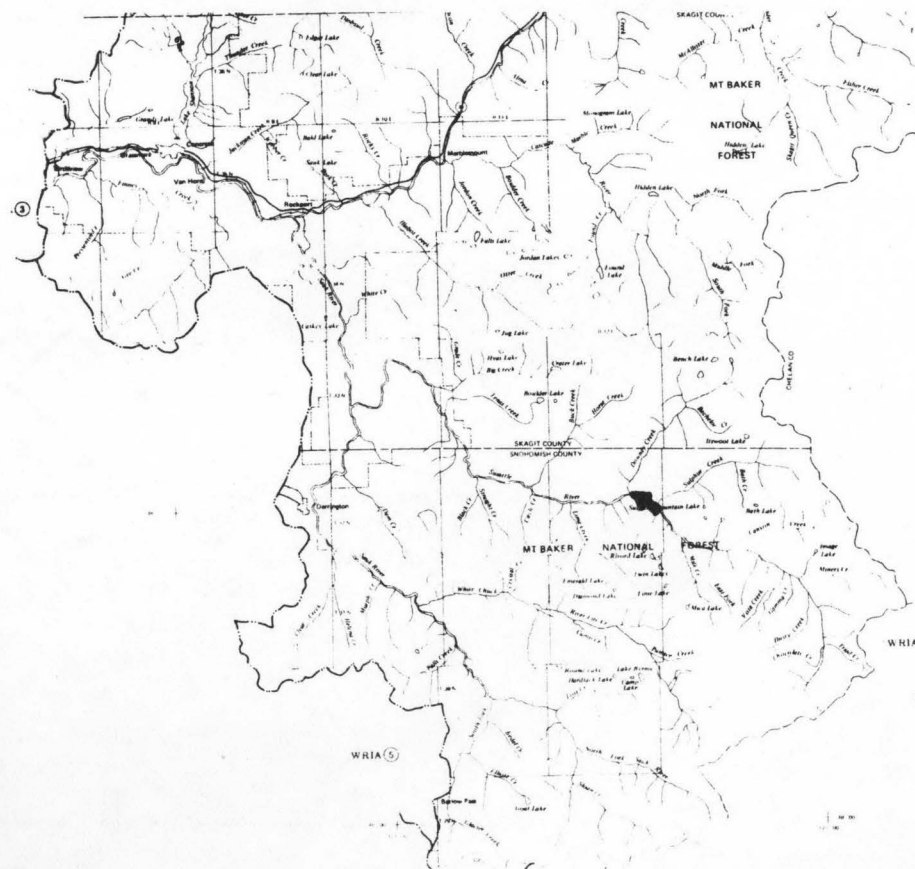
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	290	3.19	27.9	1.00
80	397	4.37	37.1	0.97
50	613	6.74	50.2	0.85
30	903	9.93	61.7	0.71
10	1610	17.7	74.3	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 828 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0080

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T32N R12E  
 D. Latitude, Longitude 48°13' 121°08'  
 E. Stream Name Suiattle River  
 F. Major Basin Name Skagit  
 G. River Mile 26.8/29.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

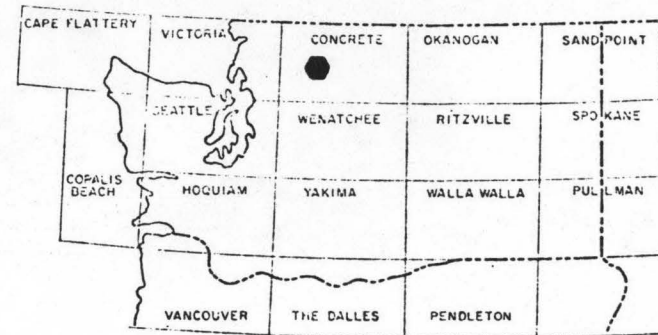
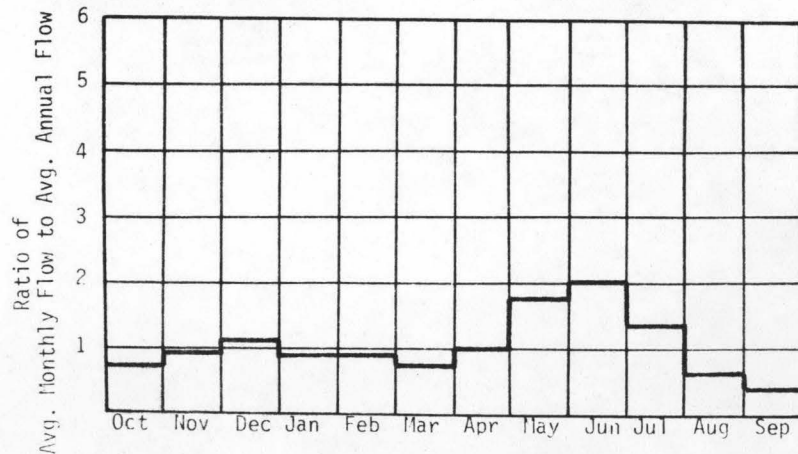
A. Upstream Elevation of Reach 1750 Ft. MSL  
 B. Downstream Elevation of Reach 1520 Ft. MSL  
 C. Total Available Head in Reach 230 Ft.  
 D. Average Slope in Reach 95.8 Ft./Mi.  
 E. Drainage Area above Reach Mouth 108 Sq.Mi.  
 F. Inflow Classification Natural

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	211	4.11	36.0	1.00
80	289	5.63	47.9	0.97
50	446	8.68	64.7	0.85
30	657	12.8	79.5	0.71
10	1170	22.8	95.7	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 603 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0081

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R13E</u>
D. Latitude, Longitude	<u>48°13' 121°08'</u>
E. Stream Name	<u>Suiattle River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>29.2/33.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

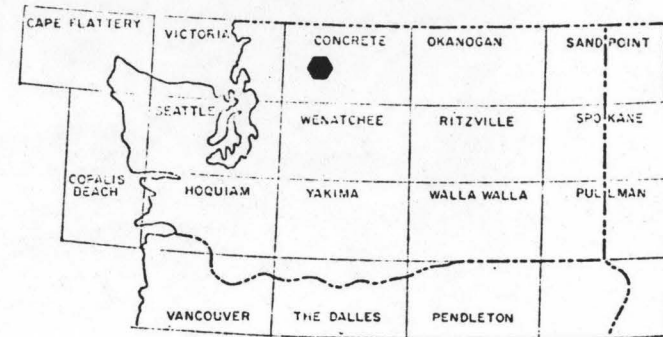
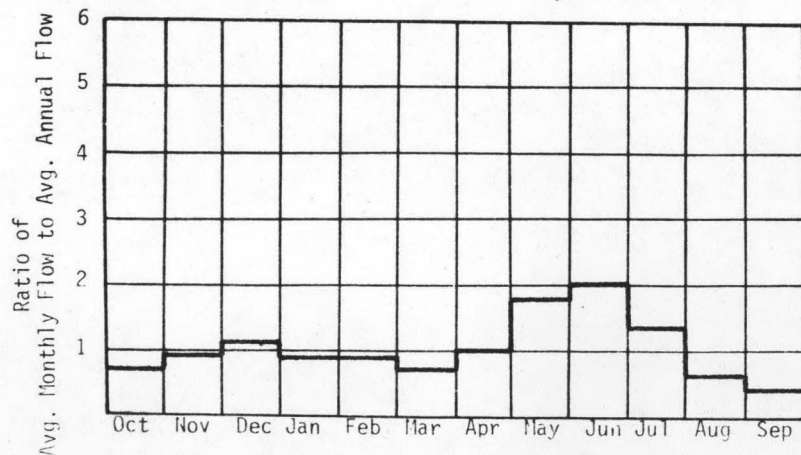
A. Upstream Elevation of Reach	<u>2250</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1750</u>	Ft. MSL
C. Total Available Head in Reach	<u>500</u>	Ft.
D. Average Slope in Reach	<u>128</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>86.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

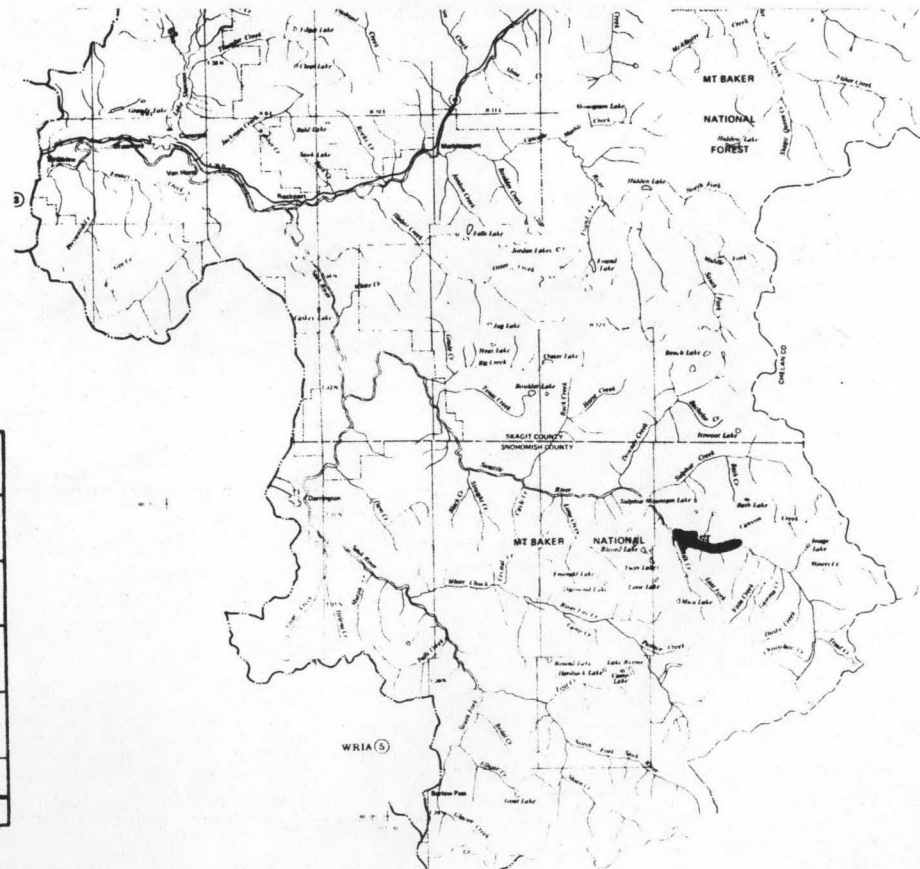
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	167	7.06	61.9	1.00
80	229	9.69	82.3	0.97
50	353	14.9	111	0.85
30	520	22.0	137	0.71
10	925	39.1	165	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 477 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0082

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T31N R13E
D. Latitude, Longitude	48°12' 121°03'
E. Stream Name	Suiattle River
F. Major Basin Name	Skagit
G. River Mile	33.1/35.6

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

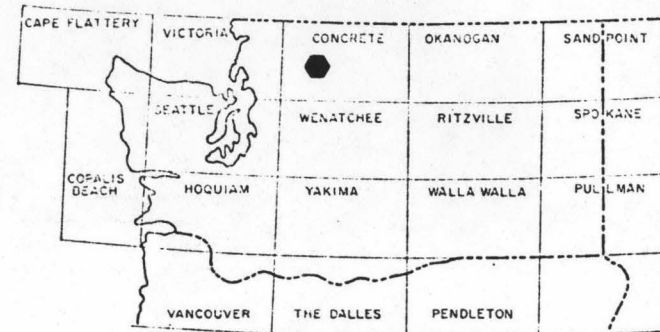
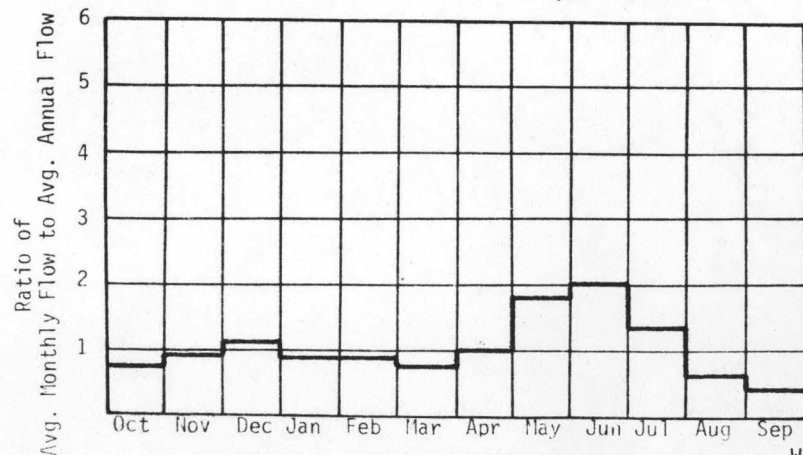
A. Upstream Elevation of Reach	2580	Ft.	MSL
B. Downstream Elevation of Reach	2250	Ft.	MSL
C. Total Available Head in Reach	330	Ft.	
D. Average Slope in Reach	132	Ft./Mi.	
E. Drainage Area above Reach Mouth	63.0	Sq.Mi.	
F. Inflow Classification	Natural		

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

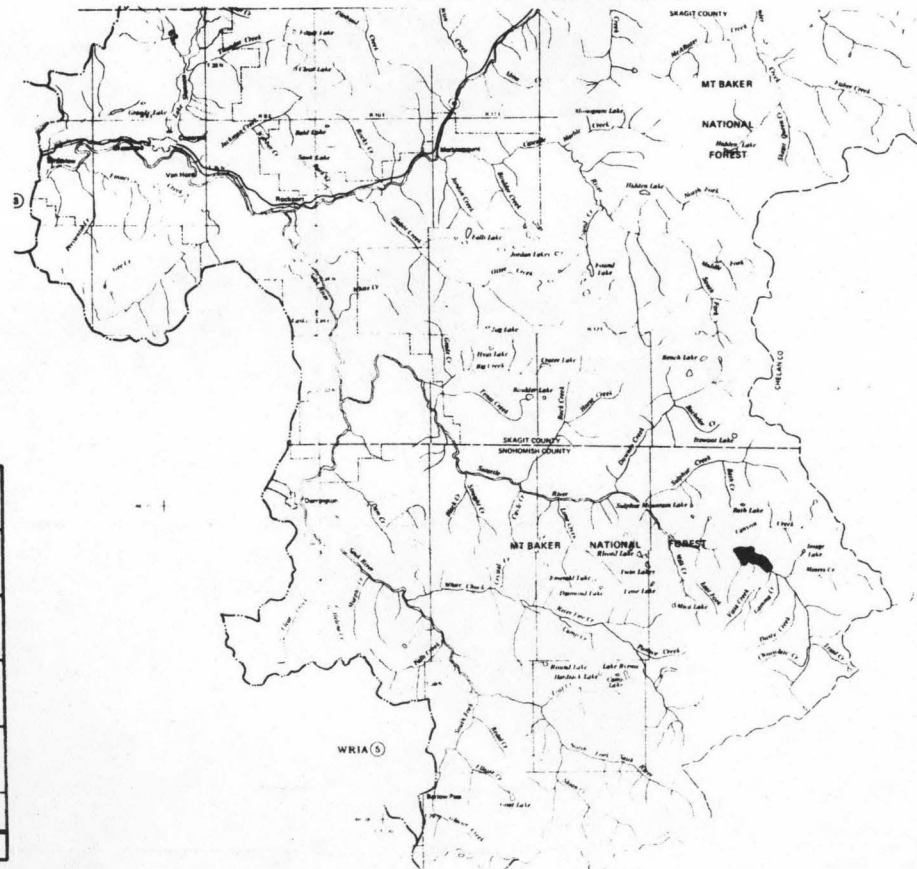
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	123	3.43	30.0	1.00
80	168	4.70	40.0	0.97
50	260	7.25	54.0	0.85
30	383	10.7	66.4	0.71
10	681	19.0	80.0	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 351 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0083

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R14E</u>
D. Latitude, Longitude	<u>48°12' 121°02'</u>
E. Stream Name	<u>Suiattle River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>35.6/36.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

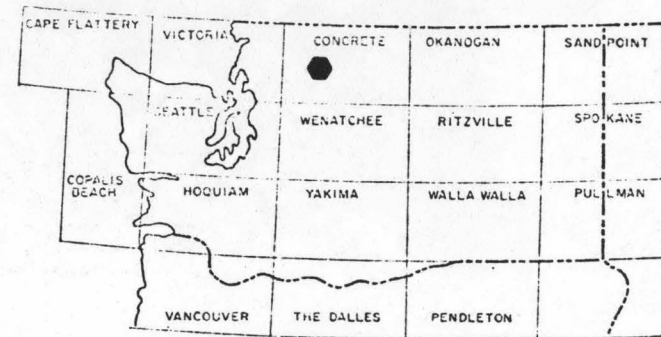
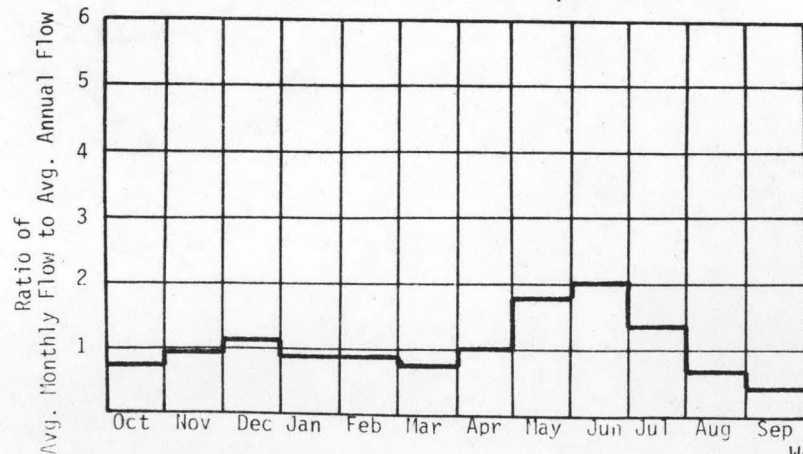
A. Upstream Elevation of Reach	<u>2700</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2580</u>	Ft. MSL
C. Total Available Head in Reach	<u>120</u>	Ft.
D. Average Slope in Reach	<u>120</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>49.5</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

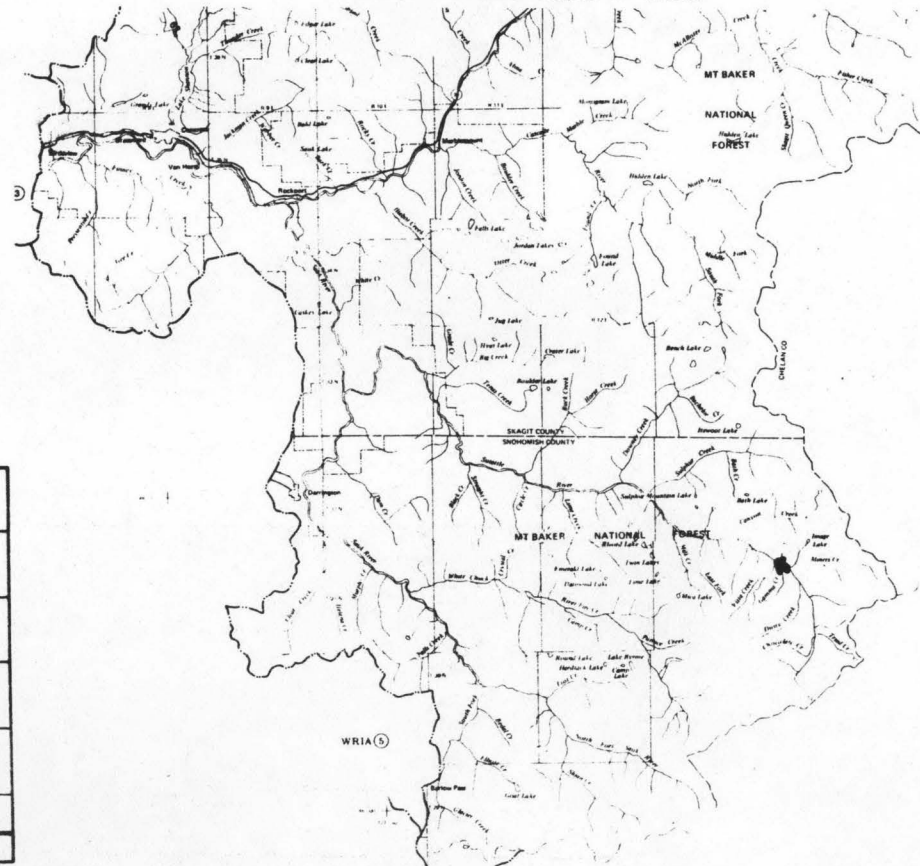
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	96.6	0.98	8.59	1.00
80	132	1.34	11.4	0.97
50	204	2.07	15.4	0.85
30	301	3.05	19.0	0.71
10	535	5.44	22.9	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 276 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0084

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T31N R14E
D. Latitude, Longitude	48°09' 121°01'
E. Stream Name	Suiattle River
F. Major Basin Name	Skagit
G. River Mile	36.6/37.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

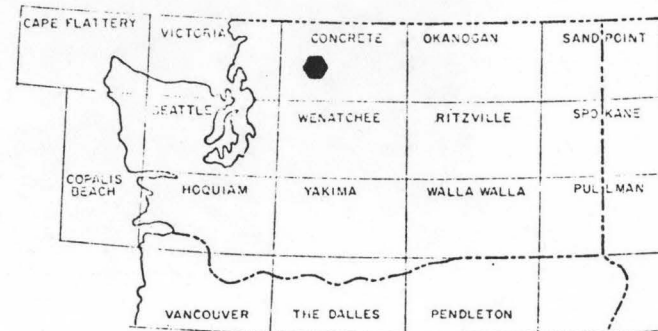
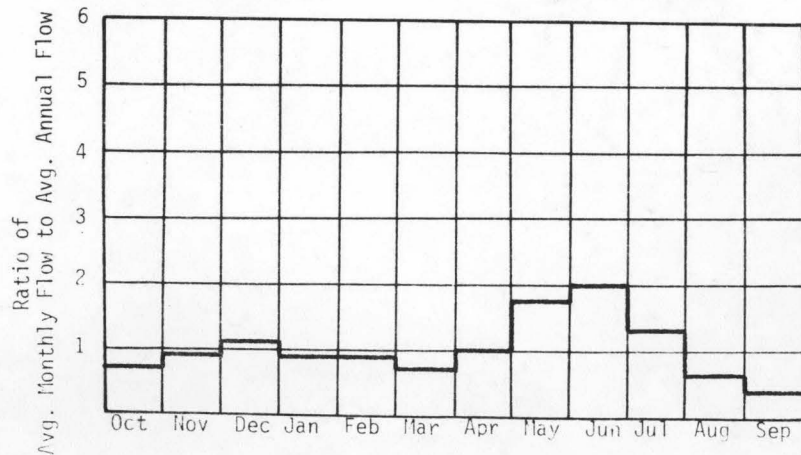
A. Upstream Elevation of Reach	2930	Ft.	MSL
B. Downstream Elevation of Reach	2700	Ft.	MSL
C. Total Available Head in Reach	230	Ft.	
D. Average Slope in Reach	256	Ft./Mi.	
E. Drainage Area above Reach Mouth	33.2	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	70.0	1.36	11.9	1.00
80	95.5	1.86	15.8	0.97
50	147	2.87	21.3	0.85
30	217	4.22	26.3	0.71
10	386	7.51	31.6	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 199 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0085

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R14E</u>
D. Latitude, Longitude	<u>48°08' 121°00'</u>
E. Stream Name	<u>Skagit River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>37.5/44.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

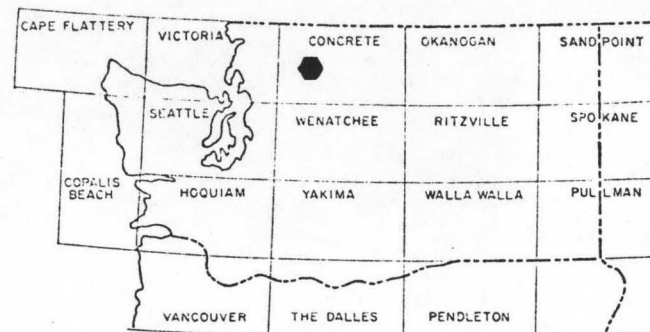
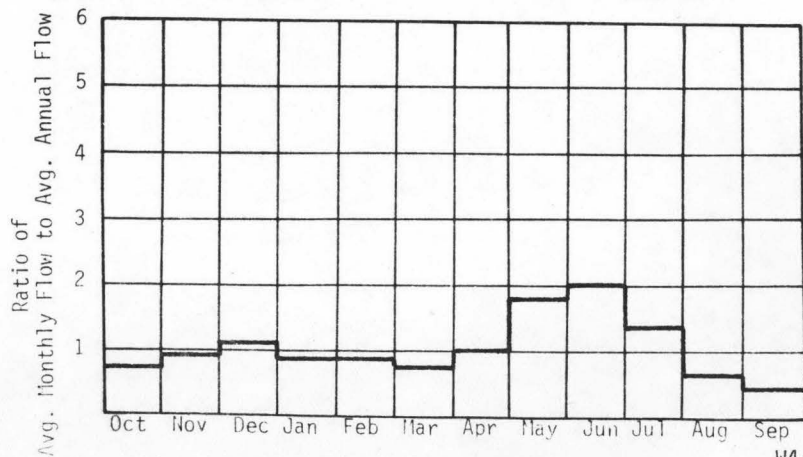
A. Upstream Elevation of Reach	<u>4100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2930</u>	Ft. MSL
C. Total Available Head in Reach	<u>1170 + 66 = 1236</u>	Ft.
D. Average Slope in Reach	<u>175</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>28.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	38.5	4.03	35.3	1.00
80	52.8	5.52	46.9	0.97
50	81.4	8.51	63.4	0.85
30	120	12.5	78.0	0.71
10	213	22.3	93.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 110 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0086

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T33N R1E
D. Latitude, Longitude	48°21' 121°26'
E. Stream Name	Big Creek
F. Major Basin Name	Skagit
G. River Mile	0/2.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

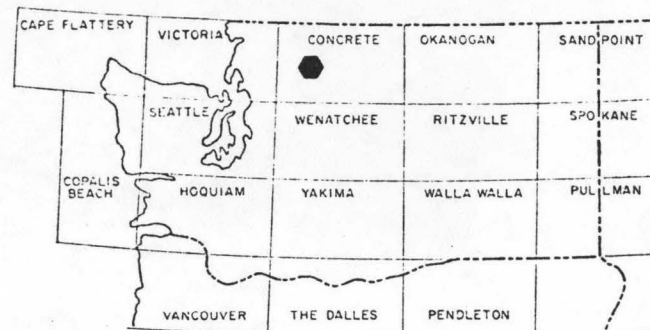
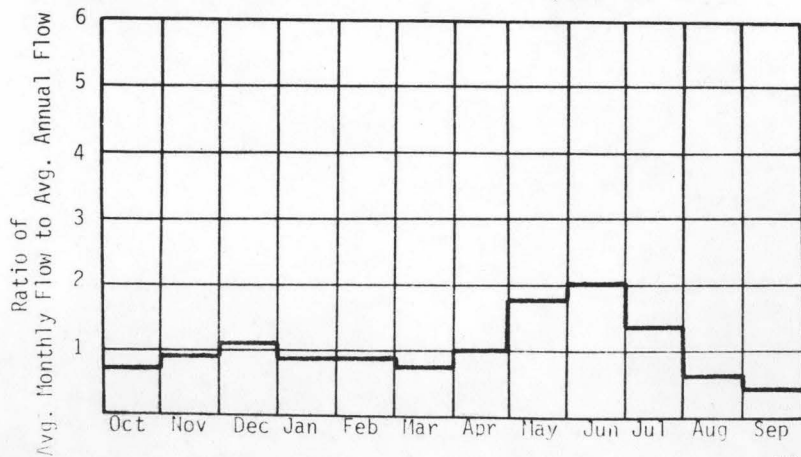
A. Upstream Elevation of Reach	1220	Ft.	MSL
B. Downstream Elevation of Reach	630	Ft.	MSL
C. Total Available Head in Reach	590	Ft.	
D. Average Slope in Reach	295	Ft./Mi.	
E. Drainage Area above Reach Mouth	21.7	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	54.3	2.71	23.7	1.00
80	71.3	3.56	30.2	0.97
50	102	5.11	38.9	0.87
30	163	8.12	49.8	0.70
10	336	16.8	64.7	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 155 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0087

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R11E</u>
D. Latitude, Longitude	<u>48°22' 121°23'</u>
E. Stream Name	<u>Big Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.0/5.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

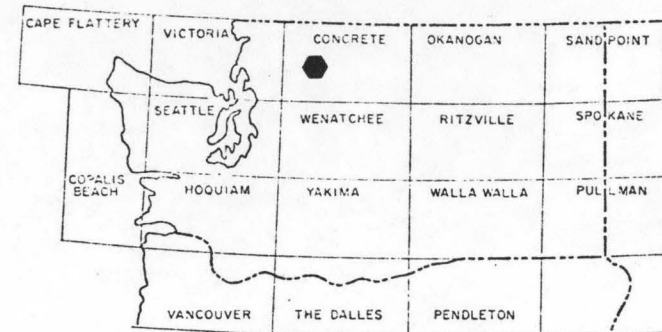
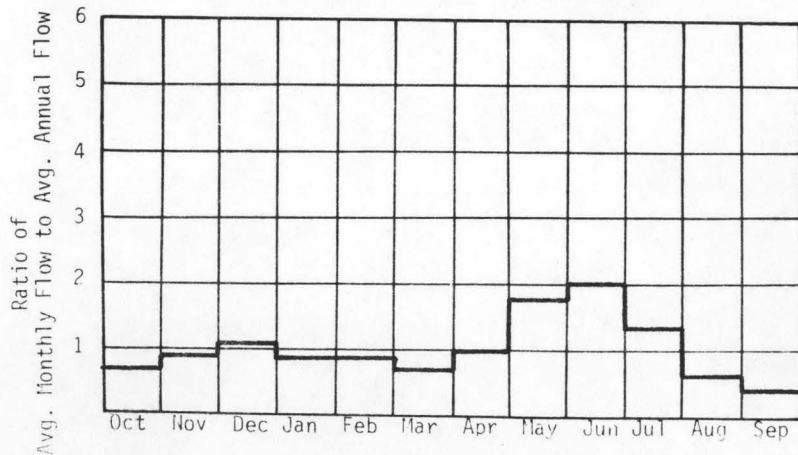
A. Upstream Elevation of Reach	<u>2380</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1200</u>	Ft. MSL
C. Total Available Head in Reach	<u>1180 + 66 = 1246</u>	Ft.
D. Average Slope in Reach	<u>319</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	46.6	4.91	43.0	1.00
80	61.2	6.45	54.8	0.97
50	87.8	9.25	70.5	0.87
30	140	14.7	90.3	0.70
10	289	30.4	117	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 133 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0088

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T32N R11E</u>
D. Latitude, Longitude	<u>48°20' 121°26'</u>
E. Stream Name	<u>Tenas Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

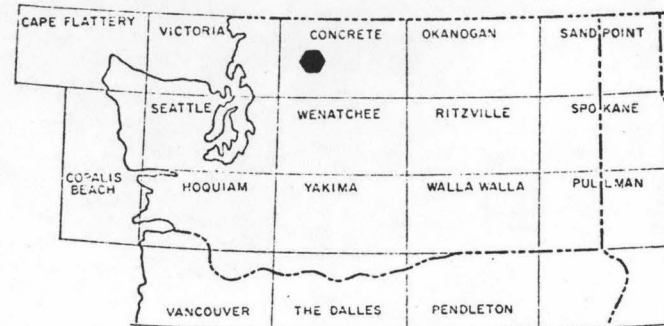
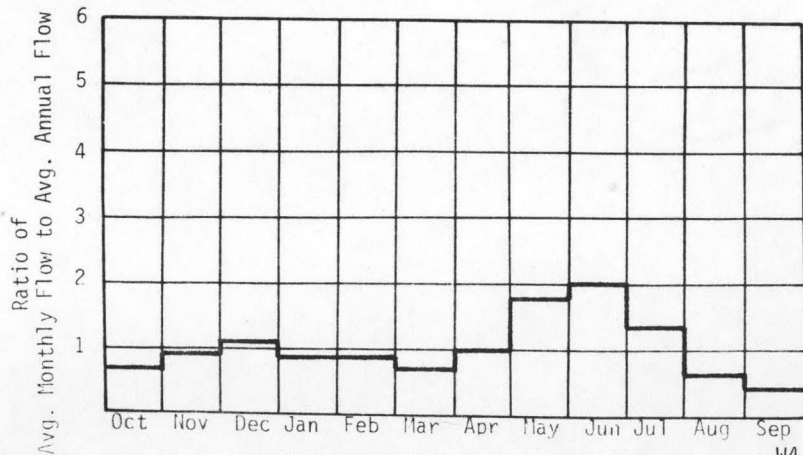
A. Upstream Elevation of Reach	<u>1000</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>695</u>	Ft. MSL
C. Total Available Head in Reach	<u>305 + 66 = 371</u>	Ft.
D. Average Slope in Reach	<u>305</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.9	0.59	5.20	1.00
80	25.9	0.81	6.91	0.97
50	40.0	1.25	9.34	0.85
30	58.9	1.85	11.5	0.71
10	105	3.29	13.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 54 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0089

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R11E</u>
D. Latitude, Longitude	<u>48°16' 121°24'</u>
E. Stream Name	<u>Straight Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

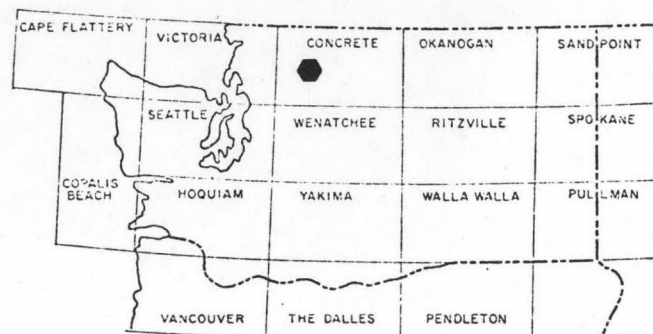
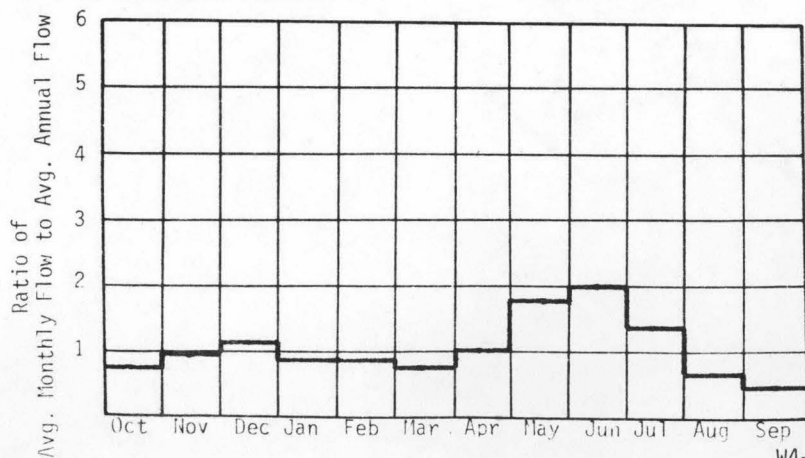
A. Upstream Elevation of Reach	<u>1080</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>860</u>	Ft. MSL
C. Total Available Head in Reach	<u>220 + 66 = 286</u>	Ft.
D. Average Slope in Reach	<u>200</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.7	0.53	4.60	1.00
80	30.0	0.72	6.12	0.97
50	45.9	1.11	8.27	0.85
30	67.6	1.64	10.2	0.71
10	120	2.91	12.2	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0090

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R12E</u>
D. Latitude, Longitude	<u>48°17' 121°18'</u>
E. Stream Name	<u>Buck Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

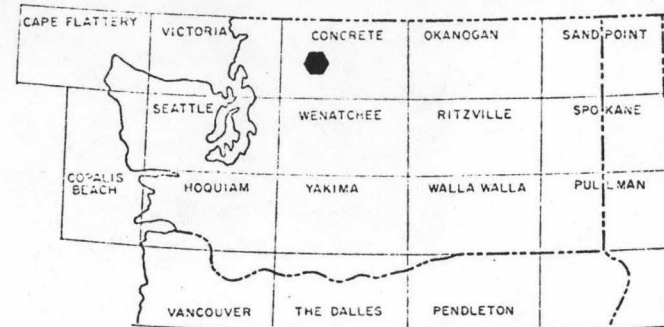
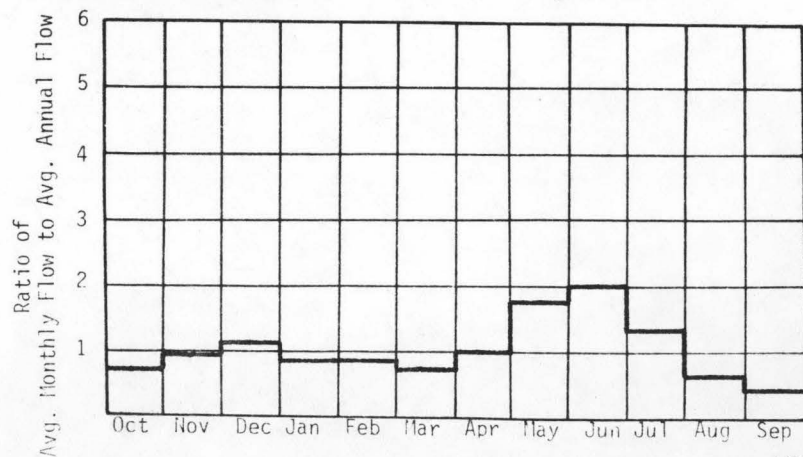
A. Upstream Elevation of Reach	<u>2060</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>990</u>	Ft. MSL
C. Total Available Head in Reach	<u>1070</u>	Ft.
D. Average Slope in Reach	<u>228</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>34.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	62.0	5.61	49.1	1.00
80	85.0	7.69	65.4	0.97
50	131	11.9	88.3	0.85
30	193	17.5	109	0.71
10	343	31.1	131	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 177 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0091

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T33N R12E
D. Latitude, Longitude	48°18' 121°17'
E. Stream Name	Buck Creek
F. Major Basin Name	Skagit
G. River Mile	4.7/6.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

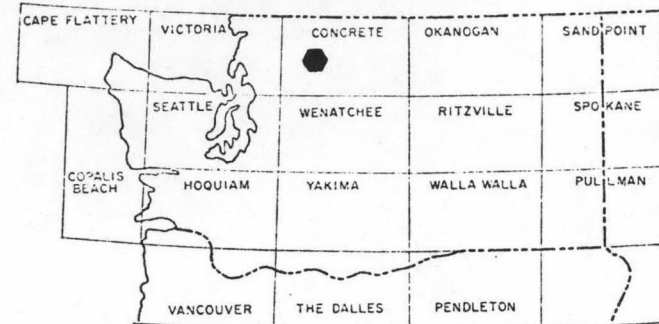
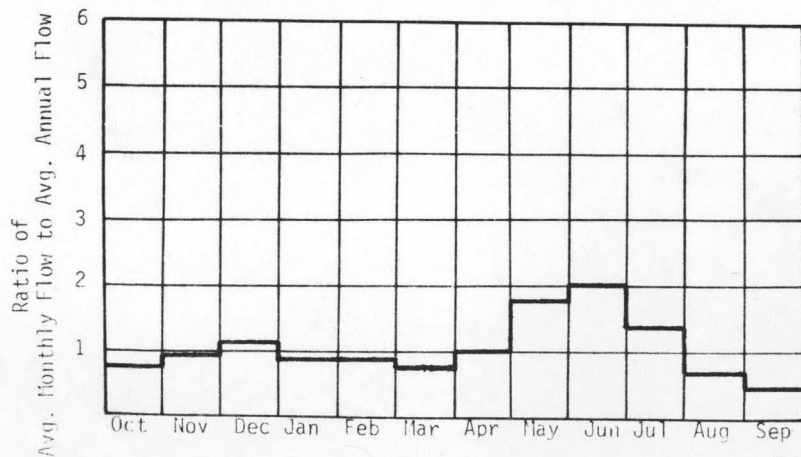
A. Upstream Elevation of Reach	2360	Ft.	MSL
B. Downstream Elevation of Reach	2060	Ft.	MSL
C. Total Available Head in Reach	300 + 66 = 366	Ft.	
D. Average Slope in Reach	150	Ft./Mi.	
E. Drainage Area above Reach Mouth	10.0	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.6	0.57	5.03	1.00
80	25.4	0.79	6.69	0.97
50	39.2	1.21	9.04	0.85
30	57.8	1.79	11.1	0.71
10	103	3.18	13.4	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 53 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0092

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R12E</u>
D. Latitude, Longitude	<u>48°19' 121°17'</u>
E. Stream Name	<u>Horse Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/0.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

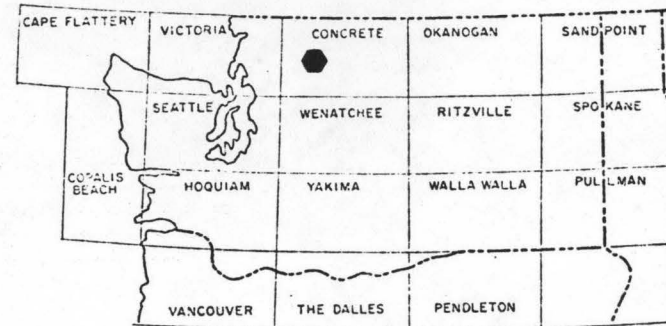
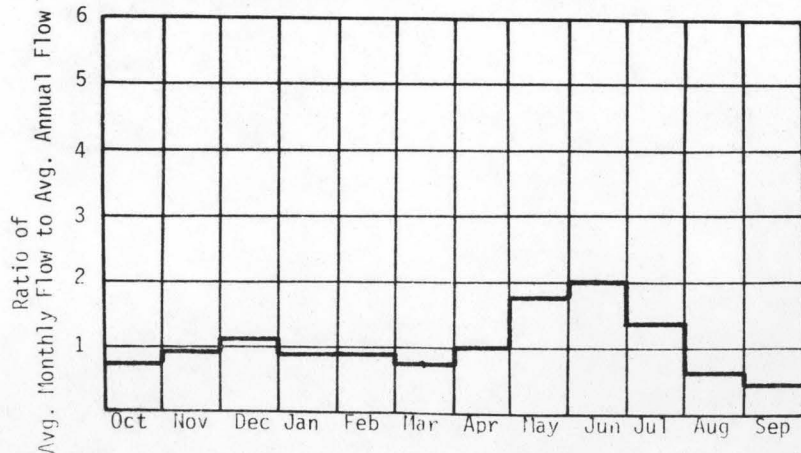
A. Upstream Elevation of Reach	<u>2080</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2060</u>	Ft. MSL
C. Total Available Head in Reach	<u>20 + 66 = 86</u>	Ft.
D. Average Slope in Reach	<u>100</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.7	0.16	1.38	1.00
80	29.8	0.22	1.84	0.97
50	45.9	0.33	2.49	0.85
30	67.6	0.49	3.06	0.71
10	120	0.88	3.68	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0093

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T32N R12E
D. Latitude, Longitude	48°14' 121°17'
E. Stream Name	Lime Creek
F. Major Basin Name	Skagit
G. River Mile	0/3.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

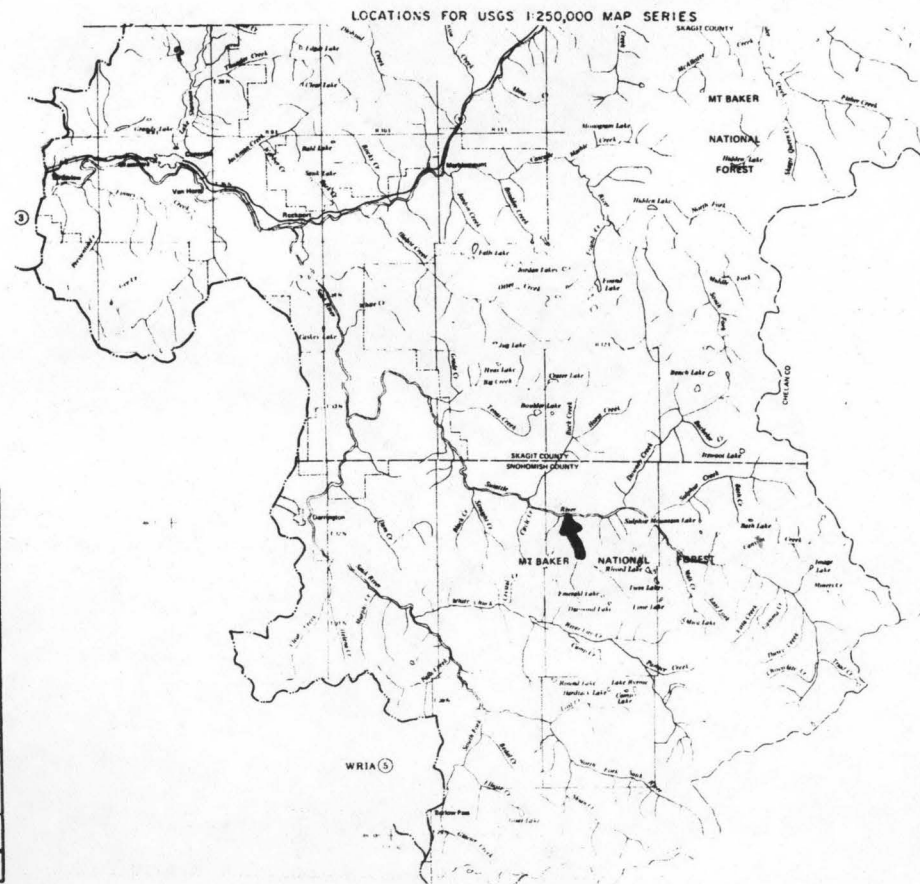
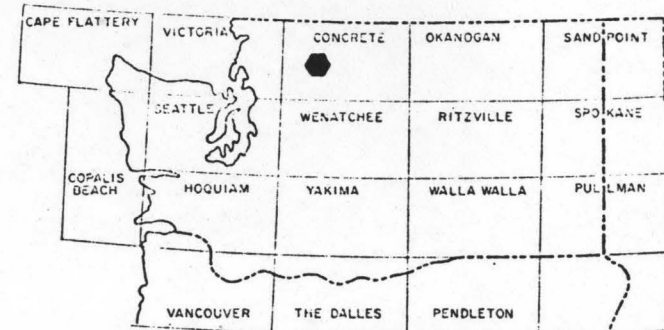
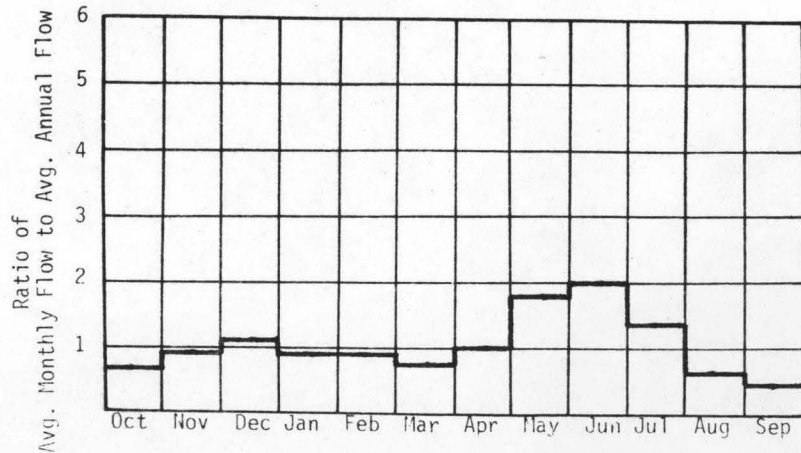
A. Upstream Elevation of Reach	2400	Ft.	MSL
B. Downstream Elevation of Reach	1140	Ft.	MSL
C. Total Available Head in Reach	1260 + 66 = 1326		Ft.
D. Average Slope in Reach	420	Ft./Mi.	
E. Drainage Area above Reach Mouth	18.0	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	31.2	3.49	30.6	1.00
80	42.7	4.79	40.7	0.97
50	65.9	7.39	55.0	0.85
30	97.0	10.9	67.7	0.71
10	173	19.4	81.4	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 89 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0094

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T33N R12E</u>
D. Latitude, Longitude	<u>48°18' 121°12'</u>
E. Stream Name	<u>Downey Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/6.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

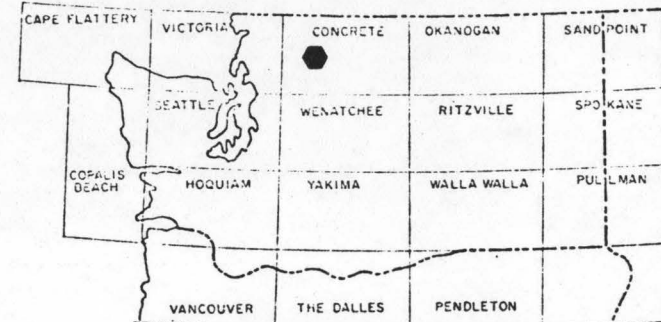
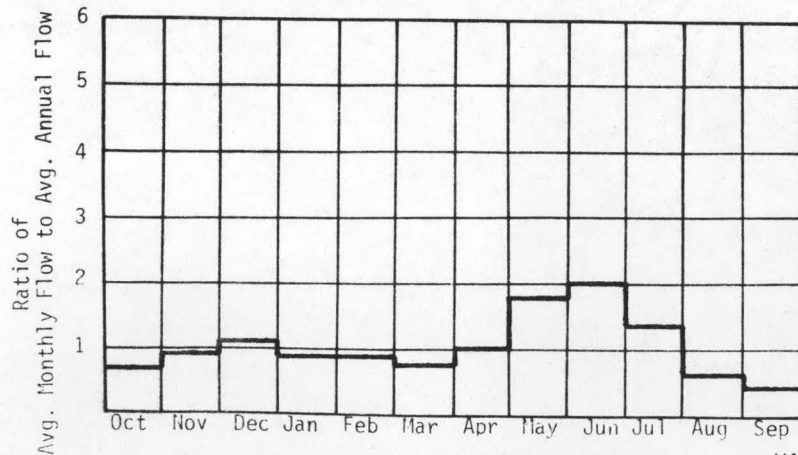
A. Upstream Elevation of Reach	<u>2420</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1390</u>	Ft. MSL
C. Total Available Head in Reach	<u>1030</u>	Ft.
D. Average Slope in Reach	<u>166</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>36.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	62.3	5.43	47.6	1.00
80	85.4	7.45	63.3	0.97
50	132	11.5	85.5	0.85
30	194	16.9	105	0.71
10	345	30.1	127	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 178 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0095

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R13E</u>
D. Latitude, Longitude	<u>48°20' 121°08'</u>
E. Stream Name	<u>Downey Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>6.2/8.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

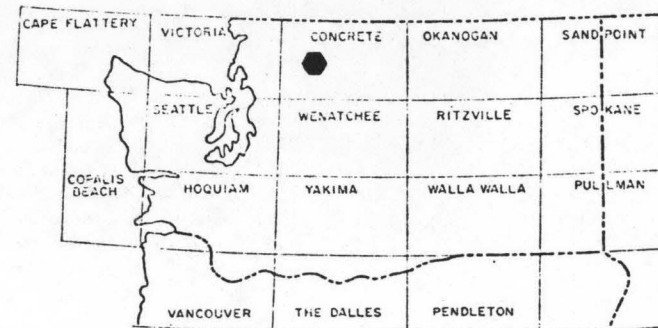
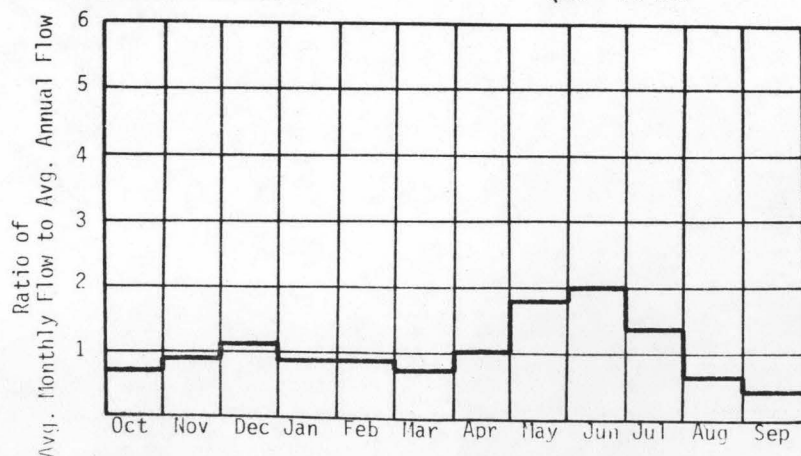
A. Upstream Elevation of Reach	<u>2920</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2420</u>	Ft. MSL
C. Total Available Head in Reach	<u>500 + 66 = 566</u>	Ft.
D. Average Slope in Reach	<u>208</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>4.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

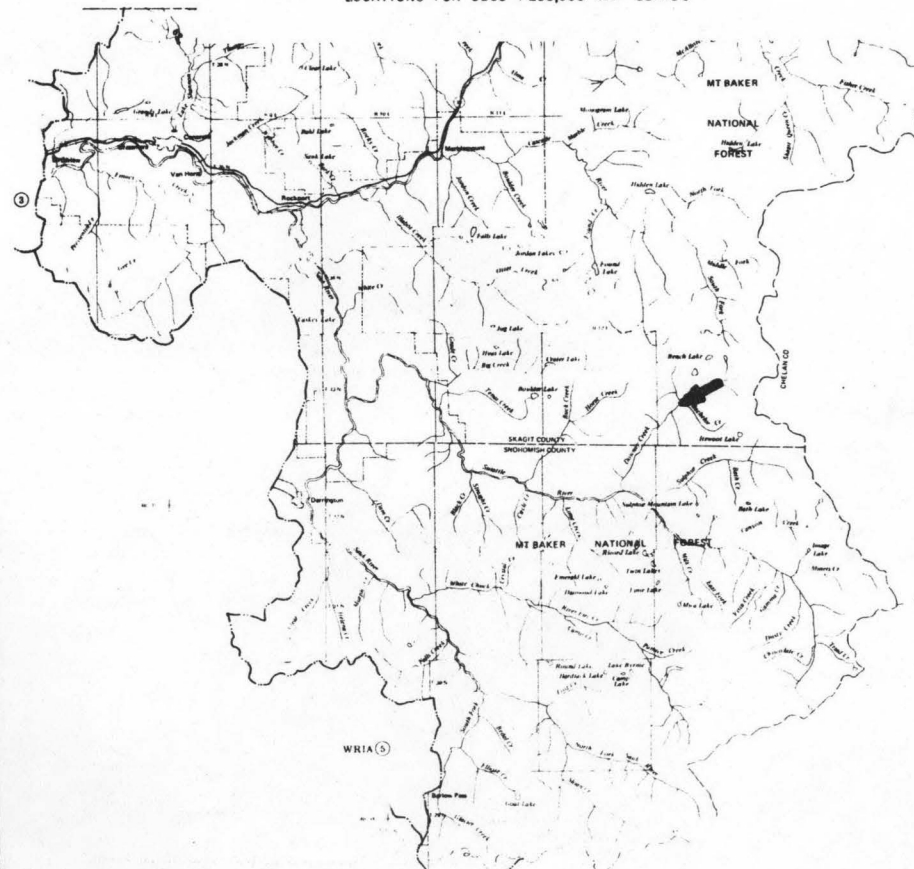
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	27.3	2.38	20.8	1.00
80	37.4	3.26	27.7	0.97
50	57.7	5.03	37.5	0.85
30	85.0	7.41	46.1	0.71
10	151	13.2	55.4	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 78 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0096

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R13E</u>
D. Latitude, Longitude	<u>48°17' 121°08'</u>
E. Stream Name	<u>Sulphur Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/7.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

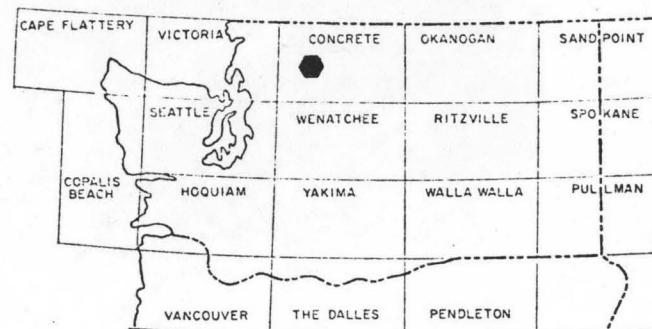
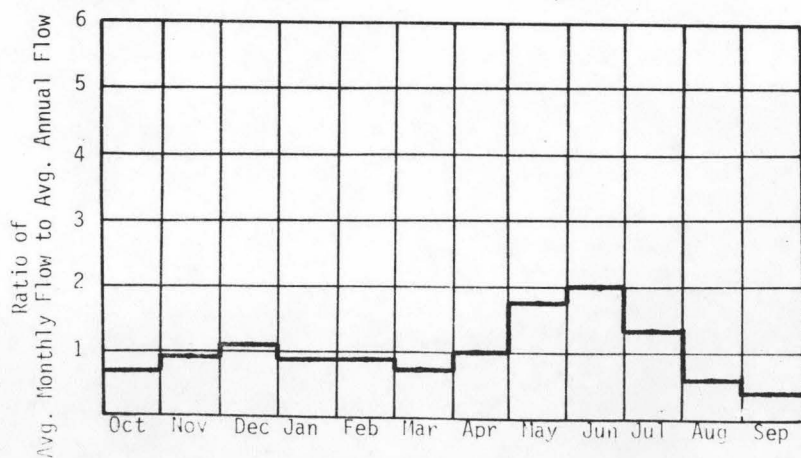
A. Upstream Elevation of Reach	<u>3160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1500</u>	Ft. MSL
C. Total Available Head in Reach	<u>1660 + 66 = 1726</u>	Ft.
D. Average Slope in Reach	<u>221</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>32.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	43.4	4.78	33.1	1.00
80	59.5	5.19	44.1	0.97
50	91.8	8.00	59.5	0.85
30	135	11.8	73.3	0.71
10	241	21.0	88.1	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 124 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0097

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R13E</u>
D. Latitude, Longitude	<u>48°12' 121°10'</u>
E. Stream Name	<u>Milk Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

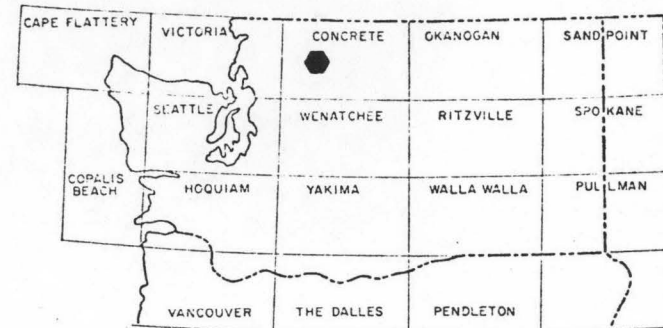
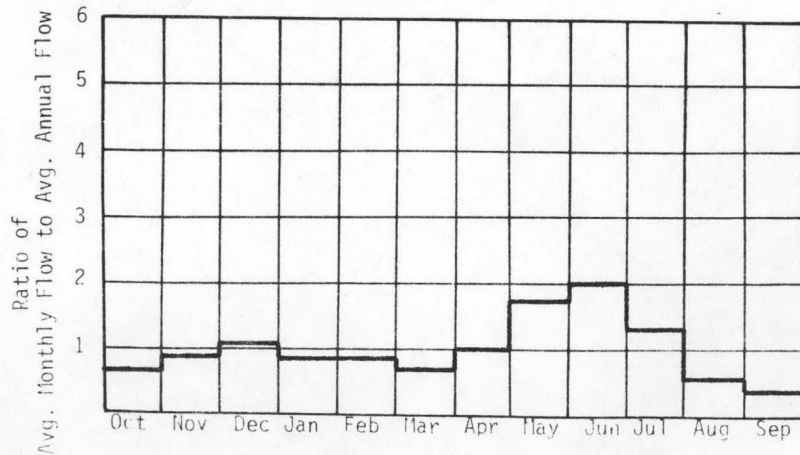
A. Upstream Elevation of Reach	<u>2500</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1750</u>	Ft. MSL
C. Total Available Head in Reach	<u>750 + 66 = 816</u>	Ft.
D. Average Slope in Reach	<u>268</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.5</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.6	1.62	14.2	1.00
80	35.6	2.22	18.9	0.97
50	54.0	3.43	25.5	0.85
30	79.6	5.05	31.4	0.71
10	142	8.99	37.8	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 73 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0098

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R13E</u>
D. Latitude, Longitude	<u>48°14' 121°05'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

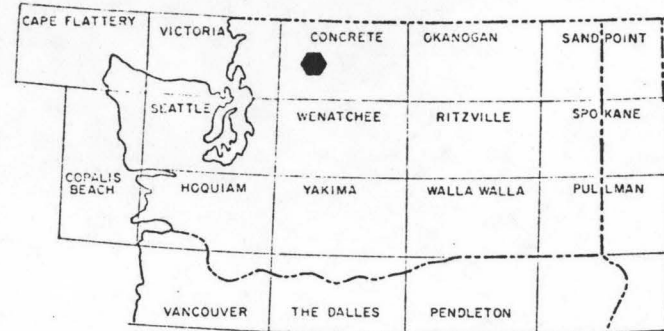
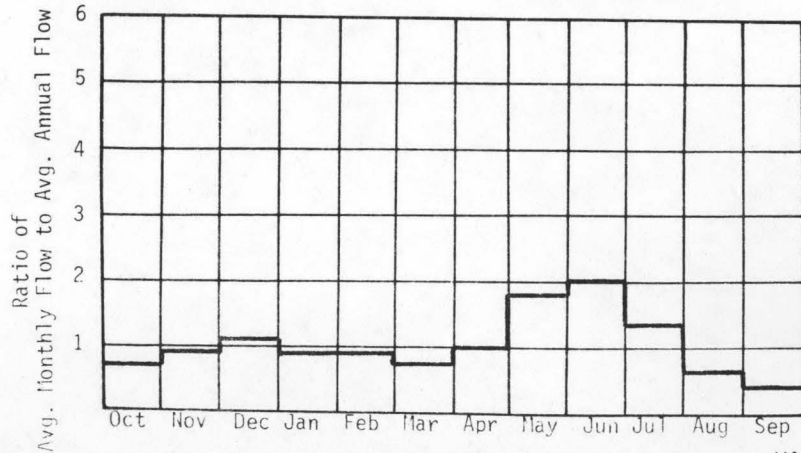
A. Upstream Elevation of Reach	<u>3600</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2250</u>	Ft. MSL
C. Total Available Head in Reach	<u>1350 + 66 = 1416</u>	Ft.
D. Average Slope in Reach	<u>396</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.1	2.77	24.2	1.00
80	31.7	3.80	32.3	0.97
50	48.8	5.85	43.6	0.85
30	71.9	8.62	53.6	0.71
10	128	15.3	64.5	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 66 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0099

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R13E</u>
D. Latitude, Longitude	<u>48°11' 121°16'</u>
E. Stream Name	<u>Miners Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

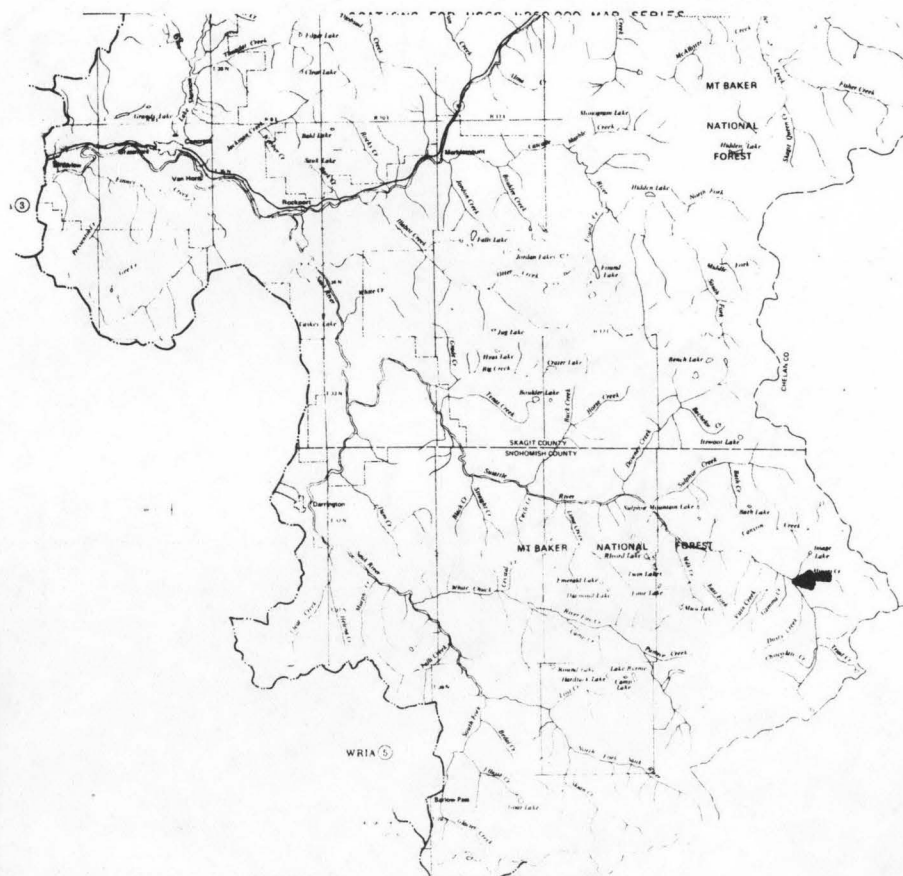
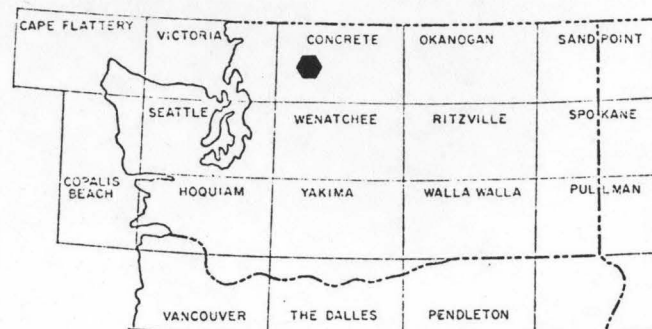
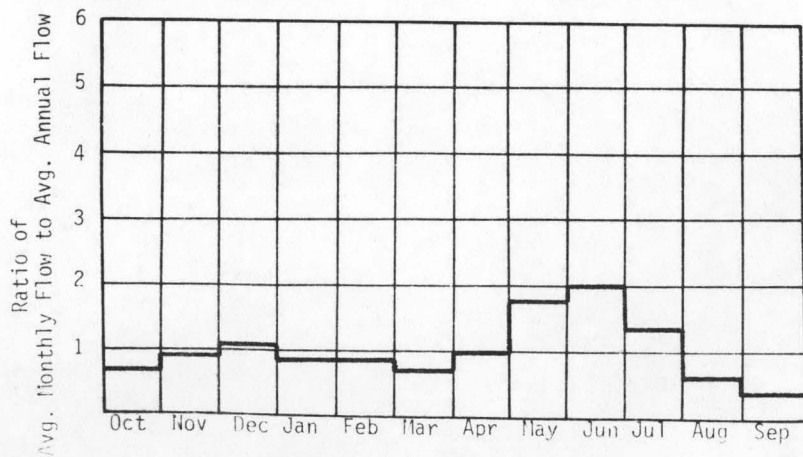
A. Upstream Elevation of Reach	<u>3700</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2700</u>	Ft. MSL
C. Total Available Head in Reach	<u>1000 + 66 = 1066</u>	Ft.
D. Average Slope in Reach	<u>625</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.9	1.70	14.9	1.00
80	25.9	2.34	19.9	0.97
50	40.0	3.60	26.8	0.85
30	58.9	5.31	33.0	0.71
10	105	9.45	39.7	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 54 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0100

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R10E</u>
D. Latitude, Longitude	<u>48°16' 121°32'</u>
E. Stream Name	<u>Dan Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/5.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

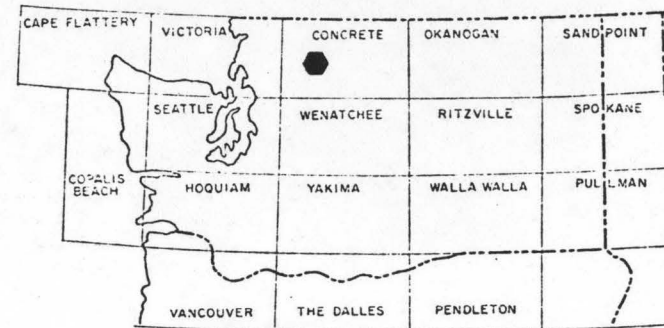
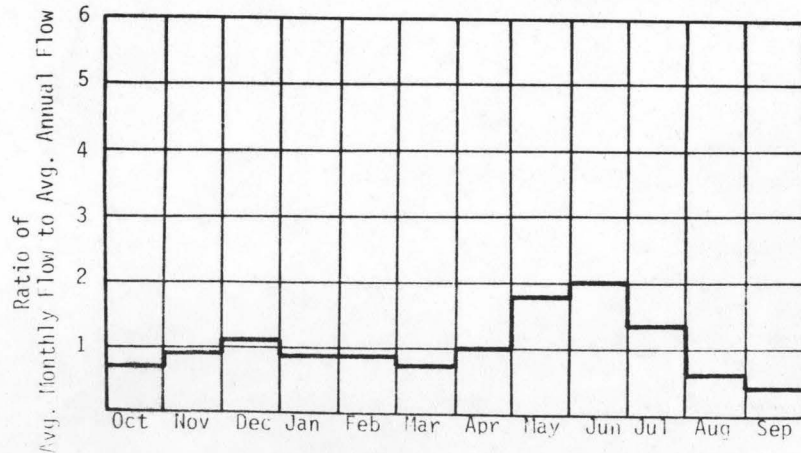
A. Upstream Elevation of Reach	<u>1600</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>445</u>	Ft. MSL
C. Total Available Head in Reach	<u>1155 + 66 = 1221</u>	Ft.
D. Average Slope in Reach	<u>210</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>17.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.5	1.50	13.1	1.00
80	23.3	2.41	20.0	0.95
50	44.7	4.62	32.4	0.80
30	71.8	7.42	42.2	0.65
10	127	13.2	51.8	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 63 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0101

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R10E</u>
D. Latitude, Longitude	<u>48°12' 121°35'</u>
E. Stream Name	<u>Clear Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

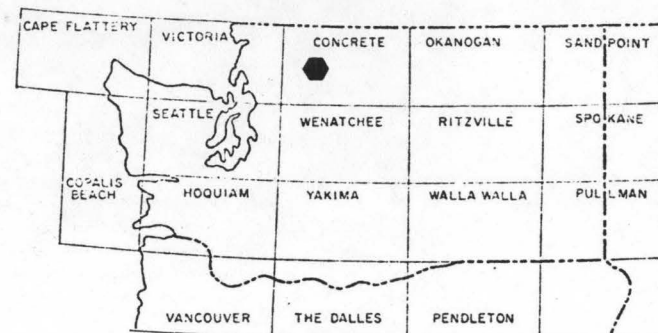
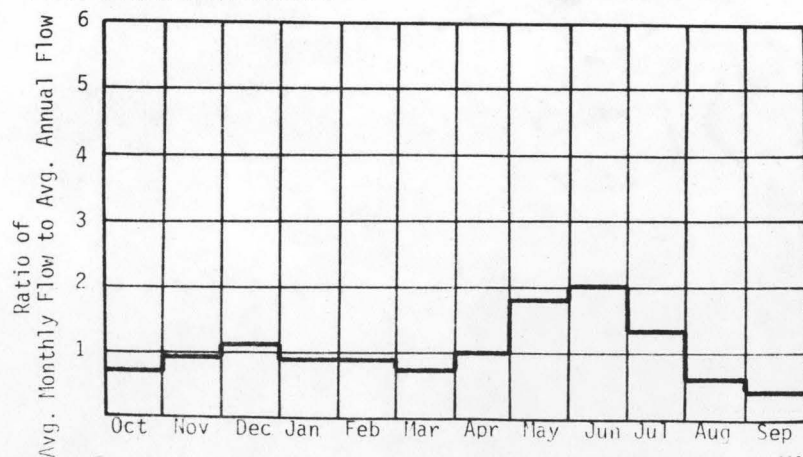
A. Upstream Elevation of Reach	<u>1120</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>595</u>	Ft. MSL
C. Total Available Head in Reach	<u>525</u>	Ft.
D. Average Slope in Reach	<u>181</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>29.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	40.9	1.82	15.9	1.00
80	65.9	2.93	24.3	0.95
50	126	5.61	39.3	0.80
30	203	9.01	51.3	0.65
10	360	16.0	63.0	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 178 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0102

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R10E</u>
D. Latitude, Longitude	<u>48°10' 121°36'</u>
E. Stream Name	<u>Clear Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.9/7.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

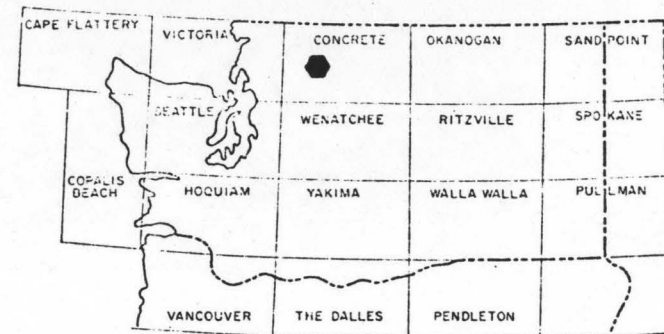
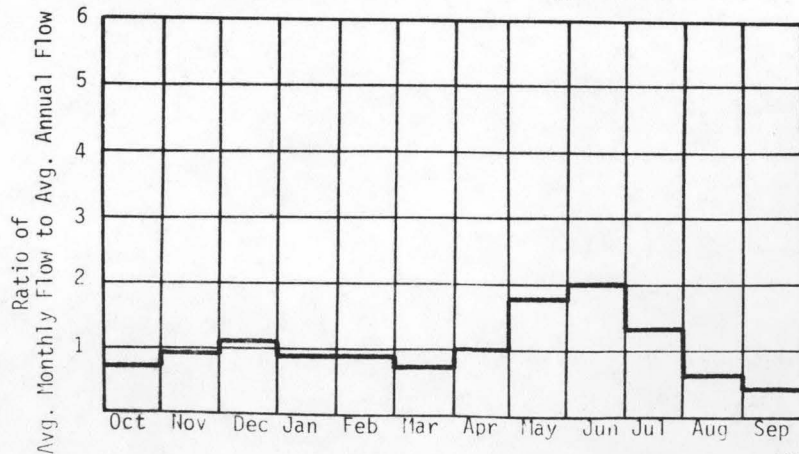
A. Upstream Elevation of Reach	<u>1570</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1120</u>	Ft. MSL
C. Total Available Head in Reach	<u>450 + 66 = 516</u>	Ft.
D. Average Slope in Reach	<u>100</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>18.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.8	0.99	8.71	1.00
80	36.6	1.60	13.3	0.95
50	70.3	3.07	21.5	0.80
30	113	4.93	28.1	0.65
10	200	8.73	34.4	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 99 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0103

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R1E</u>
D. Latitude, Longitude	<u>48°11' 121°24'</u>
E. Stream Name	<u>White Chuck River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/7.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

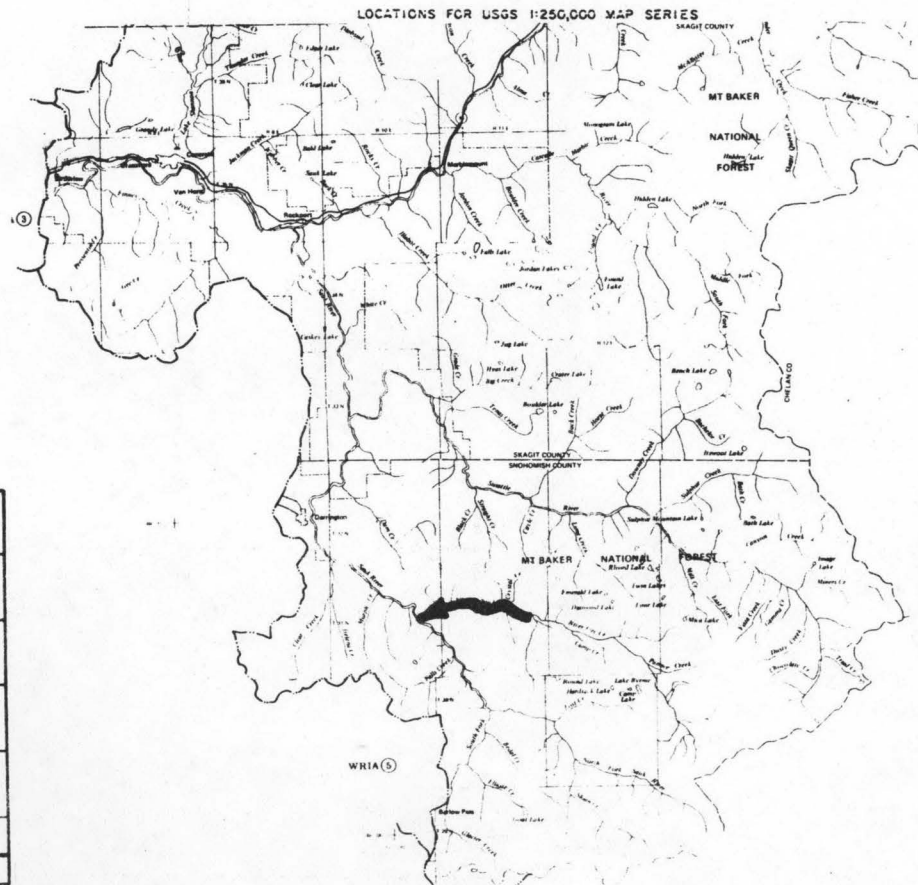
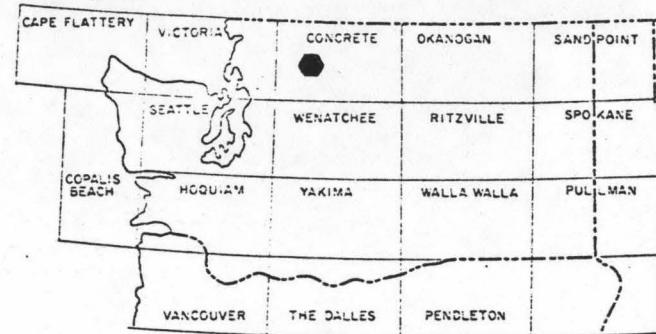
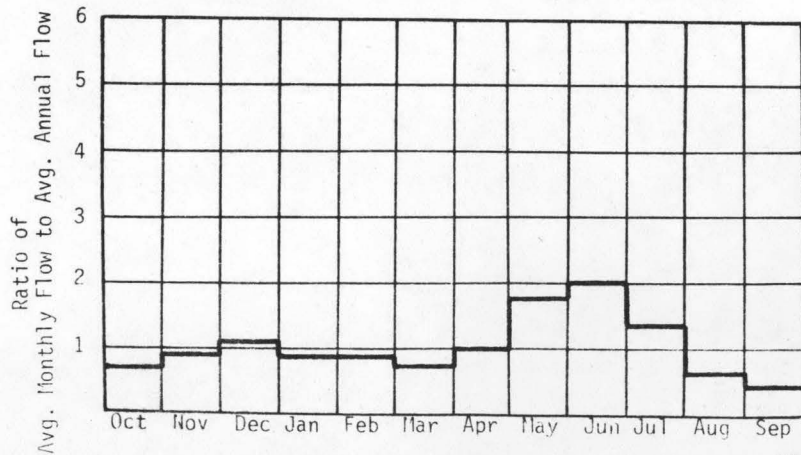
A. Upstream Elevation of Reach	<u>1660</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>910</u>	Ft. MSL
C. Total Available Head in Reach	<u>750</u>	Ft.
D. Average Slope in Reach	<u>95</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>87.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	123	7.85	68.6	1.00
80	206	13.1	109	0.95
50	423	26.9	186	0.79
30	694	44.0	247	0.64
10	1220	77.2	304	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 588 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0104

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R12E</u>
D. Latitude, Longitude	<u>48°10' 121°18'</u>
E. Stream Name	<u>White Chuck River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>7.9/10.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

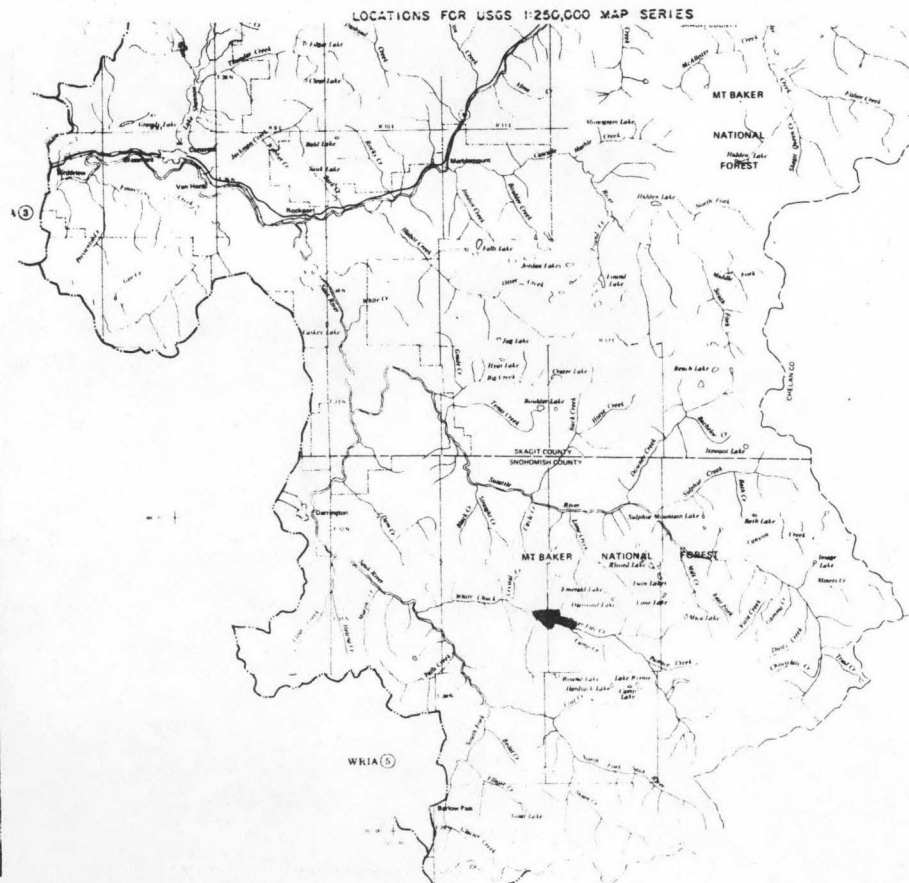
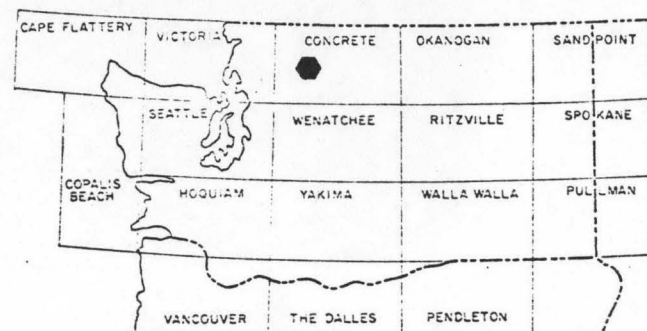
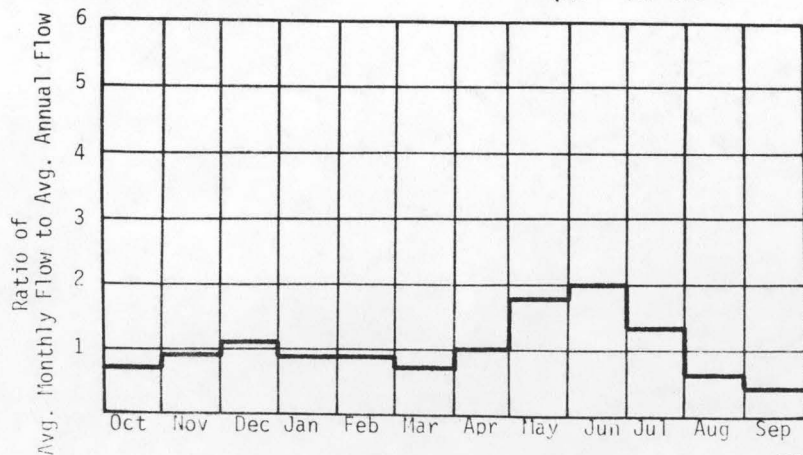
A. Upstream Elevation of Reach	<u>2020</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1660</u>	Ft. MSL
C. Total Available Head in Reach	<u>360</u>	Ft.
D. Average Slope in Reach	<u>120</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>56.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	88.0	2.68	23.5	1.00
80	147	4.47	37.2	0.95
50	302	9.19	63.6	0.79
30	494	15.1	84.4	0.64
10	867	26.4	104	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 419 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0105

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R12E</u>
D. Latitude, Longitude	<u>48°09' 121°16'</u>
E. Stream Name	<u>White Chuck River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>10.9/13.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

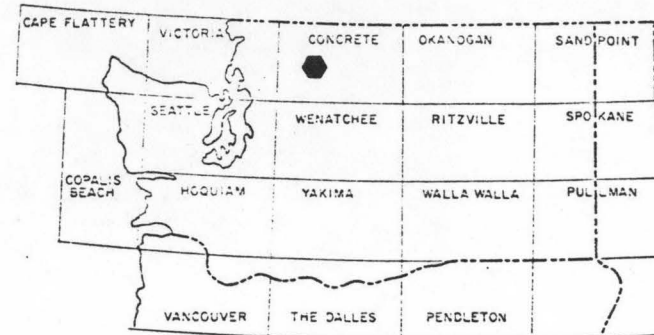
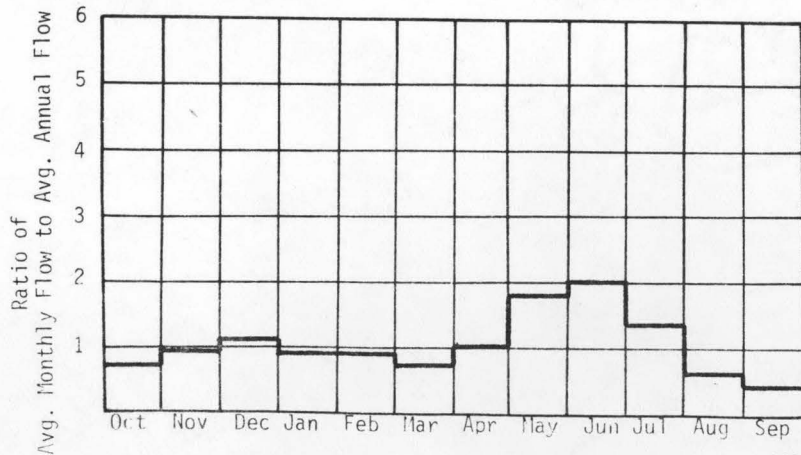
A. Upstream Elevation of Reach	<u>2400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2020</u>	Ft. MSL
C. Total Available Head in Reach	<u>380</u>	Ft.
D. Average Slope in Reach	<u>152</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>40.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	68.0	2.19	19.2	1.00
80	113	3.65	30.3	0.95
50	233	7.50	51.9	0.79
30	382	12.3	68.9	0.64
10	671	21.6	85.0	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 324 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0106

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R12E</u>
D. Latitude, Longitude	<u>48°07' 121°14'</u>
E. Stream Name	<u>White Chuck River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>13.4/21.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

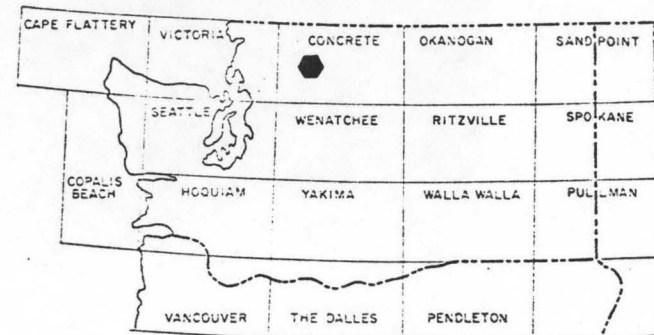
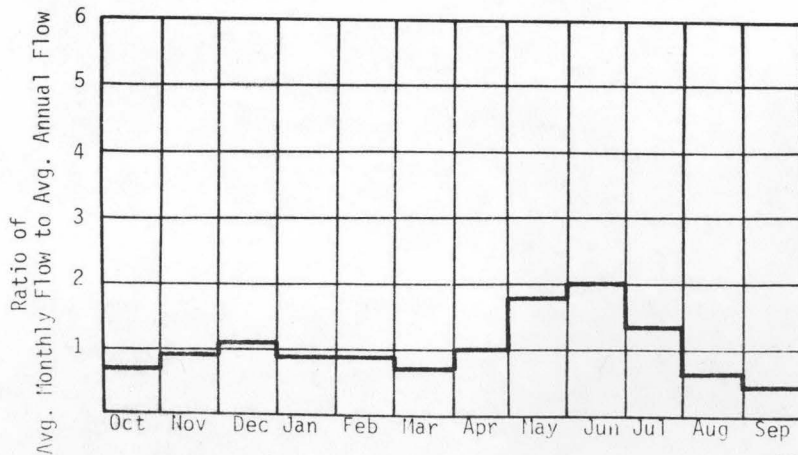
A. Upstream Elevation of Reach	<u>3940</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2400</u>	Ft. MSL
C. Total Available Head in Reach	<u>1540 + 66 = 1606</u>	Ft.
D. Average Slope in Reach	<u>193</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>33.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	35.5	4.82	42.2	1.00
80	59.2	8.04	66.9	0.95
50	122	16.5	114	0.79
30	199	27.1	152	0.64
10	350	47.5	187	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 169 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0107

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R11E</u>
D. Latitude, Longitude	<u>48°10' 121°20'</u>
E. Stream Name	<u>Pugh Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/0.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

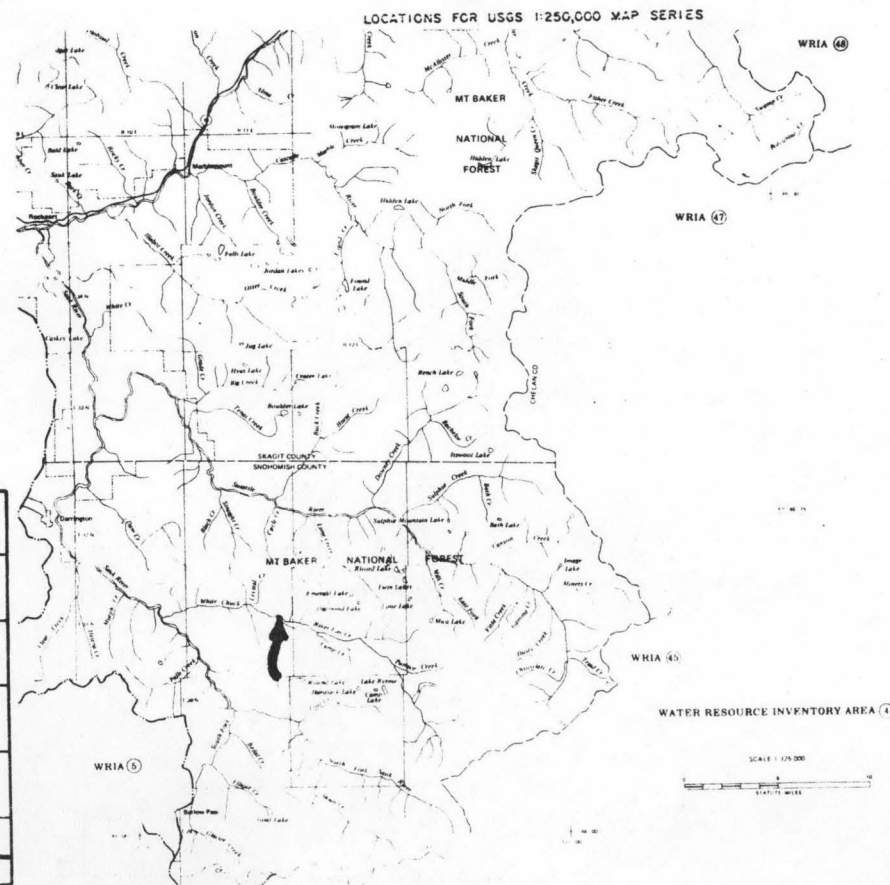
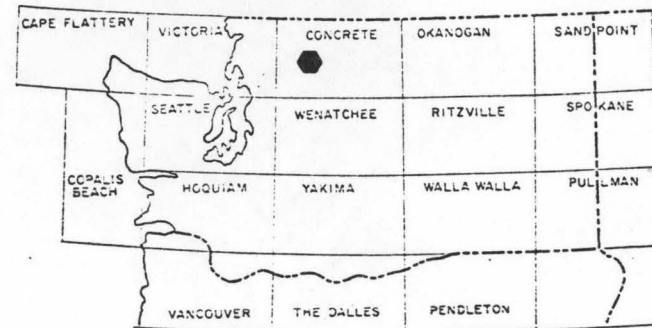
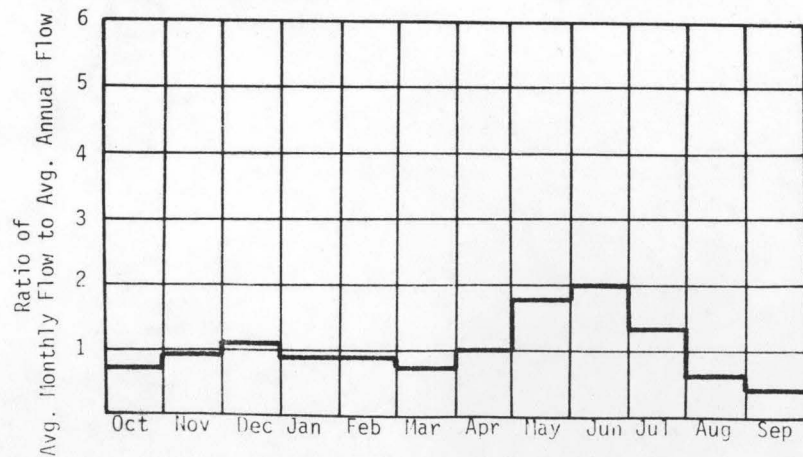
A. Upstream Elevation of Reach	<u>1840</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1660</u>	Ft. MSL
C. Total Available Head in Reach	<u>180 + 66 = 246</u>	Ft.
D. Average Slope in Reach	<u>225</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>9.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.4	0.28	2.45	1.00
80	22.4	0.47	3.88	0.95
50	46.1	0.96	6.64	0.79
30	75.5	1.57	8.81	0.64
10	132	2.76	10.9	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 64 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0108

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R12E</u>
D. Latitude, Longitude	<u>48°09' 121°17'</u>
E. Stream Name	<u>Camp Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

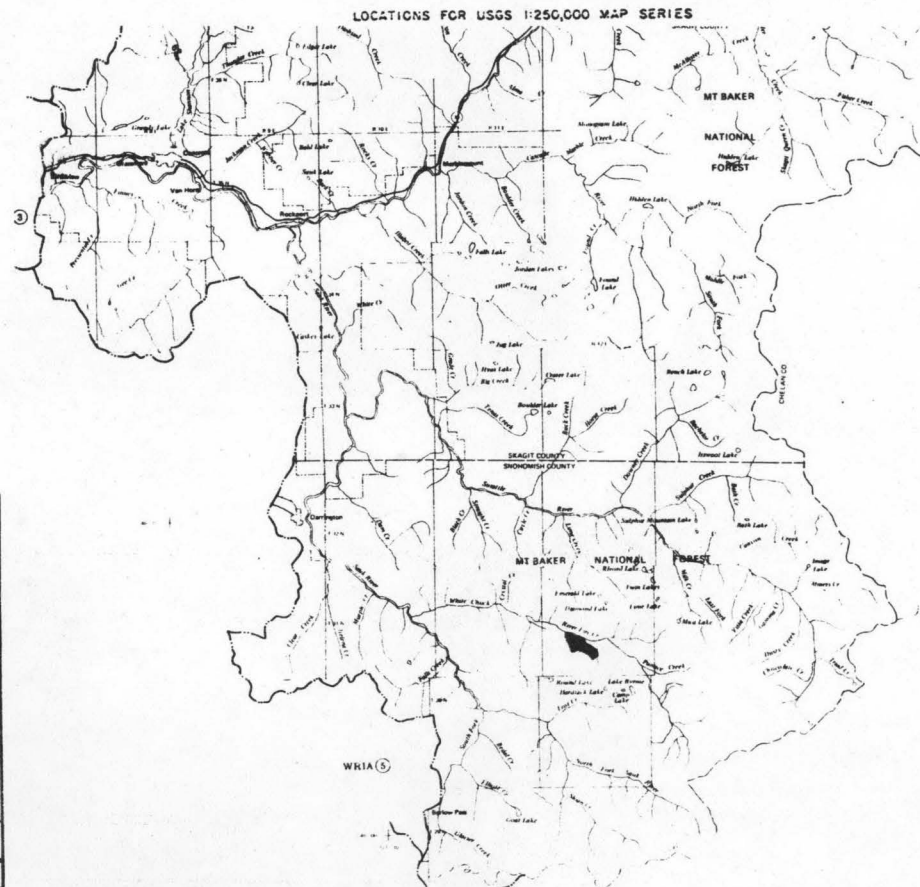
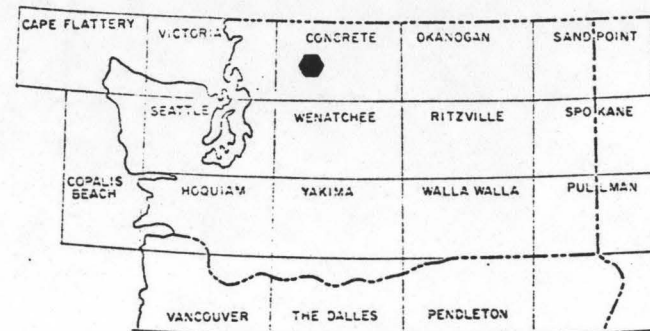
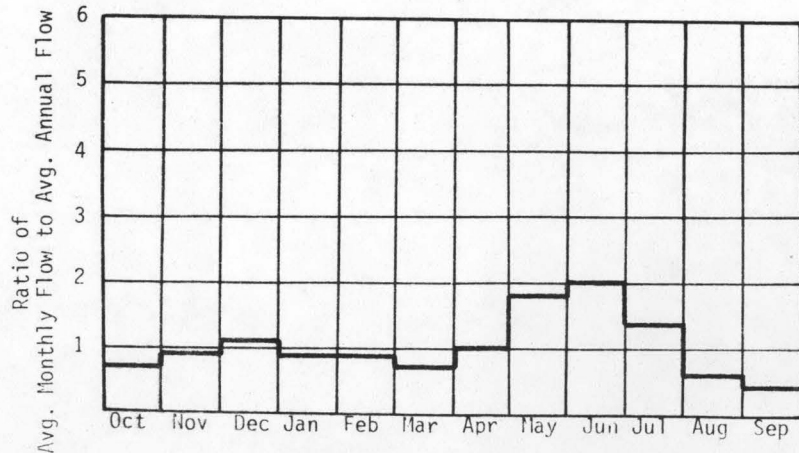
A. Upstream Elevation of Reach	<u>2340</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2020</u>	Ft. MSL
C. Total Available Head in Reach	<u>320 + 66 = 386</u>	Ft.
D. Average Slope in Reach	<u>267</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.6</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.0	0.43	3.72	1.00
80	21.7	0.71	5.90	0.95
50	44.6	1.46	10.1	0.79
30	73.2	2.39	13.4	0.64
10	128	4.19	16.5	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0109

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R11E</u>
D. Latitude, Longitude	<u>48°08' 121°26'</u>
E. Stream Name	<u>Falls Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

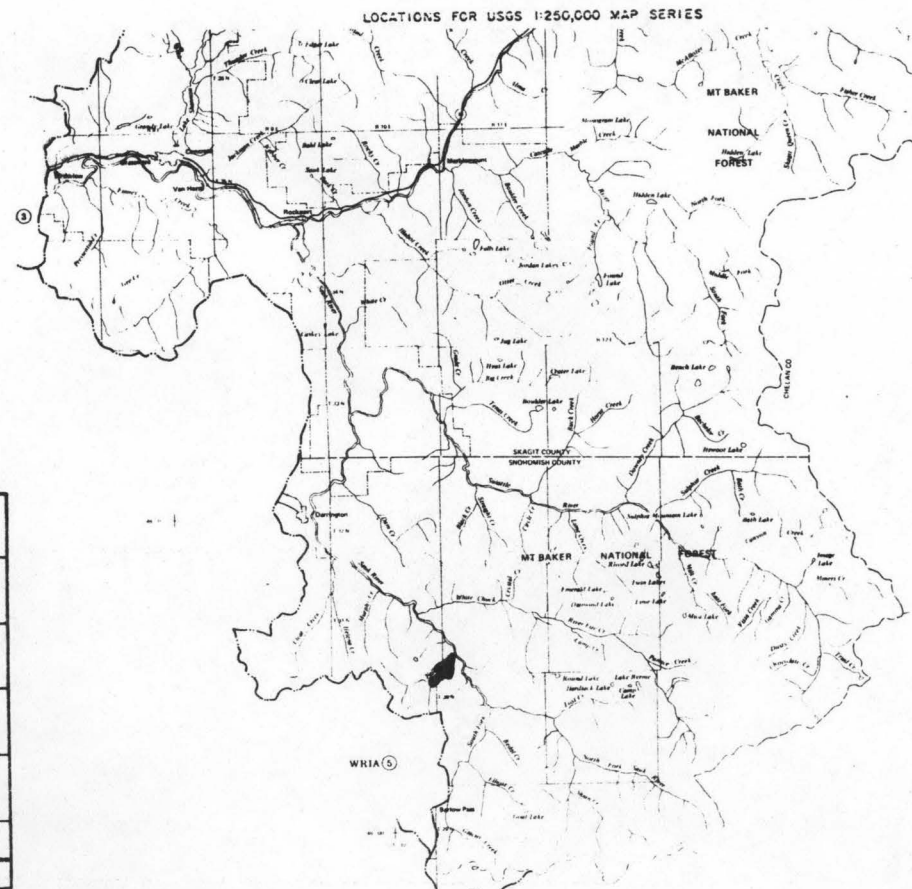
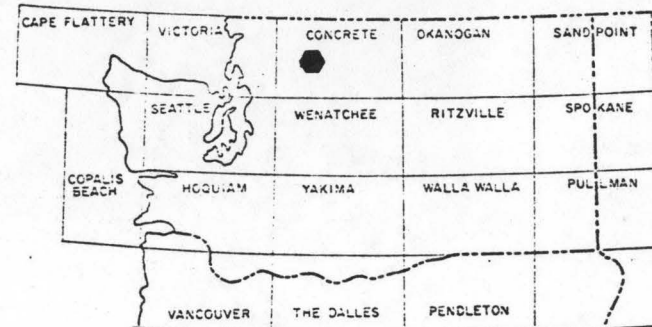
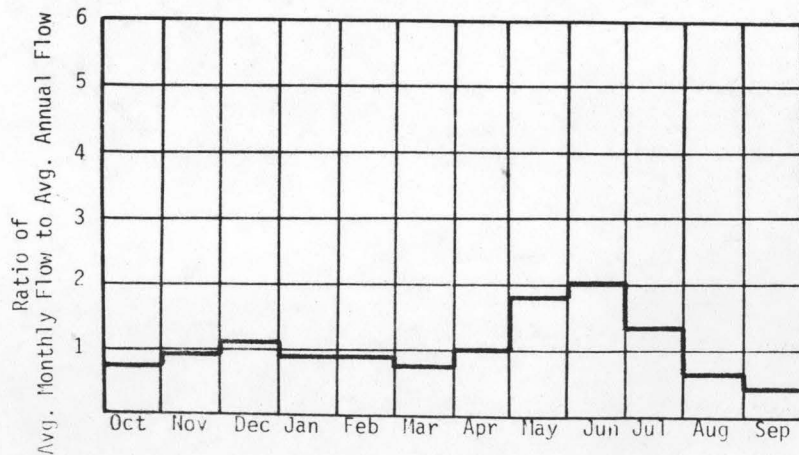
A. Upstream Elevation of Reach	<u>1600</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>995</u>	Ft. MSL
C. Total Available Head in Reach	<u>605 + 66 = 671</u>	Ft.
D. Average Slope in Reach	<u>195</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.1	0.91	8.01	1.00
80	25.9	1.47	12.2	0.95
50	49.7	2.82	19.8	0.80
30	79.8	4.53	25.8	0.65
10	141	8.03	31.6	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 70 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0110

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R11E</u>
D. Latitude, Longitude	<u>48°05' 121°23'</u>
E. Stream Name	<u>S.F. Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

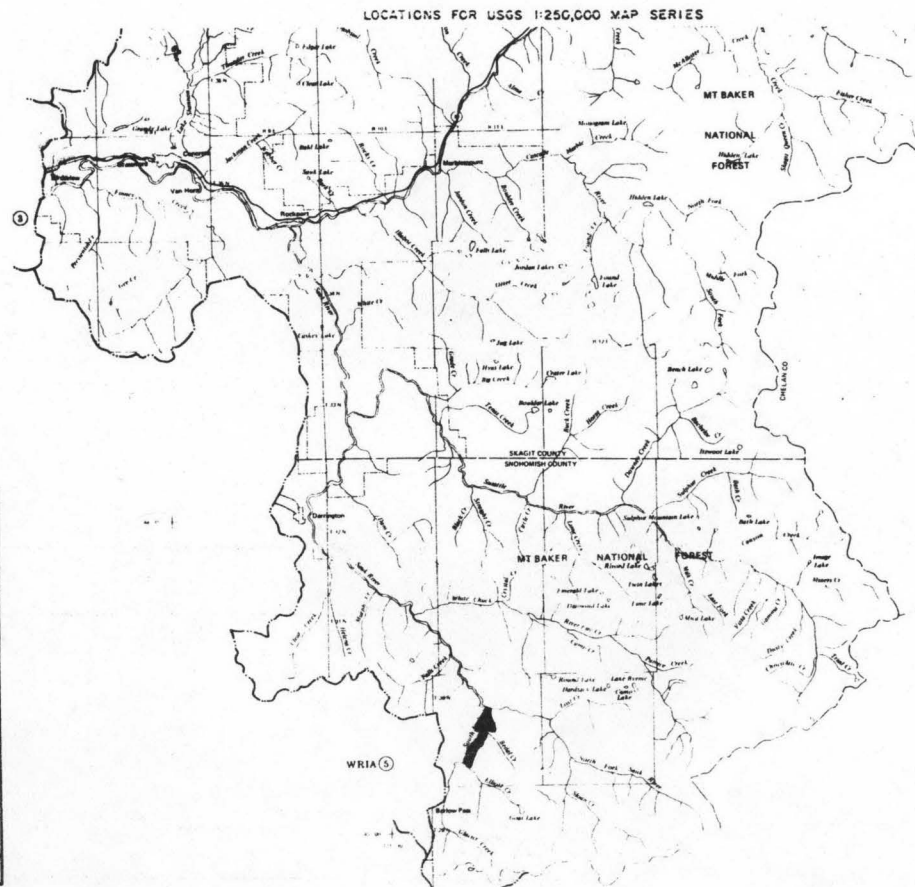
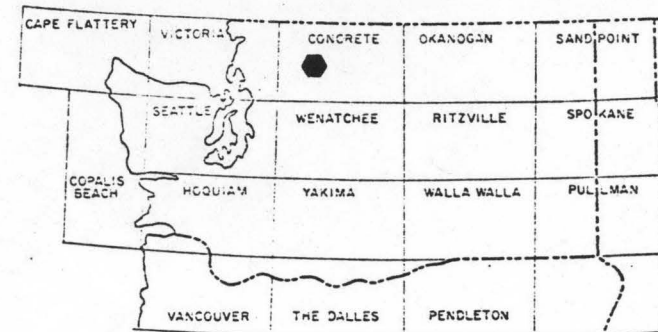
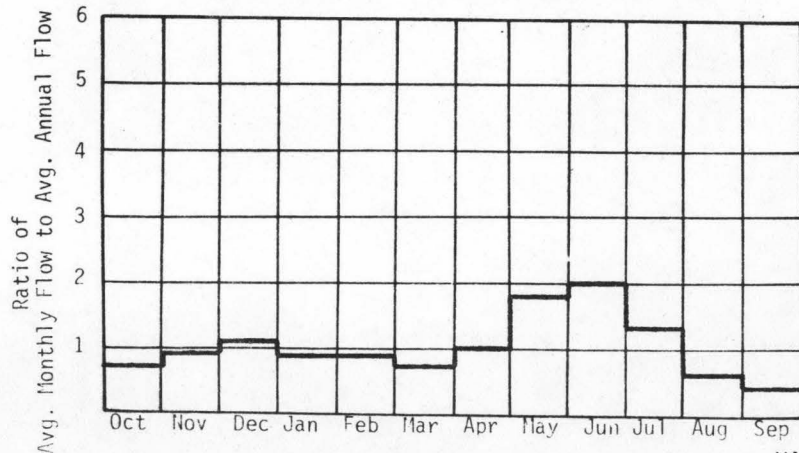
A. Upstream Elevation of Reach	<u>1665</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1215</u>	Ft. MSL
C. Total Available Head in Reach	<u>450</u>	Ft.
D. Average Slope in Reach	<u>125</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>42.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	63.0	2.40	21.0	1.00
80	116	4.40	36.2	0.94
50	235	8.93	61.8	0.79
30	406	15.5	84.0	0.62
10	718	27.3	105	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 350 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0111

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R11E</u>
D. Latitude, Longitude	<u>48°01' 121°27'</u>
E. Stream Name	<u>S.F. Sauk River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>3.6/12.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

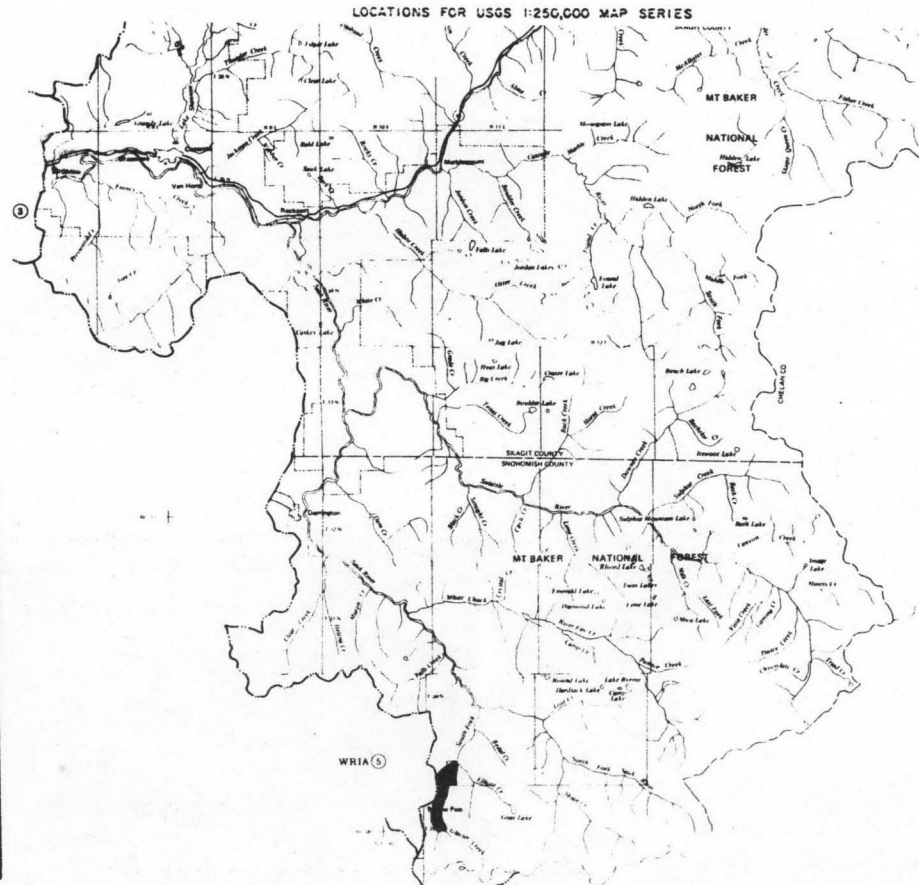
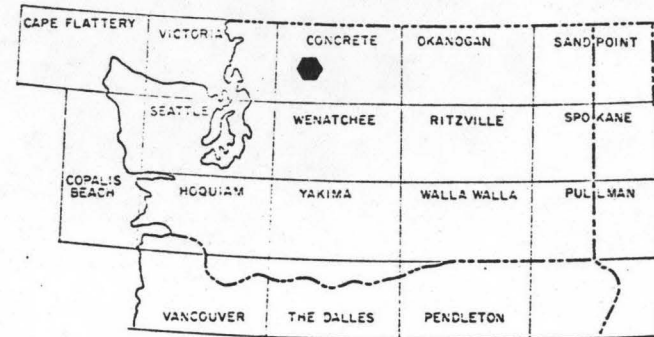
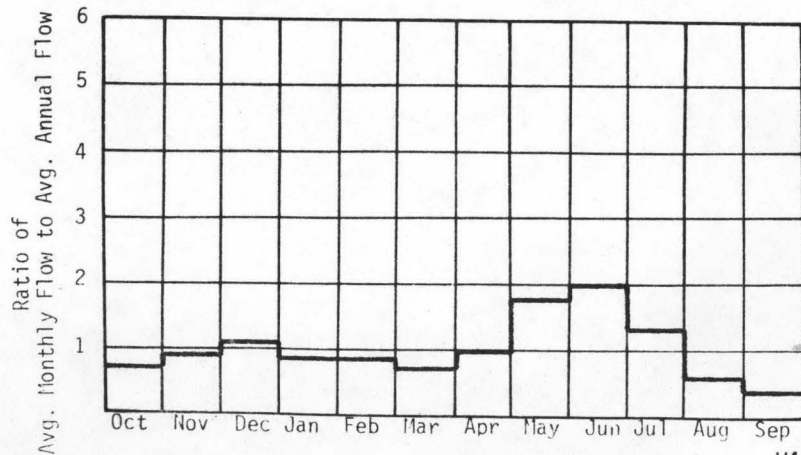
A. Upstream Elevation of Reach	<u>2740</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1665</u>	Ft. MSL
C. Total Available Head in Reach	<u>1075 + 66 = 1141</u>	Ft.
D. Average Slope in Reach	<u>126</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.8	1.53	13.4	1.00
80	29.0	2.80	23.1	0.94
50 <sup>a</sup>	59.0	5.69	39.4	0.79
30	102	9.85	53.5	0.62
10	180	17.4	67.1	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 88 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0112

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T30N R11E
D. Latitude, Longitude	48°02' 121°23'
E. Stream Name	Elliot Creek
F. Major Basin Name	Skagit
G. River Mile	0/4.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

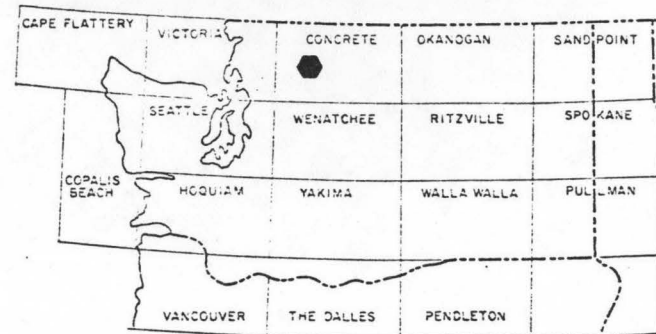
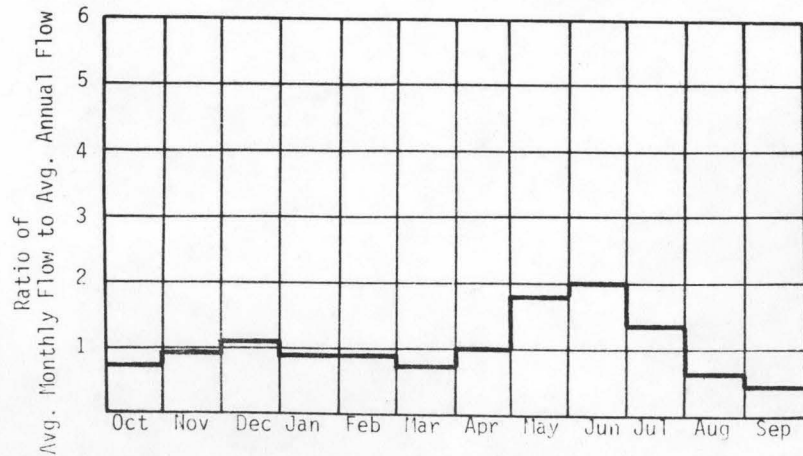
A. Upstream Elevation of Reach	2560	Ft.	MSL
B. Downstream Elevation of Reach	1665	Ft.	MSL
C. Total Available Head in Reach	895 + 66 = 961	Ft.	
D. Average Slope in Reach	218	Ft./Mi.	
E. Drainage Area above Reach Mouth	13.1	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.8	1.29	11.3	1.00
80	29.0	2.36	19.4	0.94
50	59.0	4.79	33.2	0.79
30	102	8.30	45.1	0.62
10	180	14.7	56.5	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 88 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0113

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R12E</u>
D. Latitude, Longitude	<u>48°03' 121°17'</u>
E. Stream Name	<u>Sloan Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

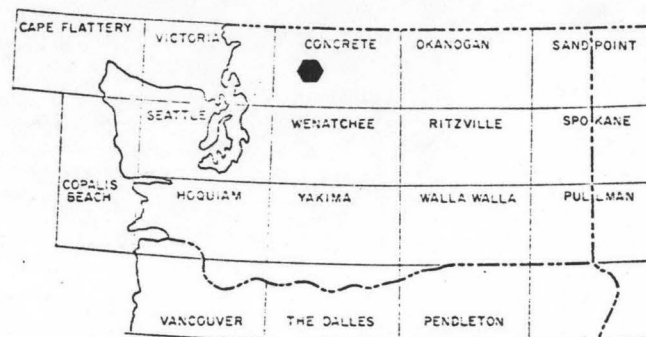
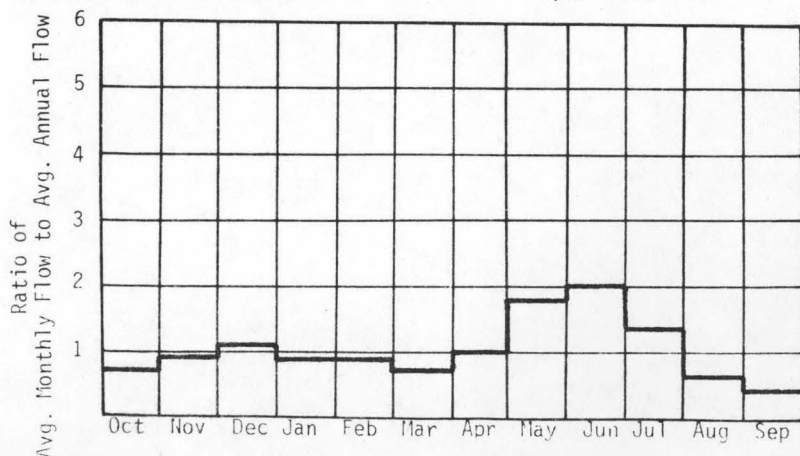
A. Upstream Elevation of Reach	<u>2295</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2020</u>	Ft. MSL
C. Total Available Head in Reach	<u>275</u>	Ft.
D. Average Slope in Reach	<u>102</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	40.9	0.95	8.34	1.00
80	65.1	1.51	12.7	0.96
50	134	3.12	21.6	0.79
30	225	5.24	28.9	0.63
10	379	8.83	35.6	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 186 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0114

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R12E</u>
D. Latitude, Longitude	<u>48°01' 121°16'</u>
E. Stream Name	<u>Sloan Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.7/6.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

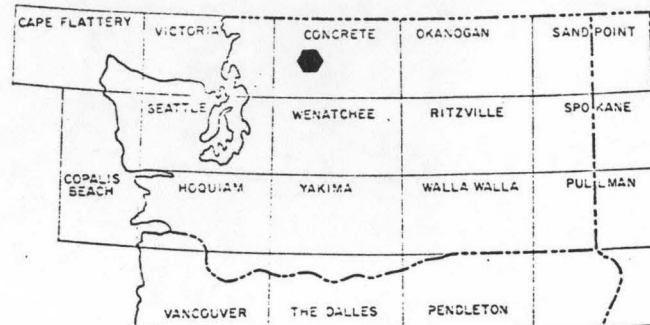
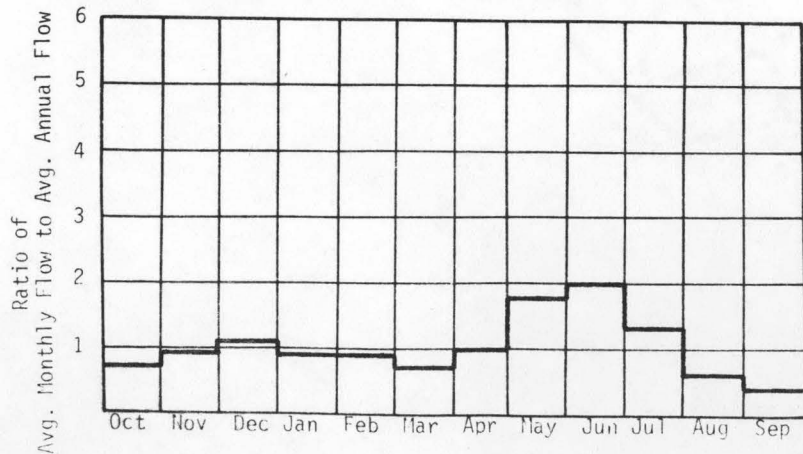
A. Upstream Elevation of Reach		<u>3150</u>	Ft. MSL
B. Downstream Elevation of Reach		<u>2295</u>	Ft. MSL
C. Total Available Head in Reach		<u>855 + 66 = 921</u>	Ft.
D. Average Slope in Reach		<u>225</u>	Ft./Mi.
E. Drainage Area above Reach Mouth		<u>15.3</u>	Sq.Mi.
F. Inflow Classification		<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	19.8	1.54	13.5	1.00
80	31.5	2.45	20.6	0.96
50	64.8	5.05	34.9	0.79
30	109	8.49	46.8	0.63
10	184	14.3	57.7	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0115

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T34N R10E
D. Latitude, Longitude	48°27' 121°27'
E. Stream Name	Illabot Creek
F. Major Basin Name	Skagit
G. River Mile	0/11.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

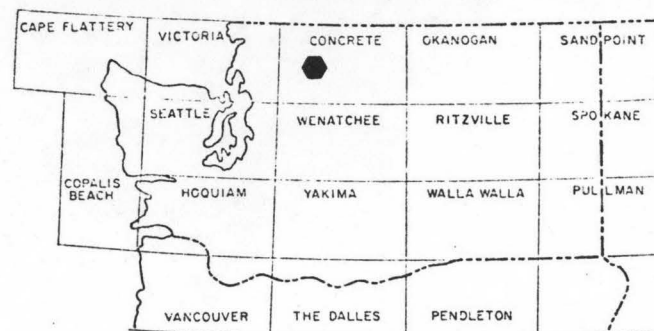
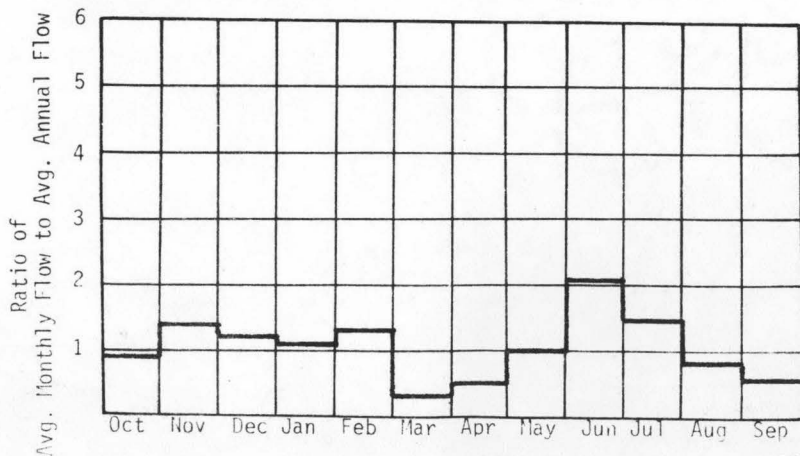
A. Upstream Elevation of Reach	2320	Ft.	MSL
B. Downstream Elevation of Reach	245	Ft.	MSL
C. Total Available Head in Reach	2075	Ft.	
D. Average Slope in Reach	182	Ft./Mi.	
E. Drainage Area above Reach Mouth	42.0	Sq.Mi.	
F. Inflow Classification	Natural		

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

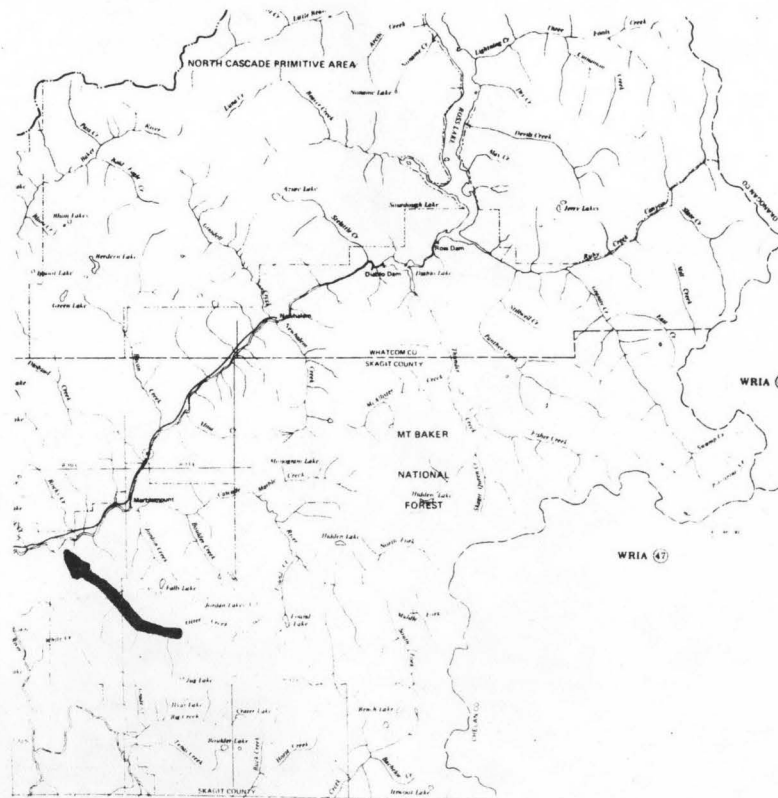
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	75.5	13.3	116	1.00
80	130	22.8	188	0.94
50	233	40.8	290	0.81
30	362	63.6	368	0.66
10	607	107	439	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 302 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0116

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T34N R11E
D. Latitude, Longitude	48°24' 121°21'
E. Stream Name	Illabot Creek
F. Major Basin Name	Skagit
G. River Mile	11.5/15.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

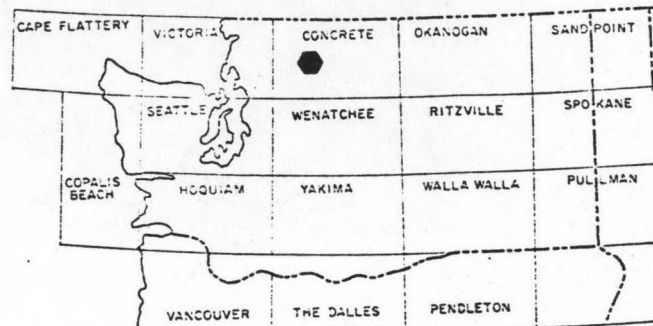
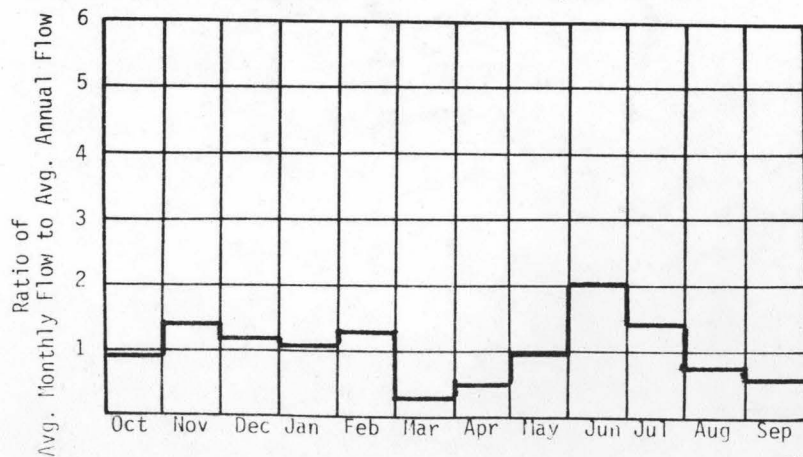
A. Upstream Elevation of Reach	3000	Ft.	MSL
B. Downstream Elevation of Reach	2320	Ft.	MSL
C. Total Available Head in Reach	680 + 66 = 746	Ft.	
D. Average Slope in Reach	189	Ft./Mi.	
E. Drainage Area above Reach Mouth	9.2	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	19.0	1.20	10.5	1.00
80	32.7	2.06	17.0	0.94
50	58.5	3.69	26.2	0.81
30	91.2	5.76	33.3	0.66
10	153	9.64	39.7	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 76 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0117

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T34N R11E
D. Latitude, Longitude	48°26' 121°22'
E. Stream Name	Otter Creek
F. Major Basin Name	Skagit
G. River Mile	0/3.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

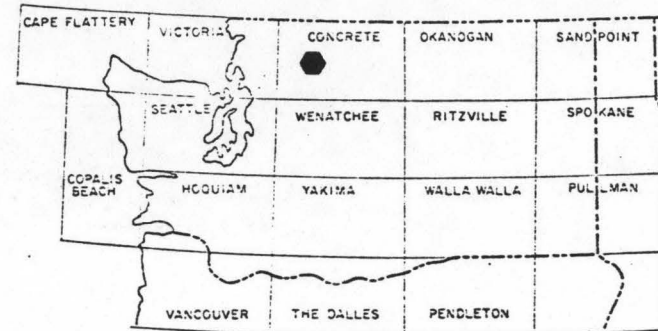
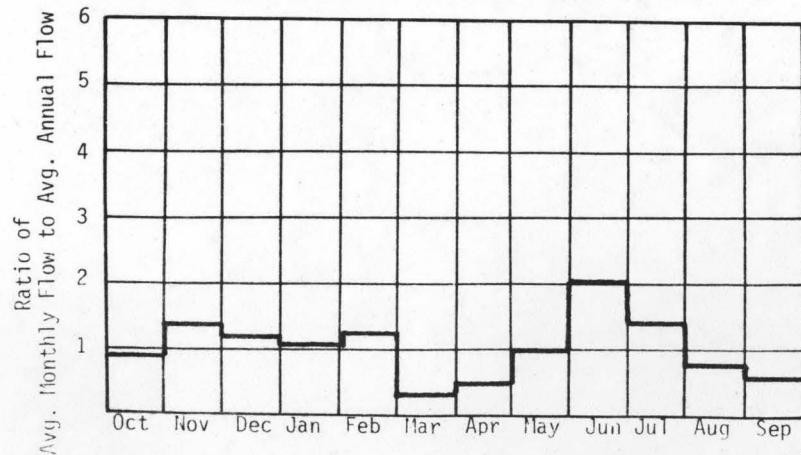
A. Upstream Elevation of Reach	3400	Ft. MSL
B. Downstream Elevation of Reach	2320	Ft. MSL
C. Total Available Head in Reach	1080 + 66 = 1146	Ft.
D. Average Slope in Reach	338	Ft./Mi.
E. Drainage Area above Reach Mouth	7.3	Sq. Mi.
F. Inflow Classification	Natural	

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

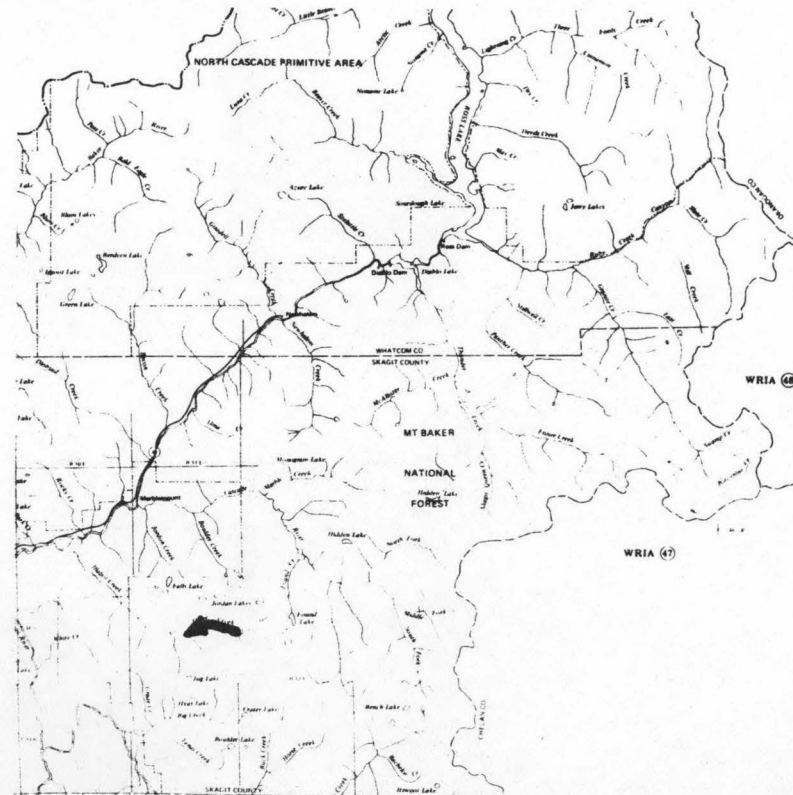
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.8	1.53	1.34	1.00
80	27.1	2.63	21.6	0.94
50	48.5	4.70	33.4	0.81
30	75.6	7.33	42.4	0.66
10	127	12.3	50.6	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 63 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0118

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R11E</u>
D. Latitude, Longitude	<u>48°31' 121°25'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/0.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

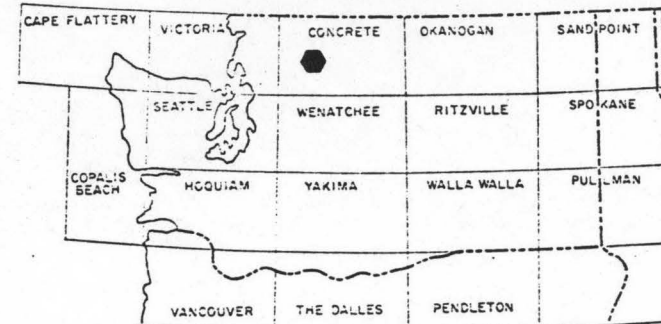
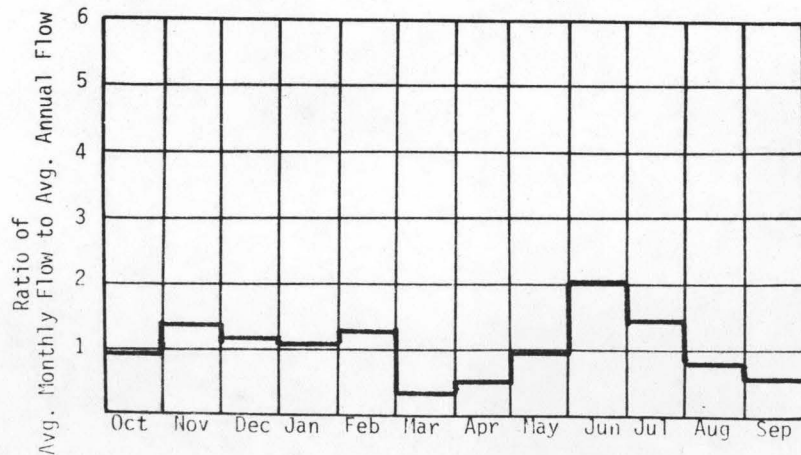
A. Upstream Elevation of Reach	<u>310</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>300</u>	Ft. MSL
C. Total Available Head in Reach	<u>10</u>	Ft.
D. Average Slope in Reach	<u>25</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>186</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

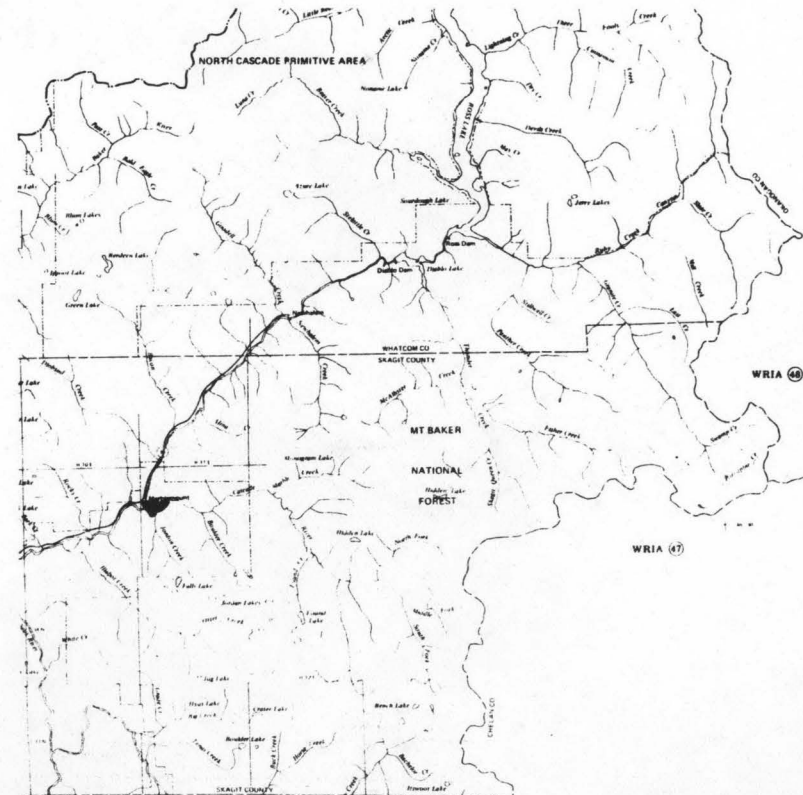
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	298	0.25	2.21	1.00
80	464	0.39	3.30	0.96
50	818	0.69	4.97	0.82
30	1270	1.08	6.31	0.67
10	2340	1.98	7.81	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1105 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0119

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R11E</u>
D. Latitude, Longitude	<u>48°31' 121°24'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0.4/4.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

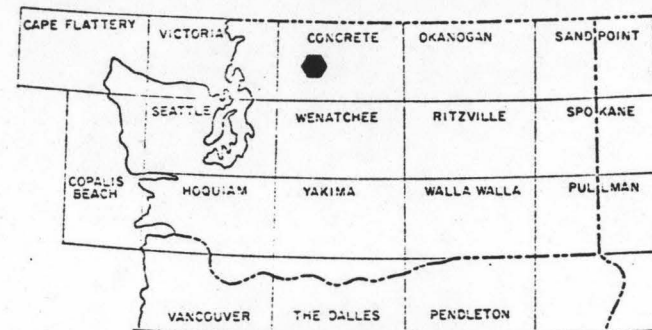
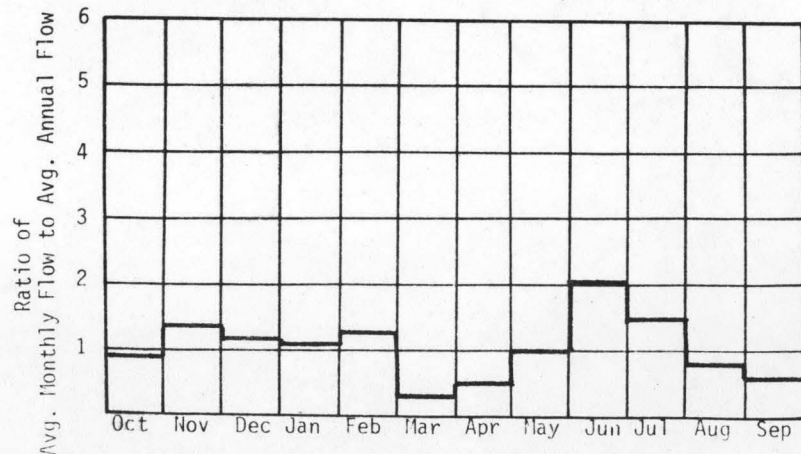
A. Upstream Elevation of Reach	<u>450</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>310</u>	Ft. MSL
C. Total Available Head in Reach	<u>140</u>	Ft.
D. Average Slope in Reach	<u>37.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>173</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

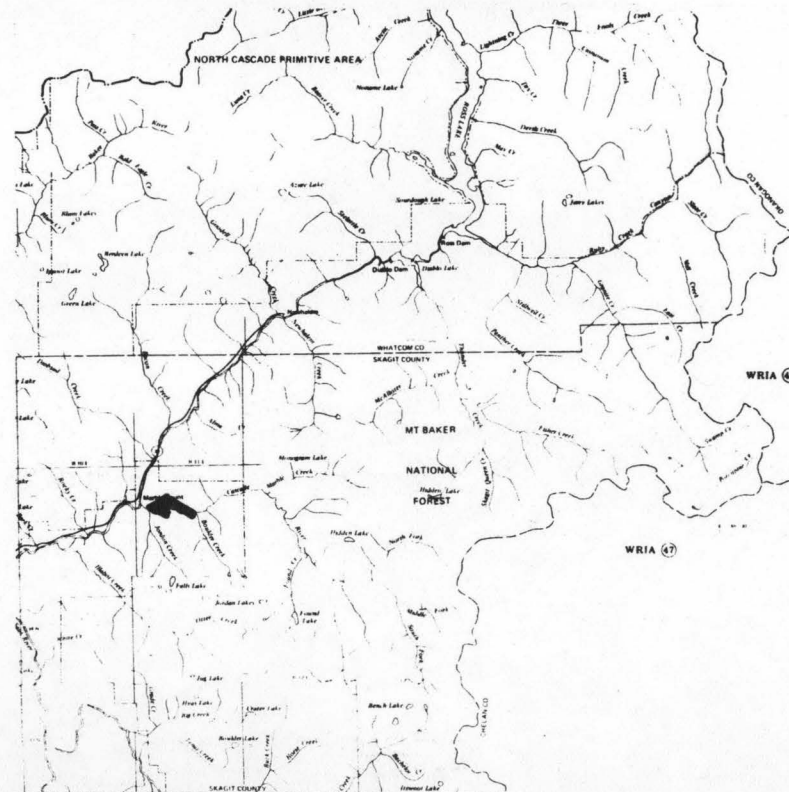
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	224	2.65	23.2	1.00
80	305	3.62	30.7	0.97
50	641	7.60	52.6	0.79
30	1130	13.4	72.7	0.62
10	2210	26.2	94.0	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1018 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0120

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R11E</u>
D. Latitude, Longitude	<u>48°31' 121°20'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.1/6.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

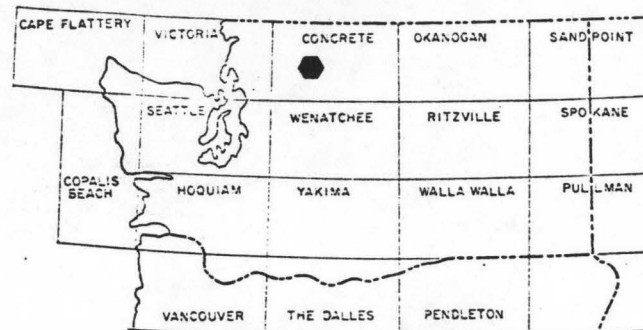
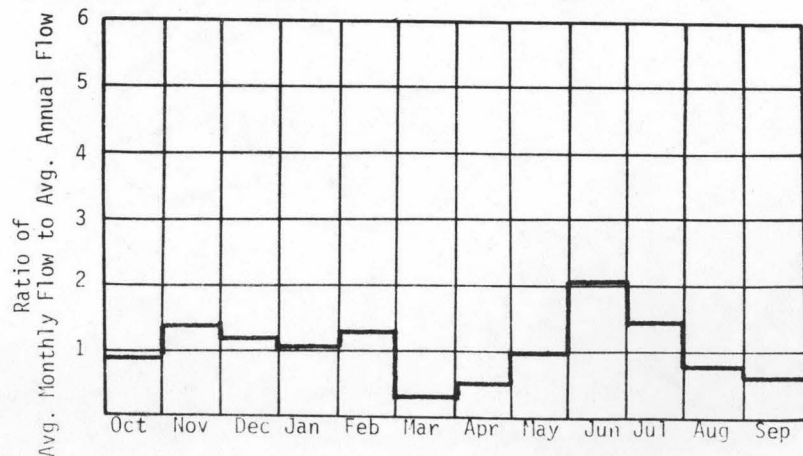
A. Upstream Elevation of Reach	<u>710</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>480</u>	Ft. MSL
C. Total Available Head in Reach	<u>230</u>	Ft.
D. Average Slope in Reach	<u>85</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>157</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

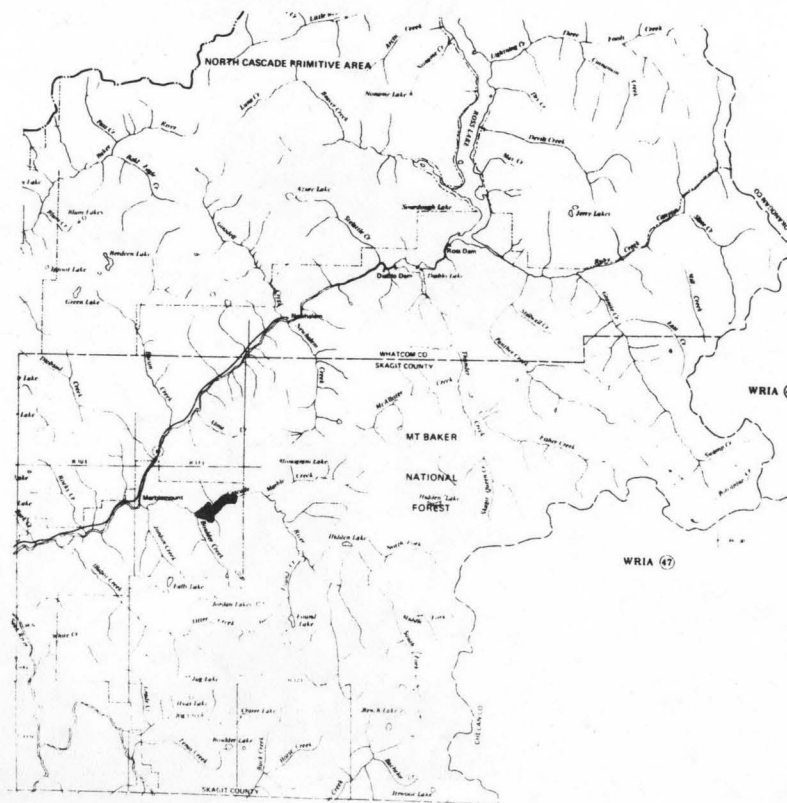
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	252	4.91	43.0	1.00
80	392	7.63	64.2	0.96
50	691	13.5	96.6	0.82
30	1070	20.9	123	0.67
10	1980	38.5	152	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 934 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0121

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°32' 121°16'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>6.9/9.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

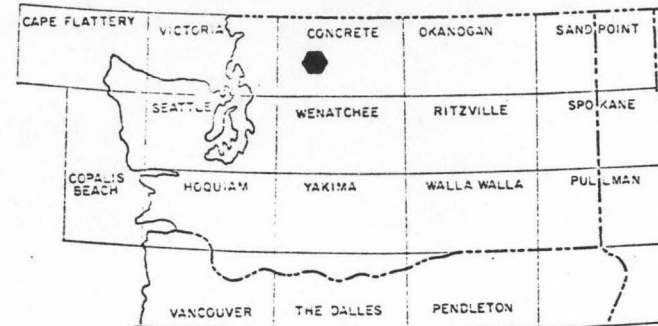
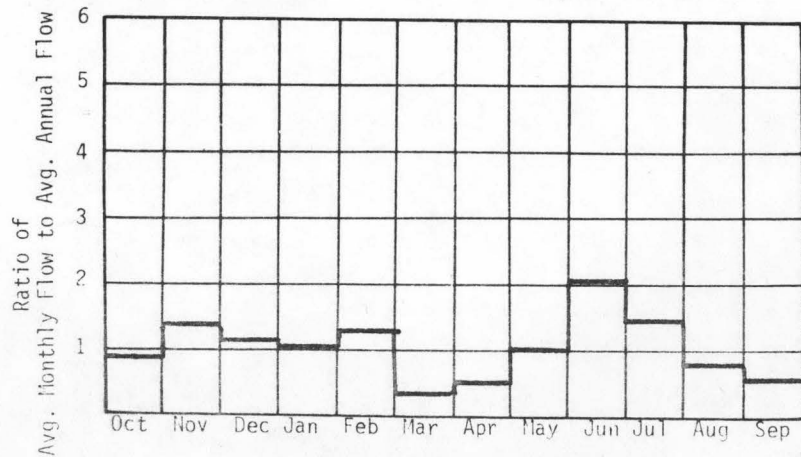
A. Upstream Elevation of Reach	<u>930</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>710</u>	Ft. MSL
C. Total Available Head in Reach	<u>220</u>	Ft.
D. Average Slope in Reach	<u>110</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>145</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	237	4.41	38.6	1.00
80	368	6.86	57.7	0.96
50	649	12.1	86.8	0.82
30	1010	18.8	110	0.67
10	1860	34.6	136	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 877 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0122

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°31' 121°15'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>9.1/13.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

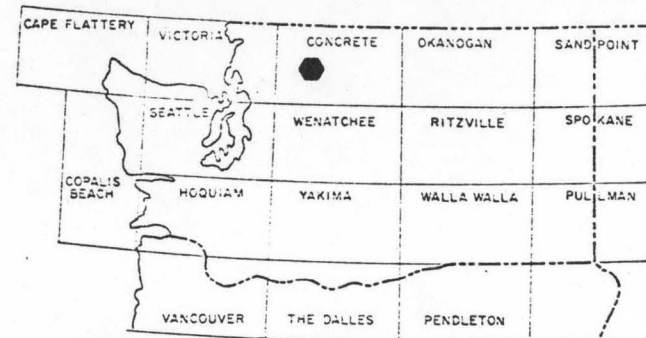
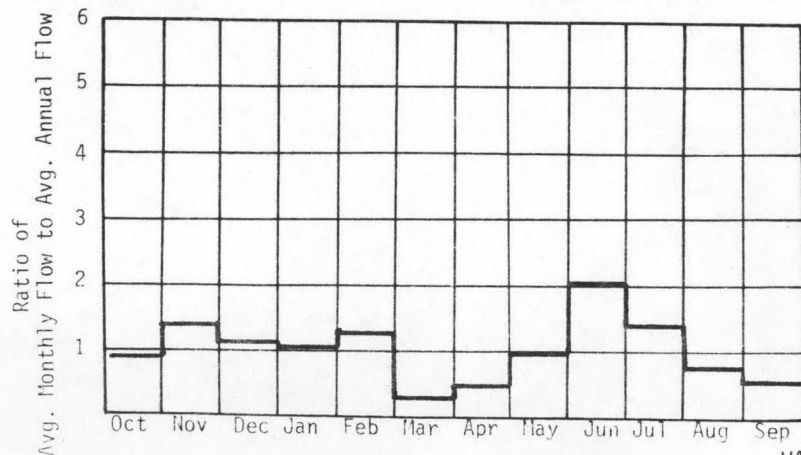
A. Upstream Elevation of Reach	<u>1065</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>930</u>	Ft. MSL
C. Total Available Head in Reach	<u>135</u>	Ft.
D. Average Slope in Reach	<u>28.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>122</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	195	2.22	19.5	1.00
80	303	3.46	29.1	0.96
50	534	6.09	43.8	0.82
30	829	9.47	55.6	0.67
10	1530	17.5	68.8	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 721 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0123

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°28' 121°16'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>13.9/16.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

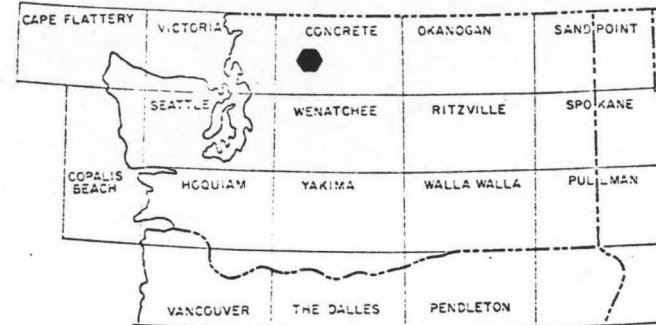
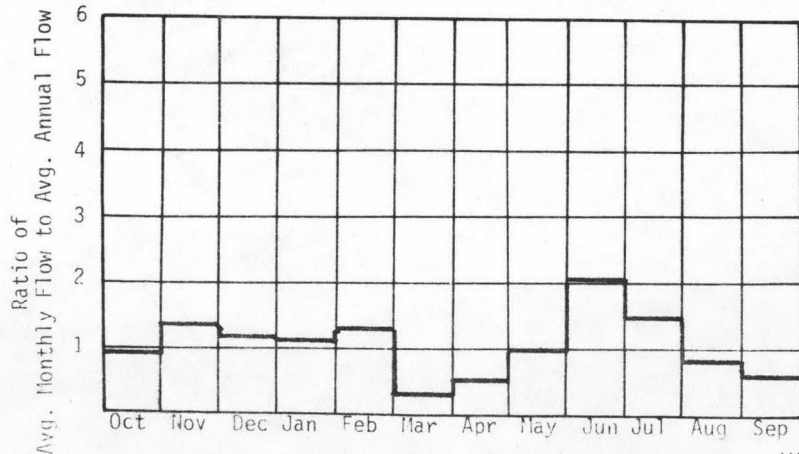
A. Upstream Elevation of Reach	<u>1150</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1065</u>	Ft. MSL
C. Total Available Head in Reach	<u>85</u>	Ft.
D. Average Slope in Reach	<u>37.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>96.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

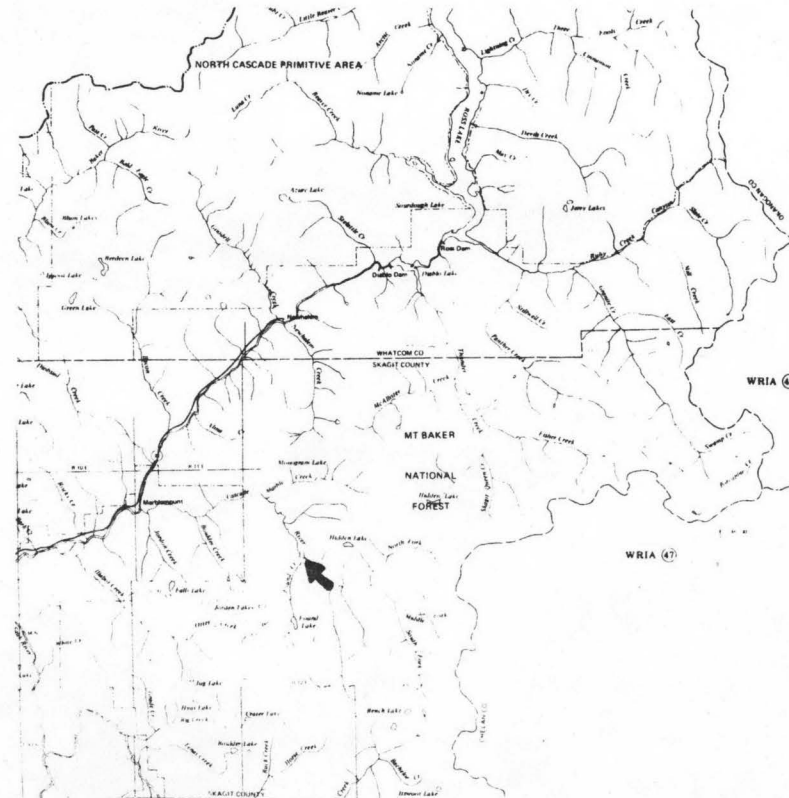
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	163	1.17	10.3	1.00
80	254	1.82	15.3	0.96
50	447	3.21	23.1	0.82
30	695	4.99	29.3	0.67
10	1280	9.21	36.3	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 604 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0124

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°28' 121°12'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>16.2/18.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

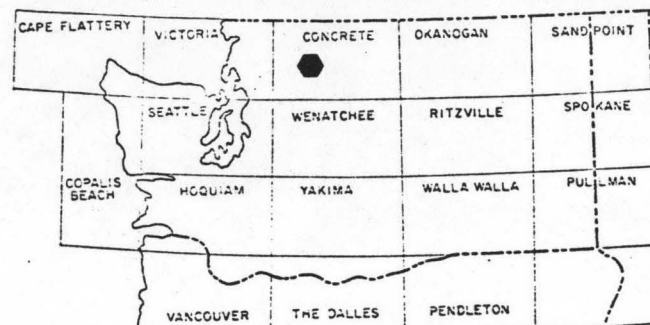
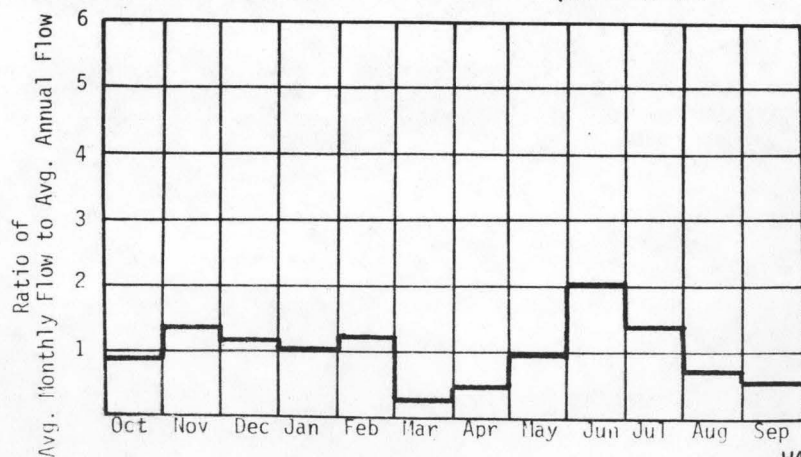
A. Upstream Elevation of Reach	<u>1335</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1150</u>	Ft. MSL
C. Total Available Head in Reach	<u>185</u>	Ft.
D. Average Slope in Reach	<u>71</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>67.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	112	1.75	15.3	1.00
80	173	2.71	22.8	0.96
50	306	4.78	34.4	0.82
30	475	7.43	43.6	0.67
10	876	13.7	54.0	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 413 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0125

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°29' 121°08'</u>
E. Stream Name	<u>N.F. Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>18.8/21.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

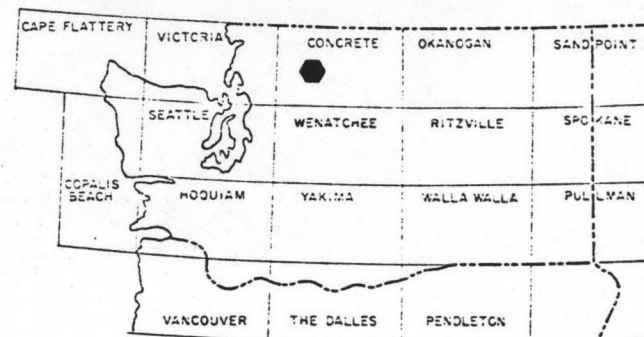
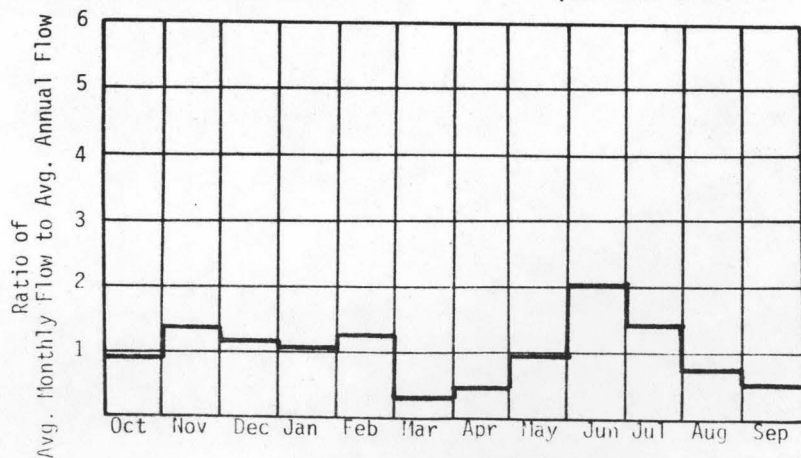
A. Upstream Elevation of Reach	<u>1975</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1335</u>	Ft. MSL
C. Total Available Head in Reach	<u>640</u>	Ft.
D. Average Slope in Reach	<u>237</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>22.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	38.6	2.09	18.3	1.00
80	60.1	3.25	27.4	0.96
50	106	5.73	41.2	0.82
30	164	8.90	52.3	0.67
10	303	16.4	64.7	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 143 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0126

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T35N R12E
D. Latitude, Longitude	48°29' 121°08'
E. Stream Name	Cascade River
F. Major Basin Name	Skagit
G. River Mile	21.5/22.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

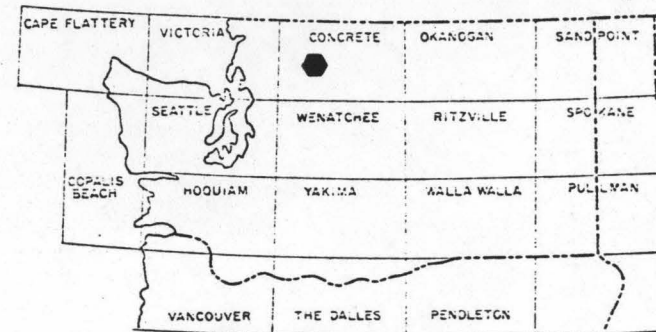
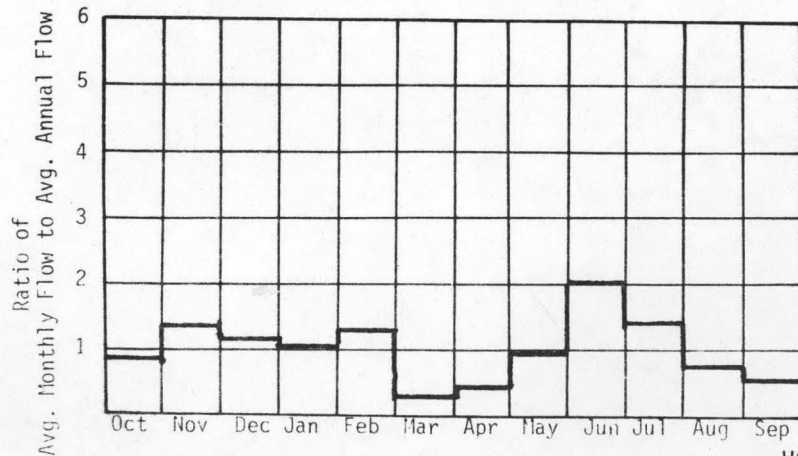
A. Upstream Elevation of Reach	2080	Ft. MSL
B. Downstream Elevation of Reach	1975	Ft. MSL
C. Total Available Head in Reach	105	Ft.
D. Average Slope in Reach	117	Ft./Mi.
E. Drainage Area above Reach Mouth	16.4	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	28.9	0.26	2.25	1.00
80	44.9	0.40	3.36	0.96
50	79.2	0.70	5.05	0.82
30	123	1.09	6.42	0.67
10	227	2.02	7.94	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 107 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0127

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°29' 121°07'</u>
E. Stream Name	<u>Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>22.4/23.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

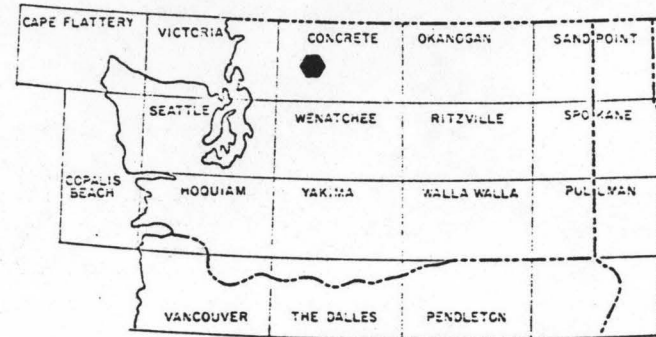
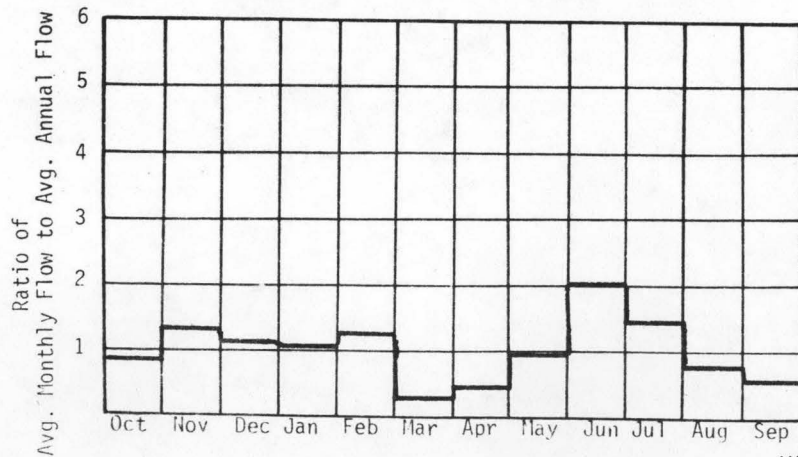
A. Upstream Elevation of Reach	<u>2200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2080</u>	Ft. MSL
C. Total Available Head in Reach	<u>120 + 66 = 186</u>	Ft.
D. Average Slope in Reach	<u>150</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

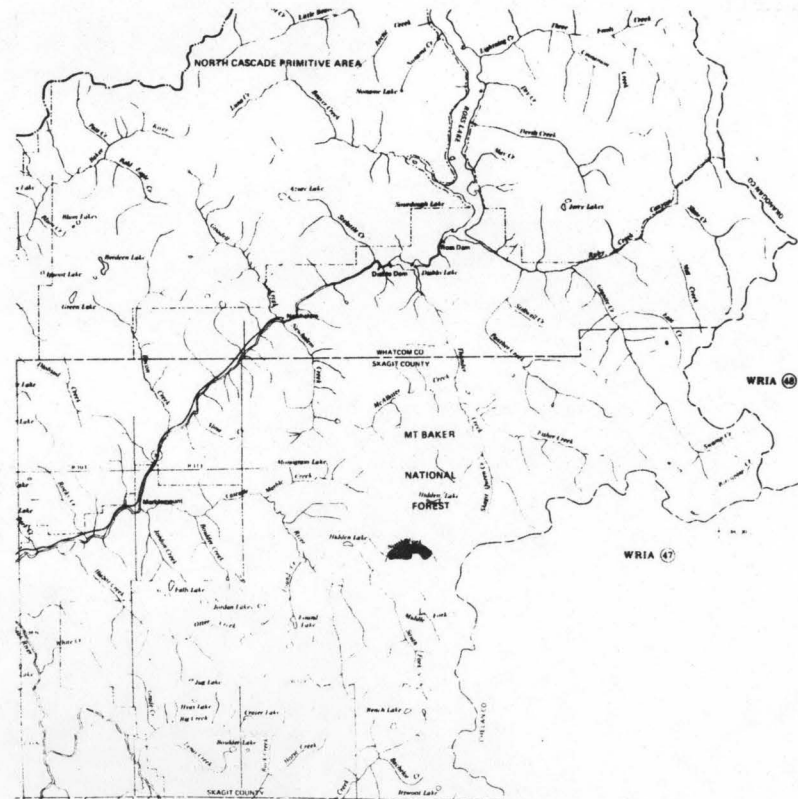
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.9	0.30	2.61	1.00
80	29.4	0.46	3.89	0.96
50	51.8	0.82	5.86	0.82
30	80.5	1.27	7.43	0.67
10	148	2.34	9.21	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 70 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0128

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R10E</u>
D. Latitude, Longitude	<u>48°31' 121°25'</u>
E. Stream Name	<u>Jordan Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

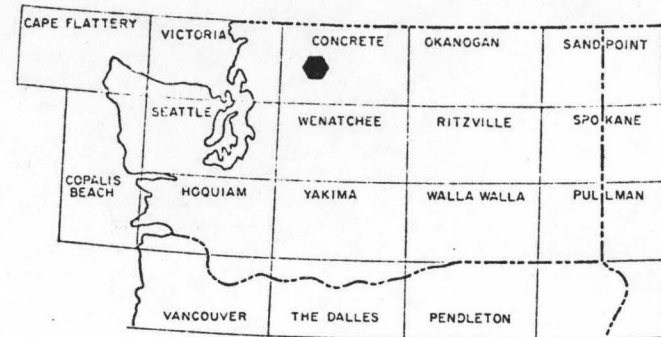
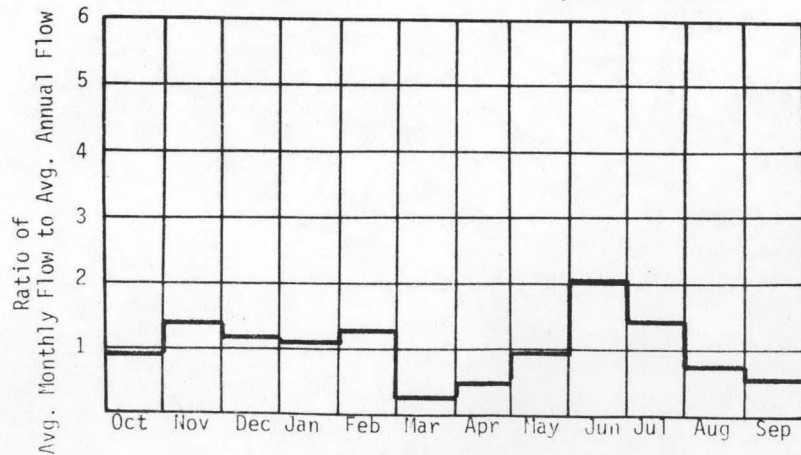
A. Upstream Elevation of Reach	<u>1800</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>310</u>	Ft. MSL
C. Total Available Head in Reach	<u>1490 + 66 = 1556</u>	Ft.
D. Average Slope in Reach	<u>339</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>12.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

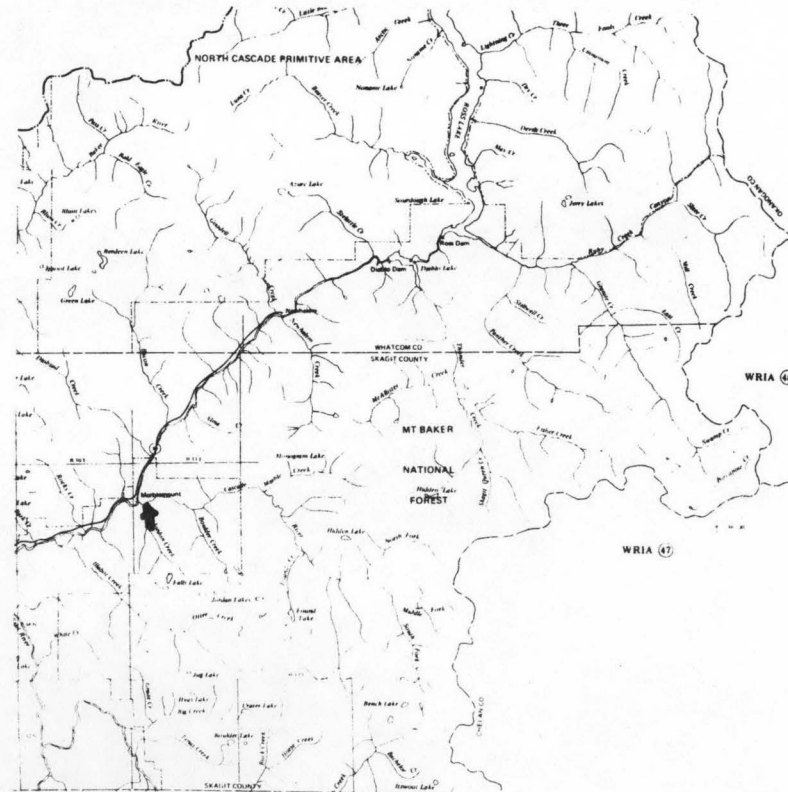
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.0	1.84	16.1	1.00
80	24.1	3.17	26.1	0.94
50	43.1	5.68	40.3	0.81
30	67.2	8.85	51.1	0.66
10	113	14.8	61.0	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 56 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0129

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R12E</u>
D. Latitude, Longitude	<u>48°33' 121°15'</u>
E. Stream Name	<u>Marble Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

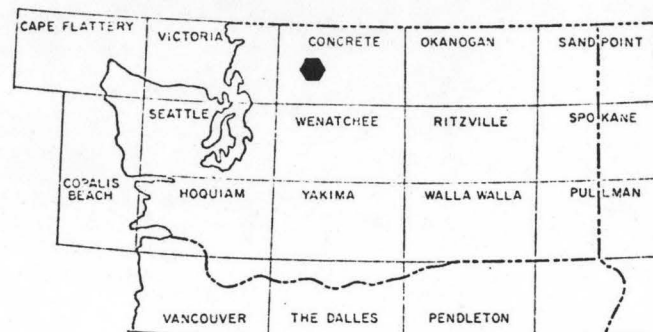
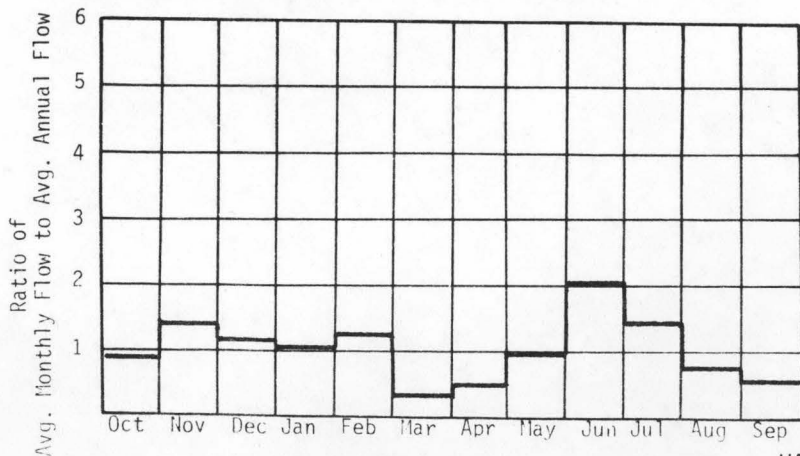
A. Upstream Elevation of Reach	<u>1870</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>930</u>	Ft. MSL
C. Total Available Head in Reach	<u>940 + 66 = 1006</u>	Ft.
D. Average Slope in Reach	<u>214</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>17.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.0	1.95	17.1	1.00
80	35.7	3.04	25.6	0.96
50	62.9	5.35	38.5	0.82
30	97.8	8.32	48.8	0.67
10	180	15.3	60.5	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 85 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0130

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T35N R12E
D. Latitude, Longitude	48°28' 121°15'
E. Stream Name	Found Creek
F. Major Basin Name	Skagit
G. River Mile	0/3.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

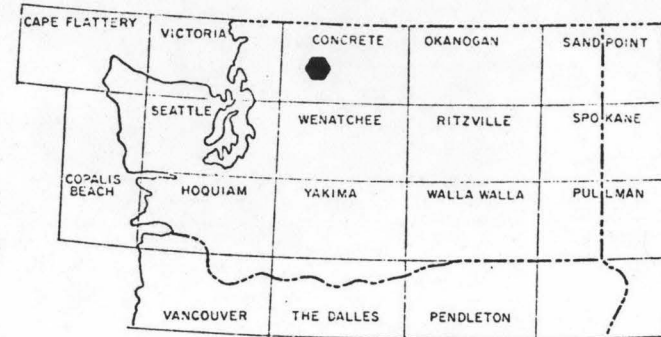
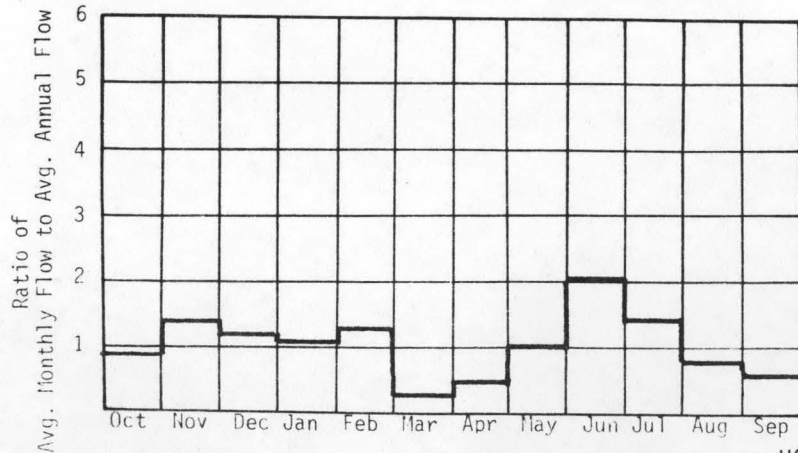
A. Upstream Elevation of Reach	2310	Ft.	MSL
B. Downstream Elevation of Reach	1065	Ft.	MSL
C. Total Available Head in Reach	1245 + 66 = 1311	Ft.	
D. Average Slope in Reach	415	Ft./Mi.	
E. Drainage Area above Reach Mouth	11.6	Sq.Mi.	
F. Inflow Classification	Natural		

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.2	1.80	15.7	1.00
80	25.2	2.79	23.5	0.96
50	44.4	4.92	35.4	0.82
30	69.0	7.65	44.9	0.67
10	127	14.1	55.6	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 60 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0131

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R12E</u>
D. Latitude, Longitude	<u>48°27' 121°13'</u>
E. Stream Name	<u>Kindy Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

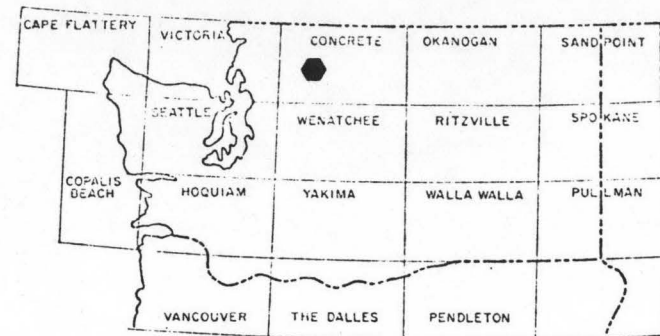
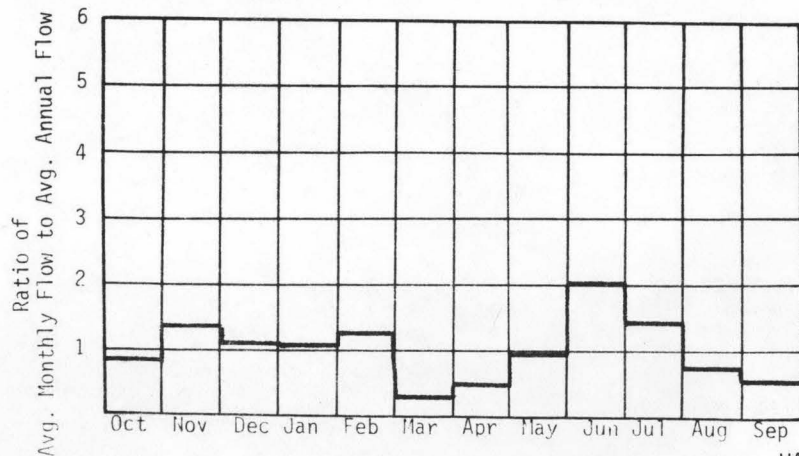
A. Upstream Elevation of Reach	<u>1620</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1150</u>	Ft. MSL
C. Total Available Head in Reach	<u>470</u>	Ft.
D. Average Slope in Reach	<u>188</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>23.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

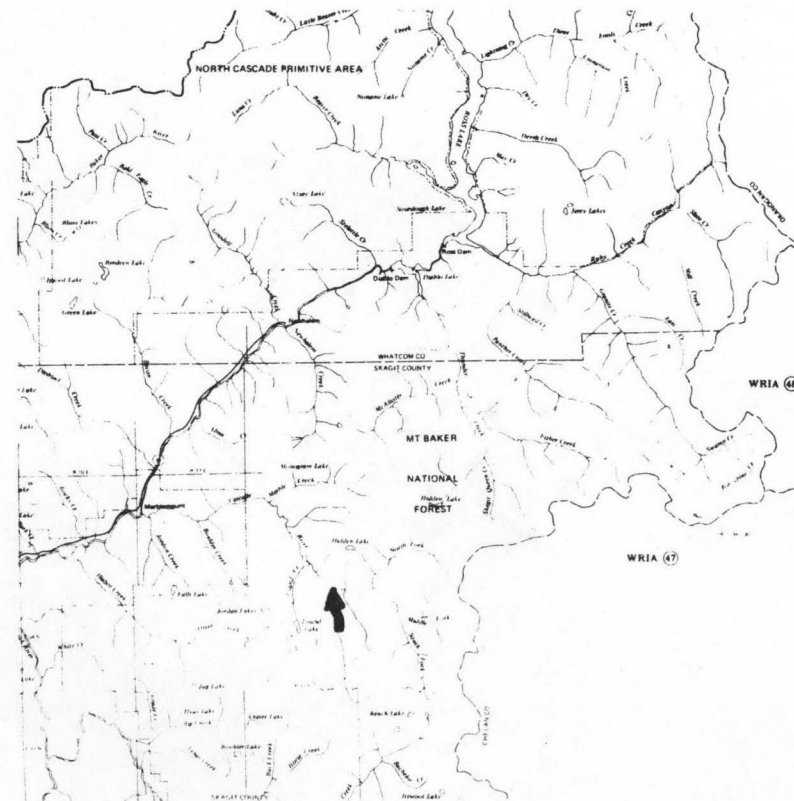
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	38.9	1.55	13.5	1.00
80	60.5	2.40	20.2	0.96
50	107	4.24	30.4	0.82
30	166	6.58	38.7	0.67
10	305	12.1	47.9	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 144 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0132

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R12E</u>
D. Latitude, Longitude	<u>48°25' 121°12'</u>
E. Stream Name	<u>Kindy Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.5/6.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

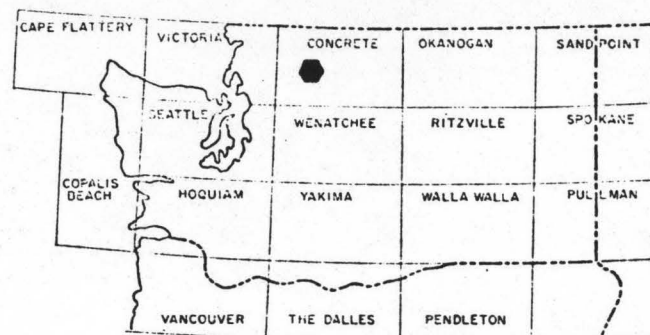
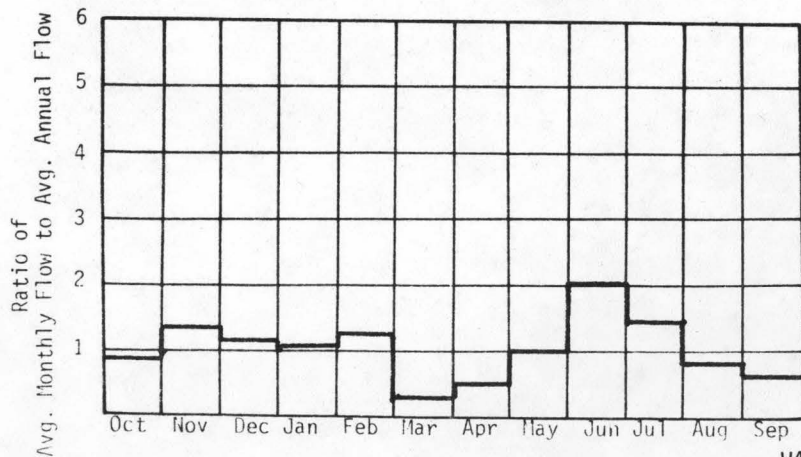
A. Upstream Elevation of Reach	<u>2350</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1620</u>	Ft. MSL
C. Total Available Head in Reach	<u>730 + 66 = 796</u>	Ft.
D. Average Slope in Reach	<u>209</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.7	1.53	13.4	1.00
80	35.3	2.38	20.0	0.96
50	62.2	4.19	30.1	0.82
30	96.6	6.51	38.2	0.67
10	178	12.0	47.3	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 84 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0133

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R12E</u>
D. Latitude, Longitude	<u>48°27' 121°08'</u>
E. Stream Name	<u>S.F. Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

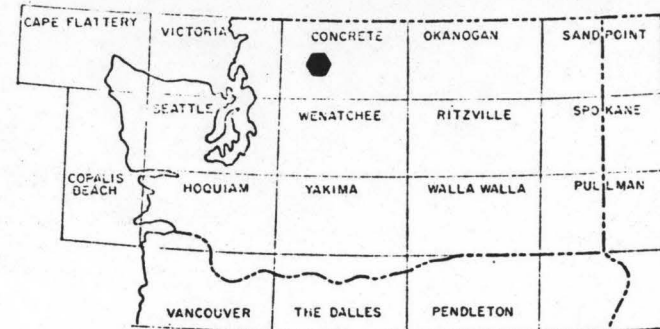
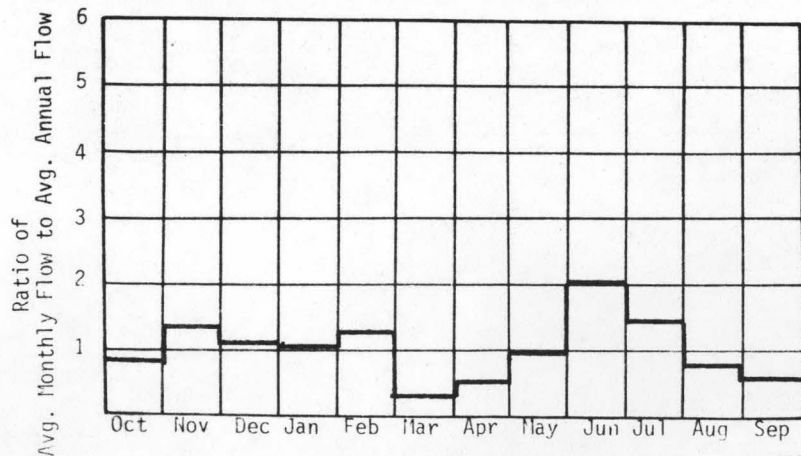
A. Upstream Elevation of Reach	<u>1755</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1335</u>	Ft. MSL
C. Total Available Head in Reach	<u>420</u>	Ft.
D. Average Slope in Reach	<u>175</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>36.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

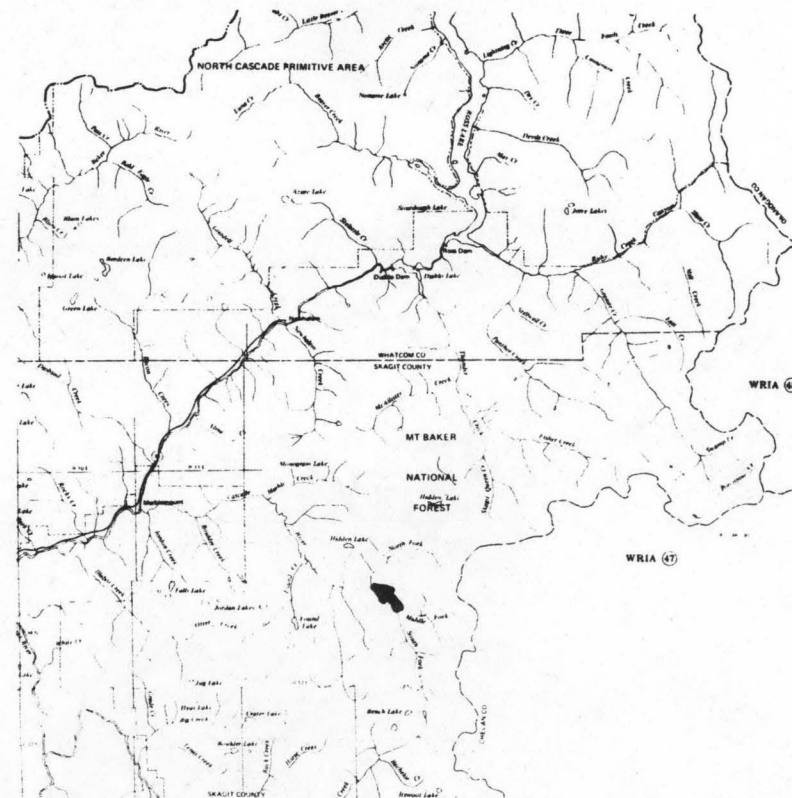
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	61.8	2.20	19.3	1.00
80	96.2	3.42	28.7	0.96
50	169	6.02	43.3	0.82
30	263	9.36	54.9	0.67
10	485	17.3	68.0	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 229 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0135

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R12E</u>
D. Latitude, Longitude	<u>48°26' 121°08'</u>
E. Stream Name	<u>S.F. Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

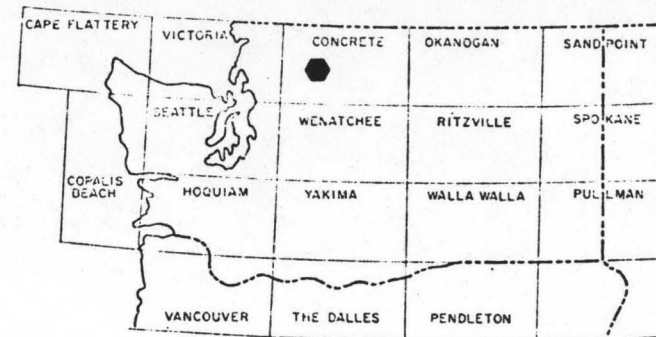
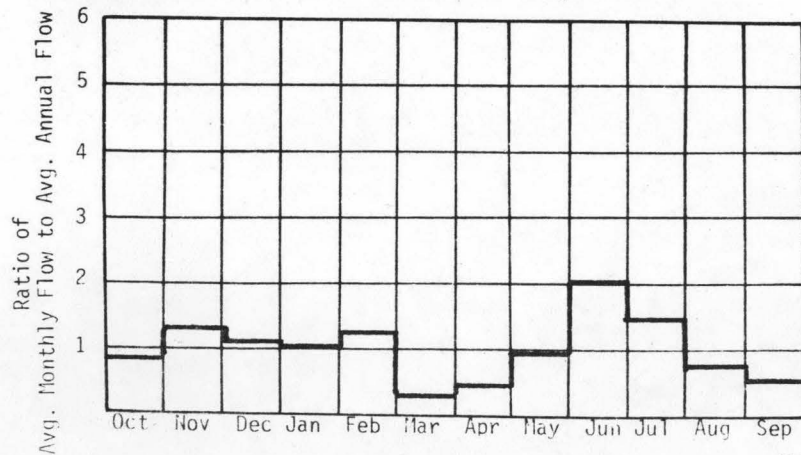
A. Upstream Elevation of Reach	<u>2065</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1760</u>	Ft. MSL
C. Total Available Head in Reach	<u>305</u>	Ft.
D. Average Slope in Reach	<u>127</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>21.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

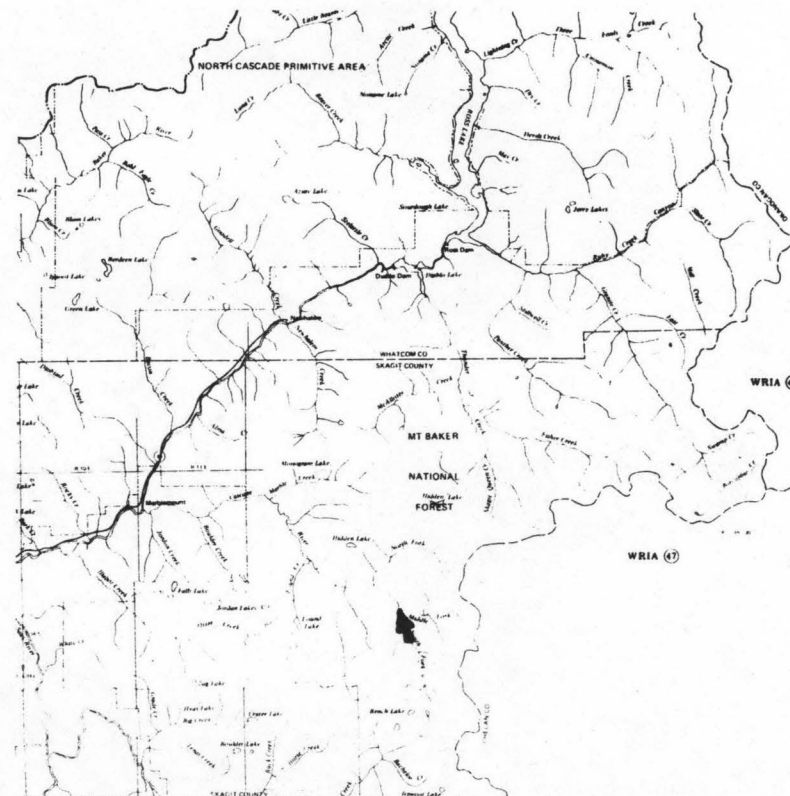
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	37.0	0.95	8.36	1.00
80	57.5	1.48	12.5	0.96
50	101	2.62	18.8	0.82
30	158	4.07	23.9	0.67
10	290	7.49	29.5	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 137 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0135

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R12E</u>
D. Latitude, Longitude	<u>48°23' 121°07'</u>
E. Stream Name	<u>S.F. Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.4/7.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

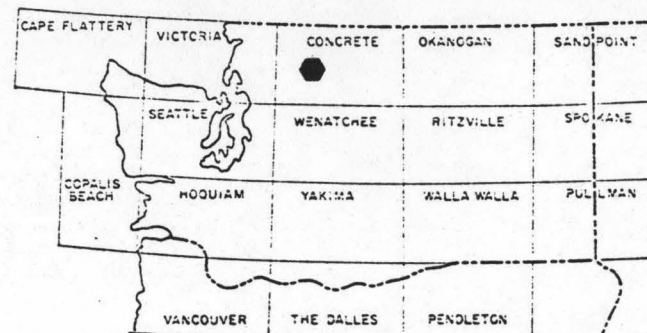
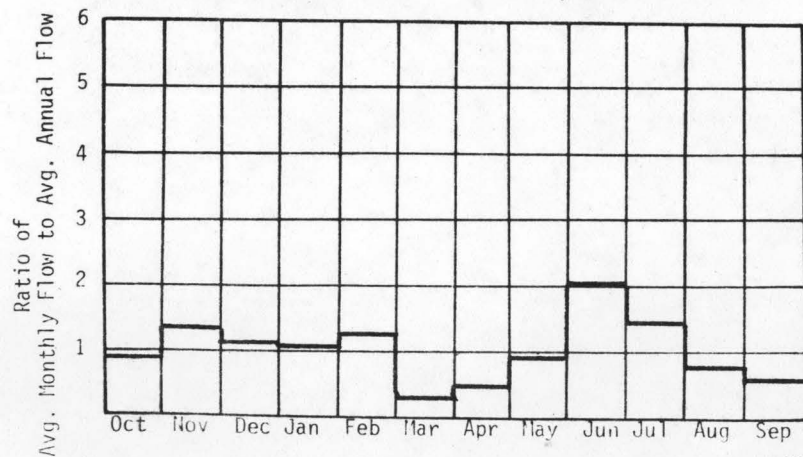
A. Upstream Elevation of Reach	<u>3235</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2065</u>	Ft. MSL
C. Total Available Head in Reach	<u>1170 + 66 = 1236</u>	Ft.
D. Average Slope in Reach	<u>334</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.1	2.20	19.3	1.00
80	32.8	3.43	28.8	0.96
50	57.7	6.04	43.4	0.82
30	89.7	9.38	55.1	0.67
10	165	17.3	68.2	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 78 cfs



LOCATIONS FOR USGS 250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0136

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T35N R12E</u>
D. Latitude, Longitude	<u>48°27' 121°07'</u>
E. Stream Name	<u>M.F. Cascade River</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

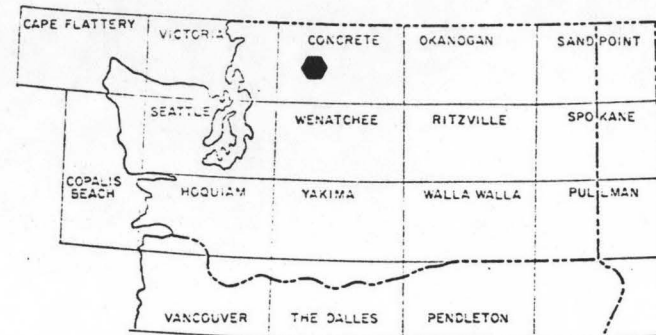
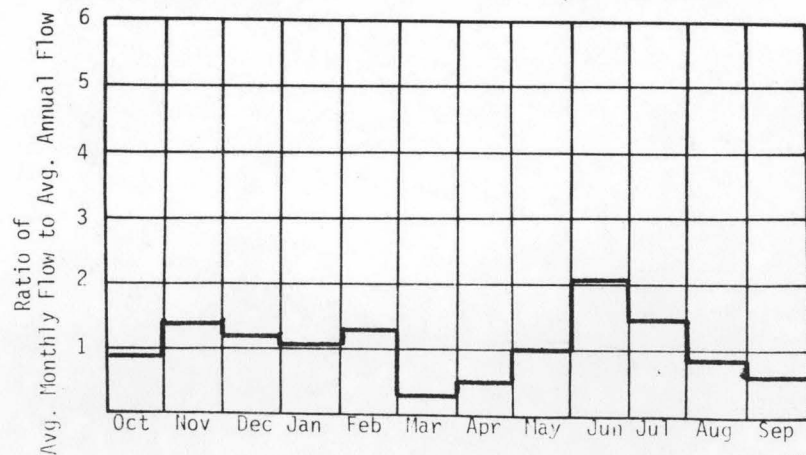
A. Upstream Elevation of Reach	<u>2780</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1755</u>	Ft. MSL
C. Total Available Head in Reach	<u>1025 + 66 = 1091</u>	Ft.
D. Average Slope in Reach	<u>569</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.7	1.55	13.5	1.00
80	26.0	2.40	20.2	0.96
50	45.9	4.23	30.4	0.82
30	71.3	6.58	38.6	0.67
10	131	12.1	47.8	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0137

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R10E</u>
D. Latitude, Longitude	<u>48°35' 121°22'</u>
E. Stream Name	<u>Diobsud Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/6.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

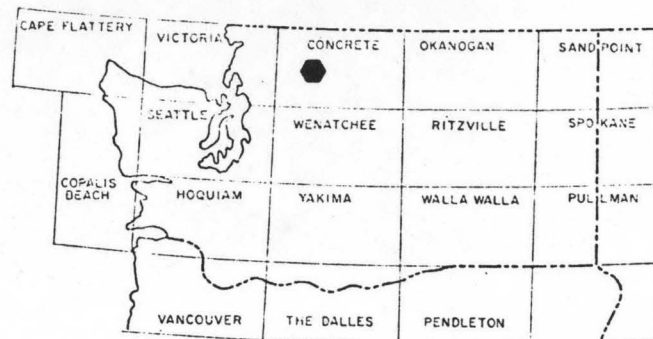
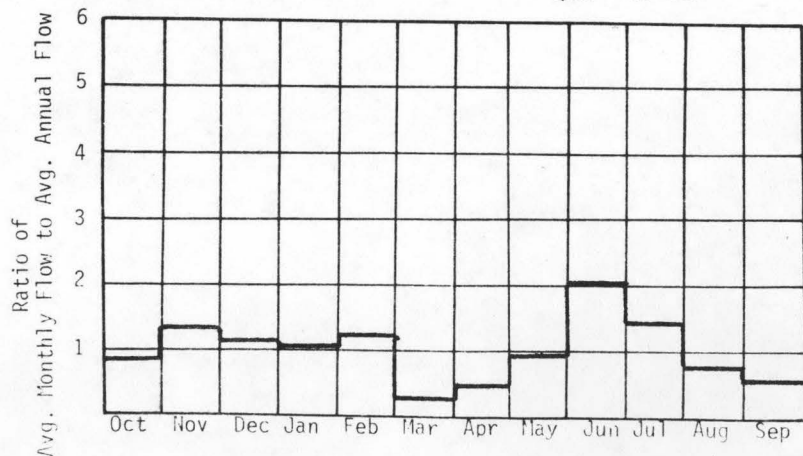
A. Upstream Elevation of Reach	<u>1680</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>325</u>	Ft. MSL
C. Total Available Head in Reach	<u>1355 + 66 = 1421</u>	Ft.
D. Average Slope in Reach	<u>202</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

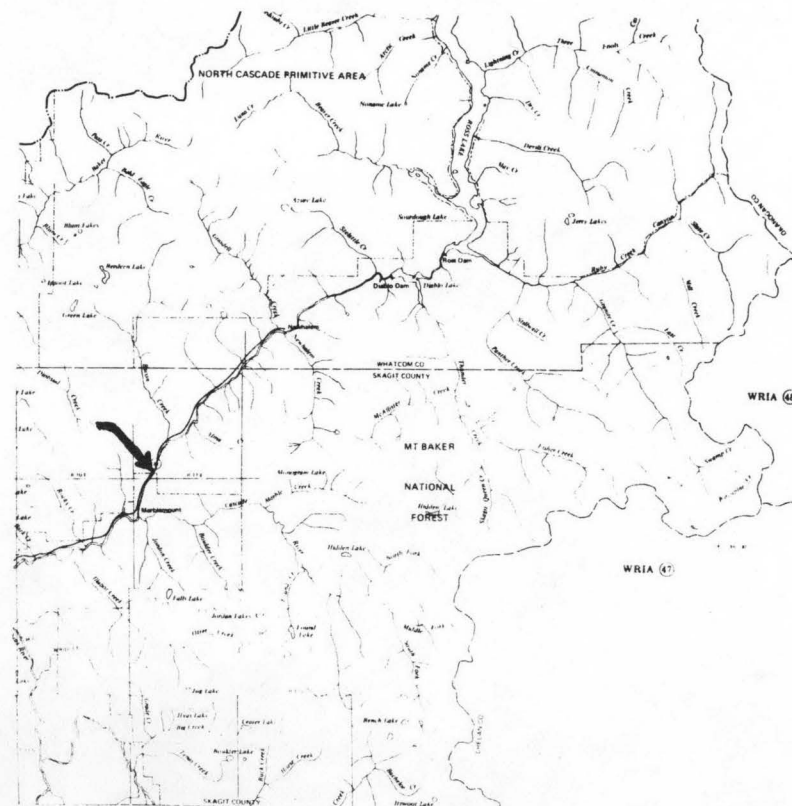
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.6	1.88	16.4	1.00
80	24.6	2.96	24.9	0.96
50	43.2	5.19	37.3	0.82
30	69.0	8.29	48.0	0.66
10	120	14.4	58.1	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 60 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0138

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T36N R11E
D. Latitude, Longitude	48°27' 121°26'
E. Stream Name	Bacon Creek
F. Major Basin Name	Skagit
G. River Mile	0/6.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

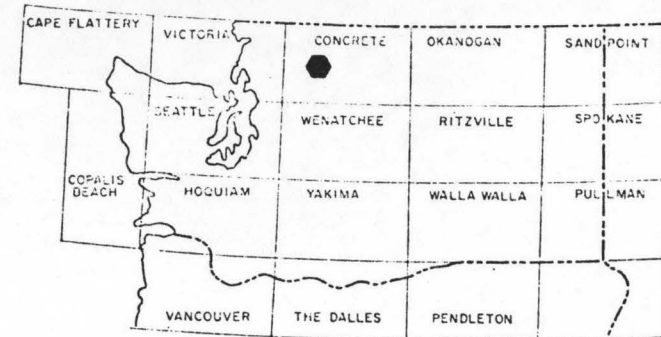
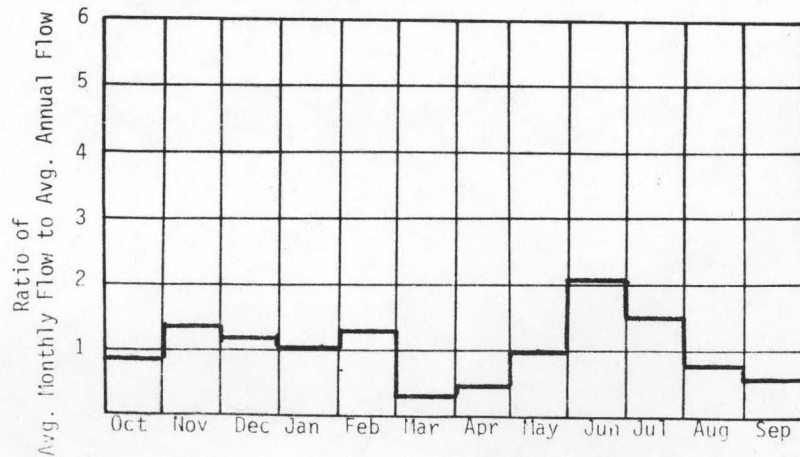
A. Upstream Elevation of Reach	820	Ft.	MSL
B. Downstream Elevation of Reach	330	Ft.	MSL
C. Total Available Head in Reach	490	Ft.	
D. Average Slope in Reach	79	Ft./Mi.	
E. Drainage Area above Reach Mouth	51.1	Sq.Mi.	
F. Inflow Classification	Natural		

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

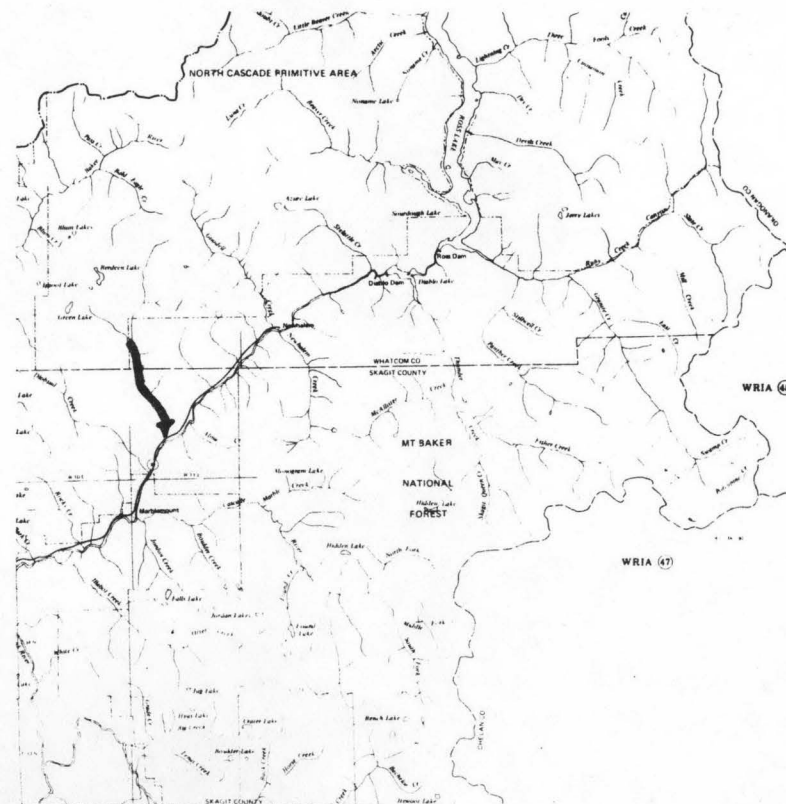
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	96.7	4.01	35.1	1.00
80	153	6.32	53.2	0.96
50	268	11.1	80.0	0.82
30	428	17.7	103	0.66
10	744	30.8	124	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 372 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0139

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T37N R11E
D. Latitude, Longitude	48°41' 121°27'
E. Stream Name	Bacon Creek
F. Major Basin Name	Skagit
G. River Mile	6.2/10.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

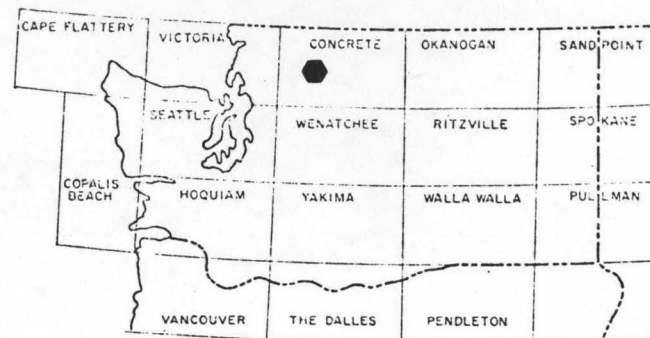
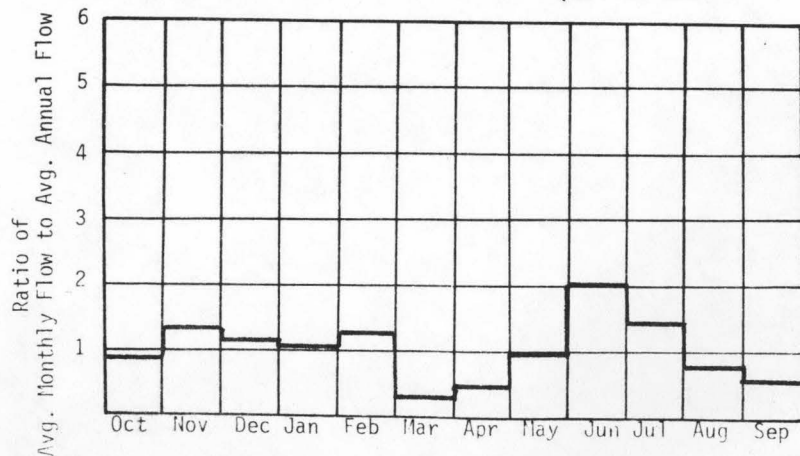
A. Upstream Elevation of Reach	2160	Ft.	MSL
B. Downstream Elevation of Reach	820	Ft.	MSL
C. Total Available Head in Reach	1340 + 66 = 1406	Ft.	
D. Average Slope in Reach	344	Ft./Mi.	
E. Drainage Area above Reach Mouth	14.2	Sq.Mi.	
F. Inflow Classification	Natural		

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

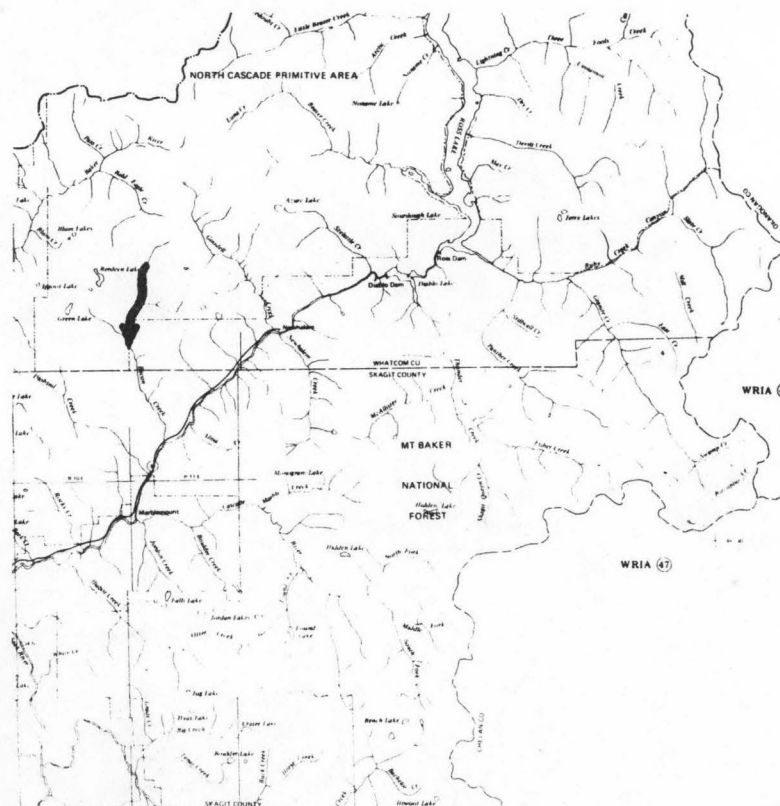
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.2	3.00	26.3	1.00
80	39.8	4.73	39.8	0.96
50	69.8	8.31	59.7	0.82
30	112	13.3	76.7	0.66
10	194	23.1	93.0	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 97 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0140

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R11E</u>
D. Latitude, Longitude	<u>48°42' 121°25'</u>
E. Stream Name	<u>E.F. Bacon Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

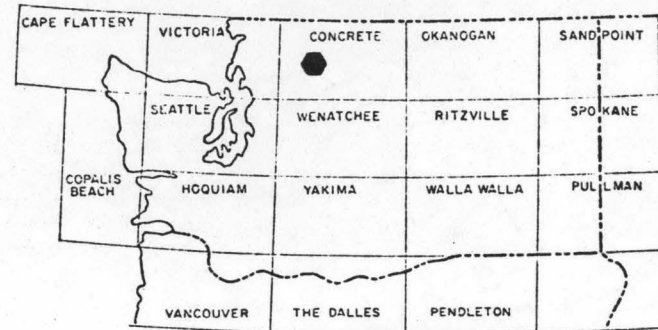
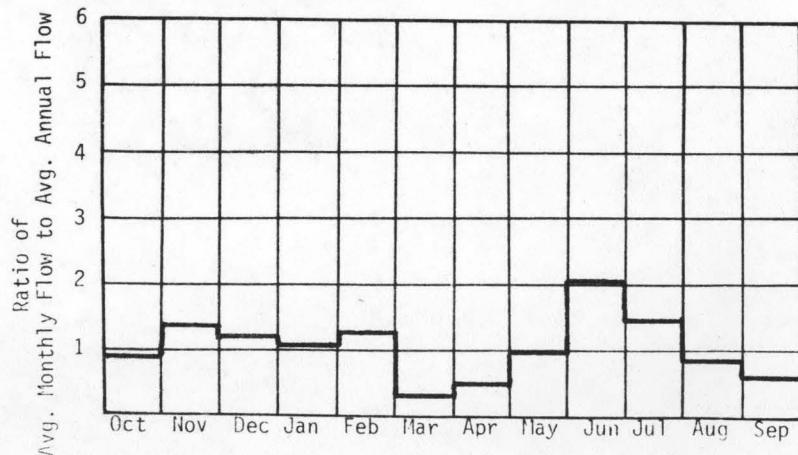
A. Upstream Elevation of Reach	<u>1760</u> Ft. MSL
B. Downstream Elevation of Reach	<u>820</u> Ft. MSL
C. Total Available Head in Reach	<u>940 + 66 = 1006</u> Ft.
D. Average Slope in Reach	<u>200</u> Ft./Mi.
E. Drainage Area above Reach Mouth	<u>19.3</u> Sq.Mi.
F. Inflow Classification	<u>Natural</u>

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	33.0	2.81	24.6	1.00
80	52.1	4.43	37.3	0.96
50	91.4	7.78	55.9	0.82
30	146	12.4	71.9	0.66
10	254	21.6	87.1	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 127 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0141

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R12E</u>
D. Latitude, Longitude	<u>48°42' 121°17'</u>
E. Stream Name	<u>Goodell Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/9.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

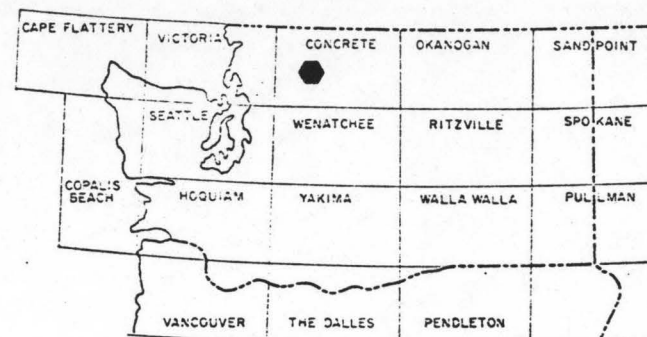
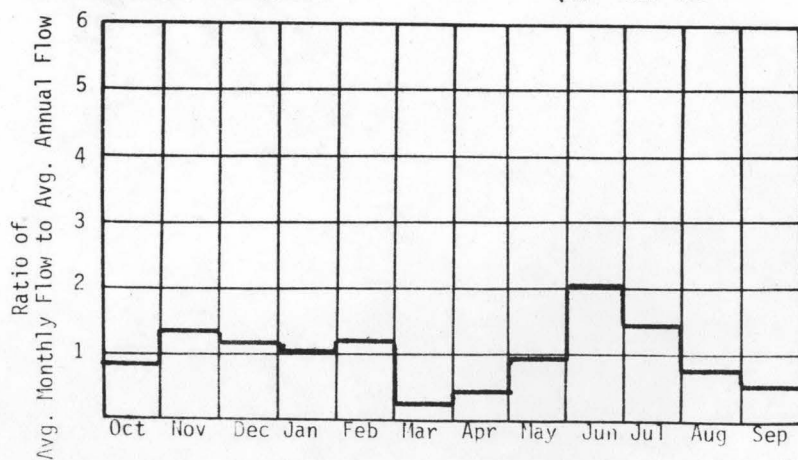
A. Upstream Elevation of Reach	<u>2640</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>480</u>	Ft. MSL
C. Total Available Head in Reach	<u>2160 + 66 = 2226</u>	Ft.
D. Average Slope in Reach	<u>218</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>38.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	33.5	6.32	55.3	1.00
80	52.9	9.96	83.8	0.96
50	92.9	17.5	126	0.82
30	148	27.9	162	0.66
10	258	48.6	196	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 129 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0142

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T36N R12E</u>
D. Latitude, Longitude	<u>48°38' 121°13'</u>
E. Stream Name	<u>Newhalem Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/6.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

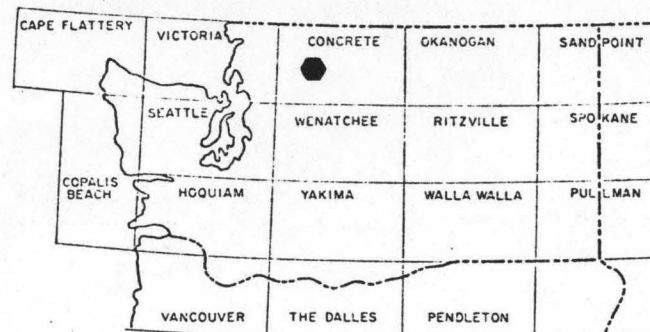
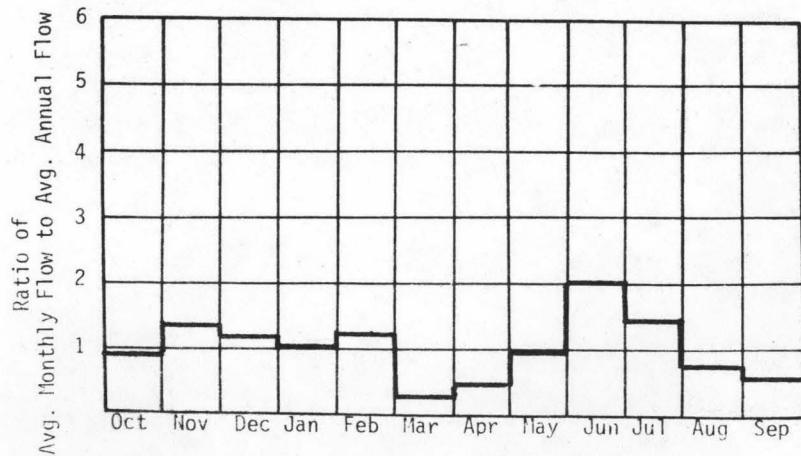
A. Upstream Elevation of Reach	<u>1440</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>480</u>	Ft. MSL
C. Total Available Head in Reach	<u>960</u>	Ft.
D. Average Slope in Reach	<u>139</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>28.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	40.5	3.29	28.8	1.00
80	59.9	4.87	40.9	0.96
50	107	8.68	62.4	0.82
30	178	14.5	82.4	0.65
10	358	29.1	107	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 162 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0143

### I. LOCATION

A. State	Washington
B. County	Skaagit
C. Township, Range	T36N R12E
D. Latitude, Longitude	48°37' 121°13'
E. Stream Name	Newhalem Creek
F. Major Basin Name	Skaagit
G. River Mile	6.9/13.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

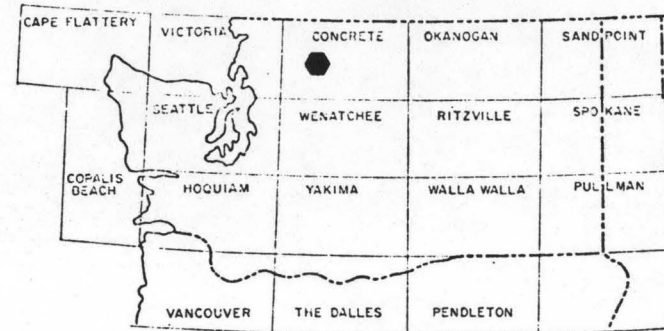
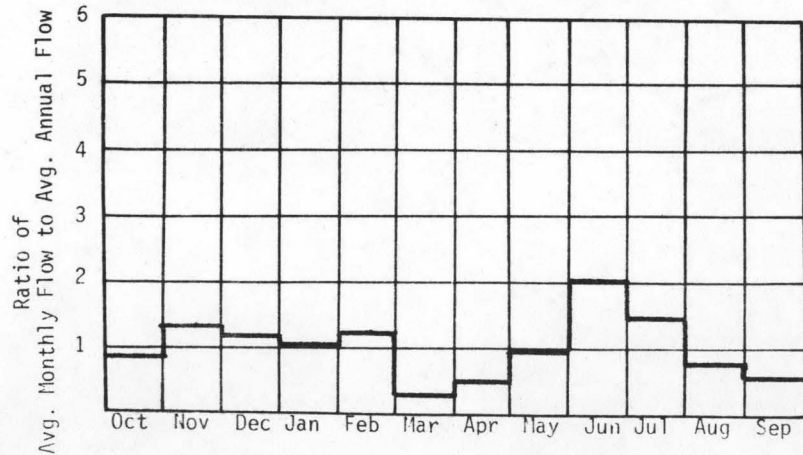
A. Upstream Elevation of Reach	1800	Ft. MSL
B. Downstream Elevation of Reach	1440	Ft. MSL
C. Total Available Head in Reach	360 + 66 = 426	Ft.
D. Average Slope in Reach	16.5	Ft./Mi.
E. Drainage Area above Reach Mouth	Natural	Sq.Mi.
F. Inflow Classification		

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

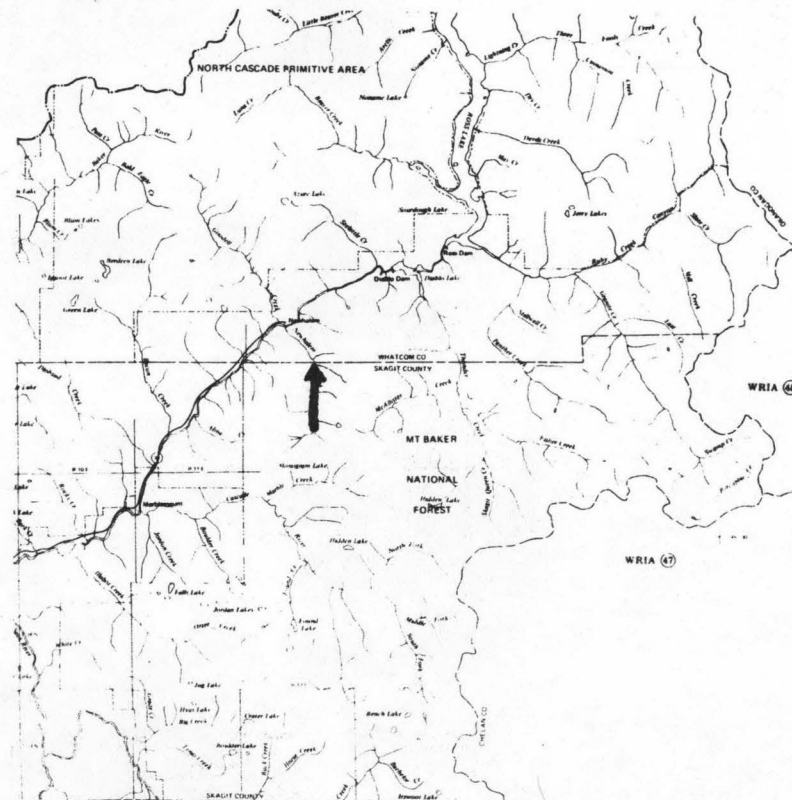
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.5	0.81	7.10	1.00
80	33.3	1.20	10.1	0.96
50	59.4	2.14	15.4	0.82
30	99.0	3.57	20.3	0.65
10	199	7.17	26.4	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0144

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T38N R12E
D. Latitude, Longitude	48°44' 121°10'
E. Stream Name	Stetattle Creek
F. Major Basin Name	Skagit
G. River Mile	0/4.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

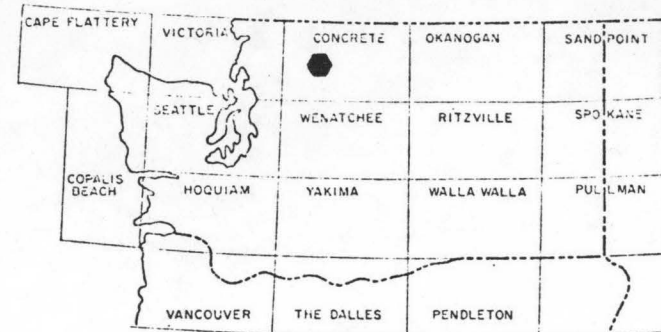
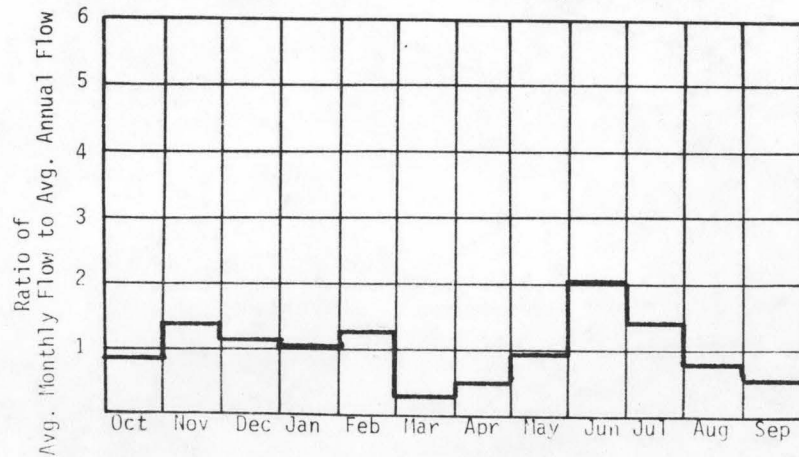
A. Upstream Elevation of Reach	1660	Ft. MSL
B. Downstream Elevation of Reach	878	Ft. MSL
C. Total Available Head in Reach	782	Ft.
D. Average Slope in Reach	196	Ft./Mi.
E. Drainage Area above Reach Mouth	22.2	Sq.Mi.
F. Inflow Classification	Natural	

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

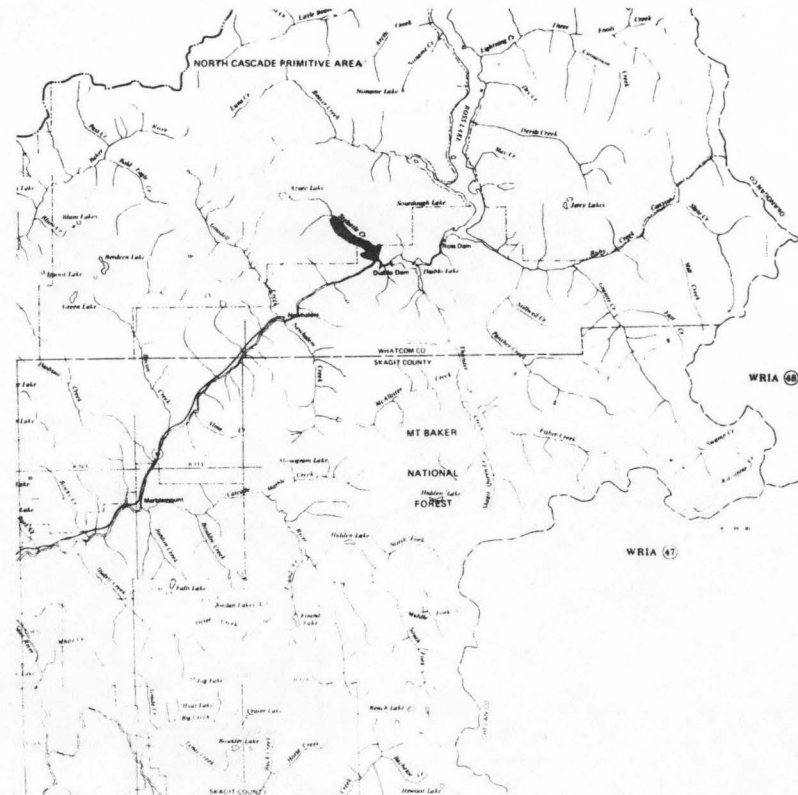
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	28.1	1.86	16.3	1.00
80	48.8	3.23	26.9	0.95
50	104	6.85	46.8	0.78
30	172	11.4	62.7	0.63
10	326	21.5	79.3	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 148 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0145

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R12E</u>
D. Latitude, Longitude	<u>48°46' 121°12'</u>
E. Stream Name	<u>Stetattle Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.0/5.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

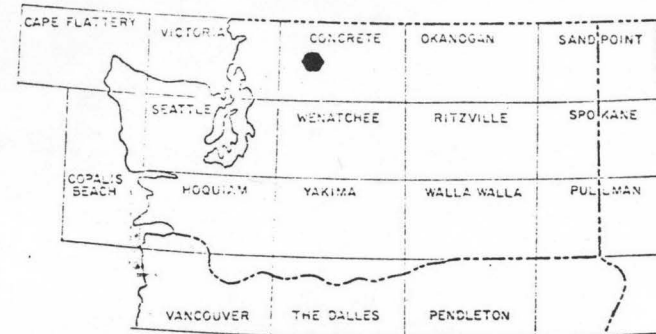
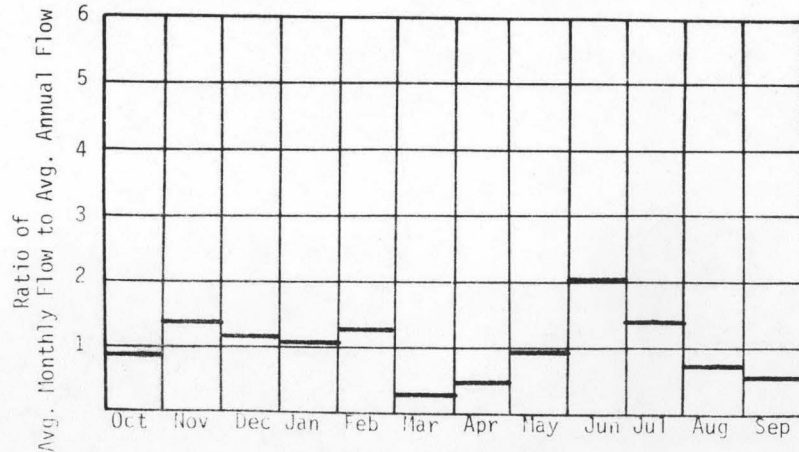
A. Upstream Elevation of Reach	<u>1950</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1660</u>	Ft. MSL
C. Total Available Head in Reach	<u>290 + 66 = 356</u>	Ft.
D. Average Slope in Reach	<u>290</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

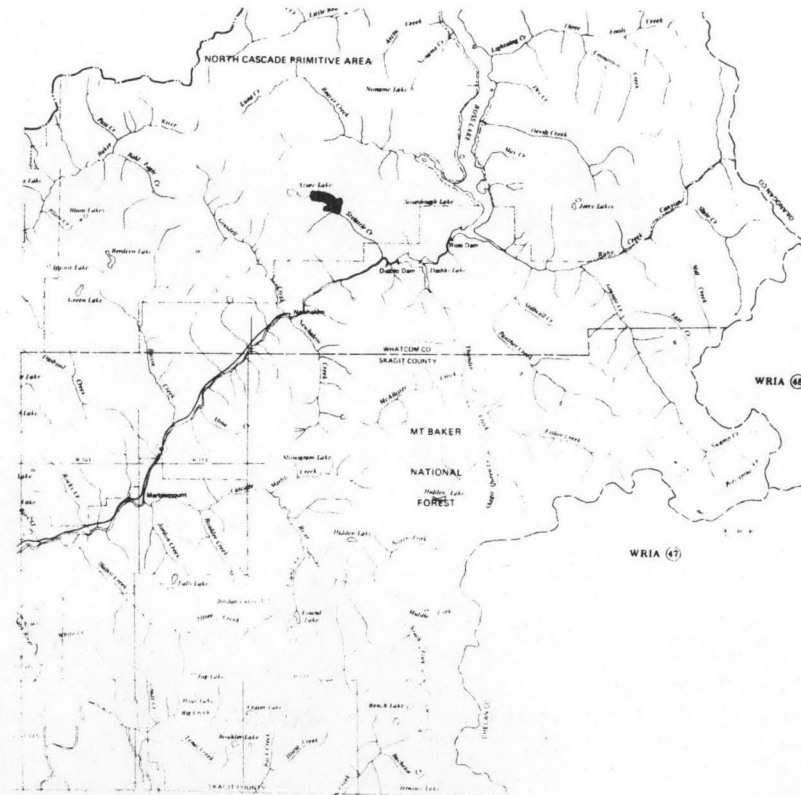
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.9	0.39	3.41	1.00
80	22.4	0.68	5.62	0.95
50	47.6	1.43	9.80	0.78
30	78.9	2.38	13.1	0.63
10	150	4.51	16.6	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 68 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0146

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R14E</u>
D. Latitude, Longitude	<u>48°40' 121°03'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Whatcom</u>
G. River Mile	<u>0/4.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

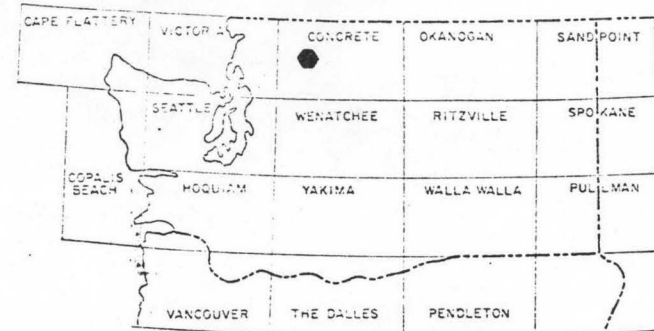
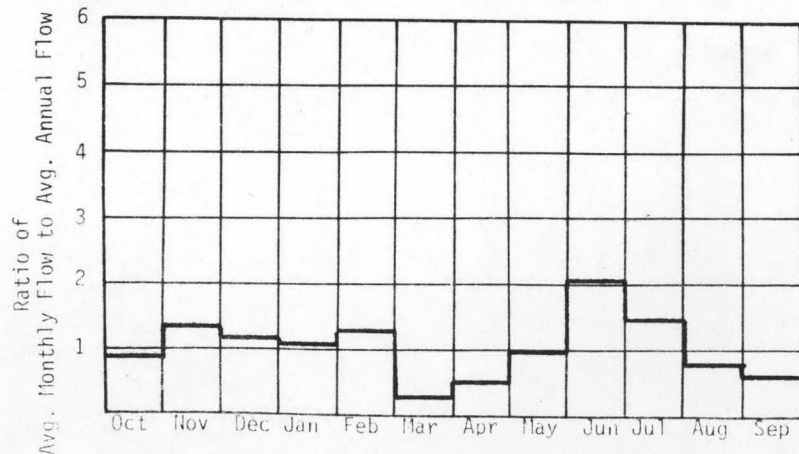
A. Upstream Elevation of Reach	<u>1395</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1208</u>	Ft. MSL
C. Total Available Head in Reach	<u>187</u>	Ft.
D. Average Slope in Reach	<u>38.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>106</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

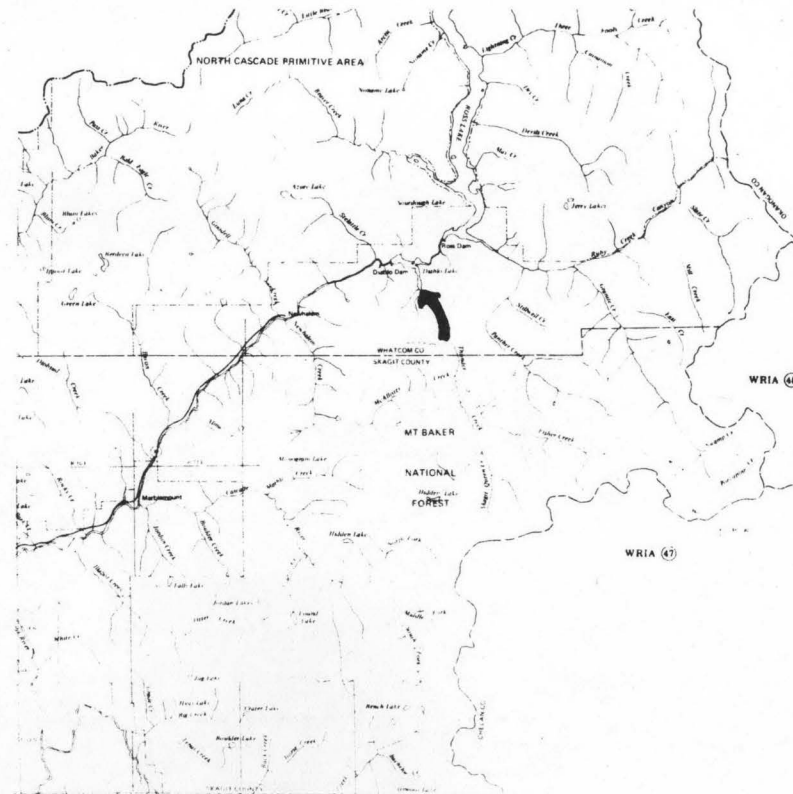
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	106	1.68	14.7	1.00
80	165	2.61	21.8	0.95
50	401	6.35	42.8	0.77
30	761	12.0	62.2	0.59
10	1330	21.0	77.3	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 590 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0147

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T37N R14E</u>
D. Latitude, Longitude	<u>48°38' 121°03'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.9/7.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

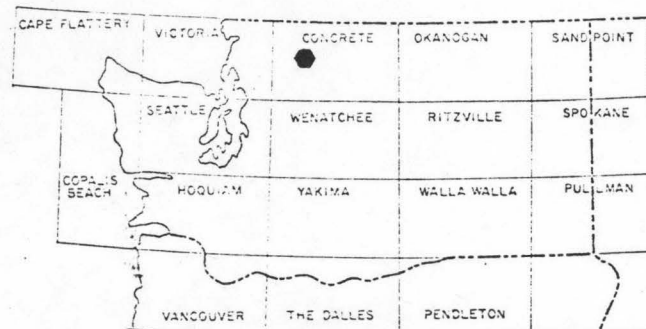
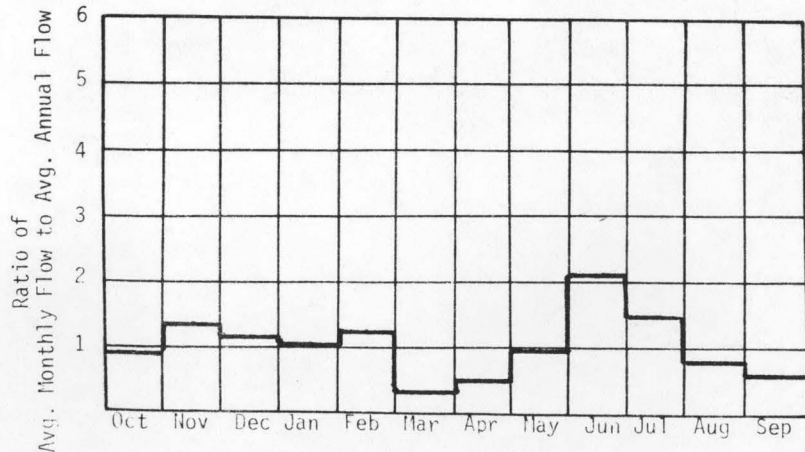
A. Upstream Elevation of Reach	<u>1760</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1395</u>	Ft. MSL
C. Total Available Head in Reach	<u>365</u>	Ft.
D. Average Slope in Reach	<u>159</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>96.3</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	112	3.45	30.2	1.00
80	162	5.00	42.0	0.96
50	374	11.5	78.9	0.78
30	714	22.1	116	0.60
10	1280	39.6	146	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 558 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0148

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R14E</u>
D. Latitude, Longitude	<u>48°37' 121°03'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>7.4/8.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

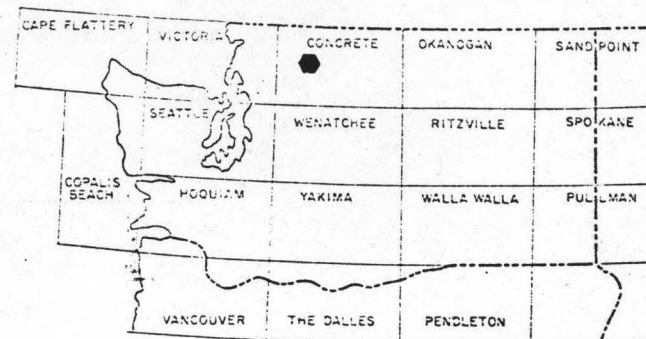
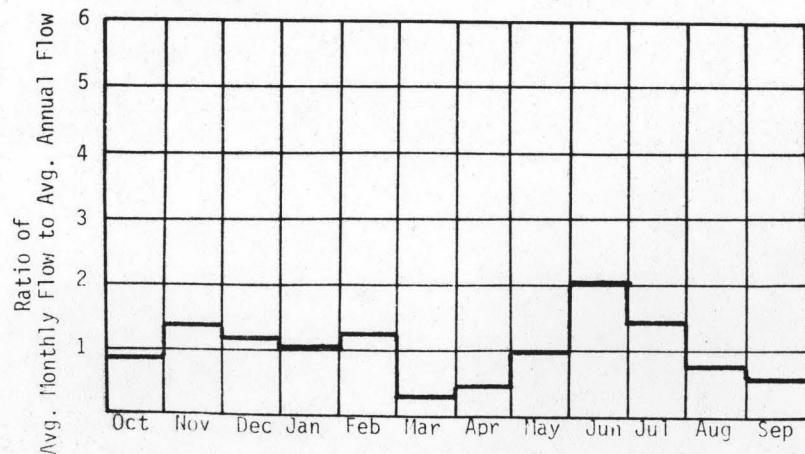
A. Upstream Elevation of Reach	<u>1930</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1800</u>	Ft. MSL
C. Total Available Head in Reach	<u>130</u>	Ft.
D. Average Slope in Reach	<u>93</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>69.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	79.2	0.87	7.63	1.00
80	115	1.26	10.6	0.96
50	265	2.92	19.9	0.78
30	507	5.57	29.3	0.60
10	911	10.0	36.9	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 396 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0149

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R14E</u>
D. Latitude, Longitude	<u>48°35' 121°03'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>8.8/13.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

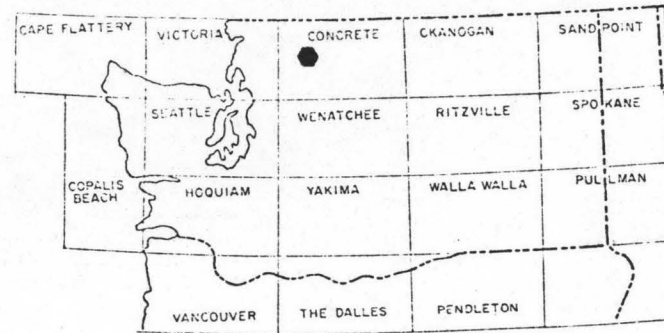
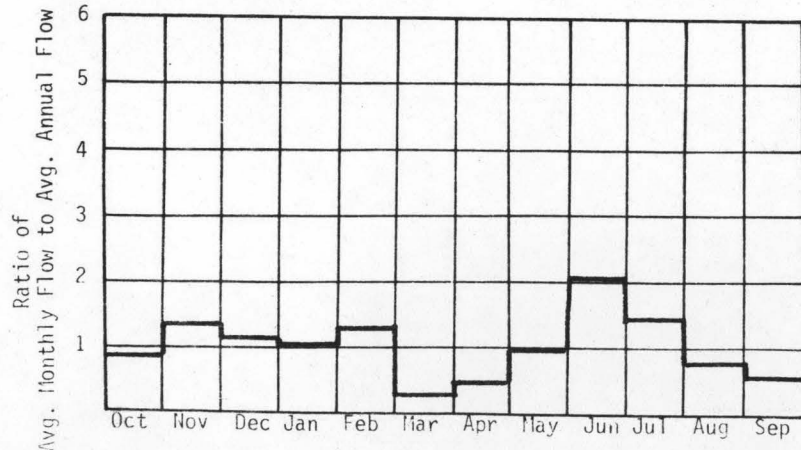
A. Upstream Elevation of Reach	<u>2070</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1930</u>	Ft. MSL
C. Total Available Head in Reach	<u>140</u>	Ft.
D. Average Slope in Reach	<u>33.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>37.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

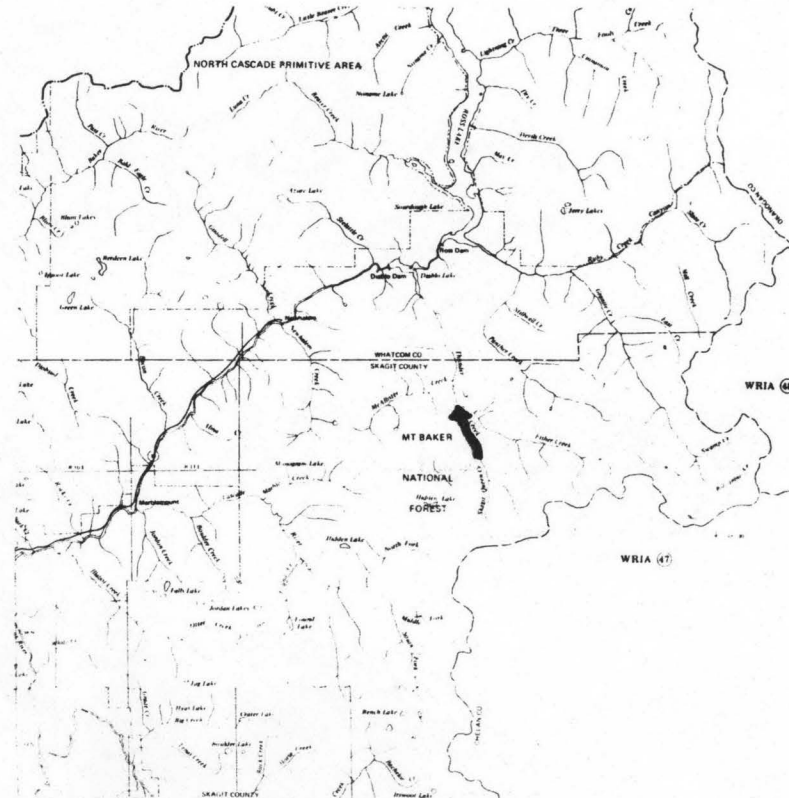
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	42.4	0.50	4.40	1.00
80	61.5	0.73	6.12	0.96
50	142	1.68	11.5	0.78
30	271	3.21	16.9	0.60
10	488	4.78	21.3	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 212 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0150

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R14E</u>
D. Latitude, Longitude	<u>48°33' 121°02'</u>
E. Stream Name	<u>Thunder Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

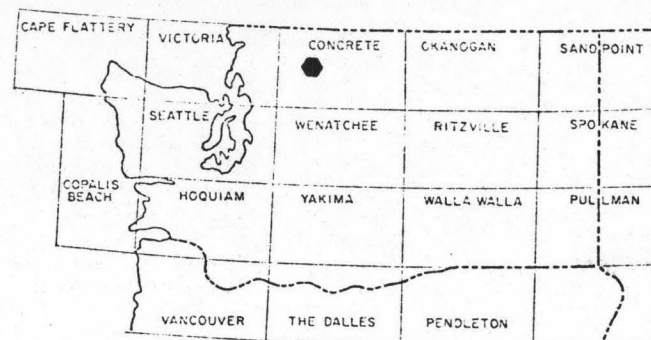
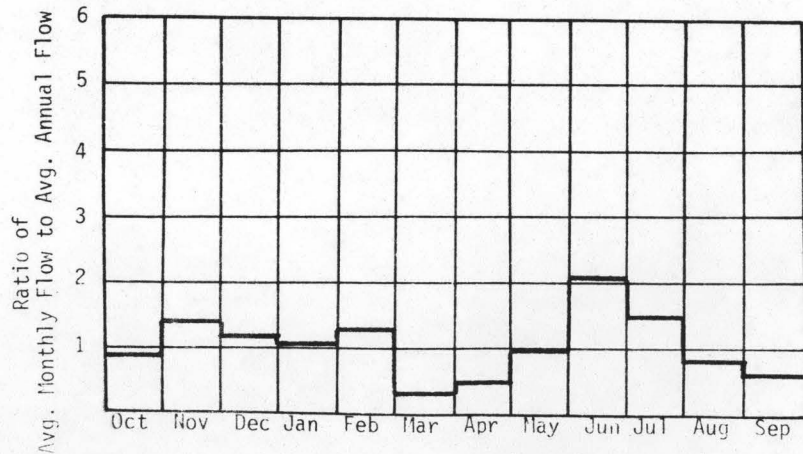
A. Upstream Elevation of Reach	<u>2720</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2070</u>	Ft. MSL
C. Total Available Head in Reach	<u>650 + 66 = 716</u>	Ft.
D. Average Slope in Reach	<u>406</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.2	1.04	9.13	1.00
80	24.9	1.51	12.7	0.96
50	57.6	3.49	23.9	0.78
30	110	6.67	35.1	0.60
10	198	12.0	44.1	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 86 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0151

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T37N R14E</u>
D. Latitude, Longitude	<u>48°37' 121°07'</u>
E. Stream Name	<u>McAllister Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/5.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

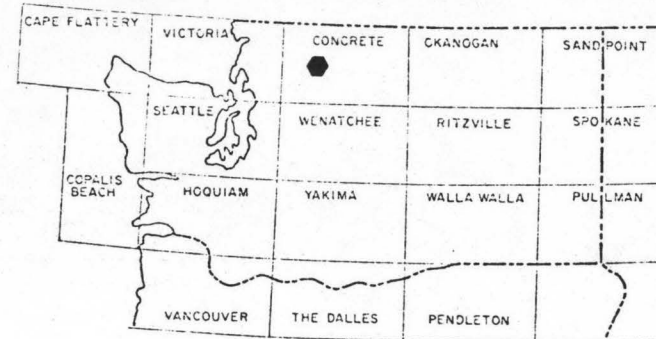
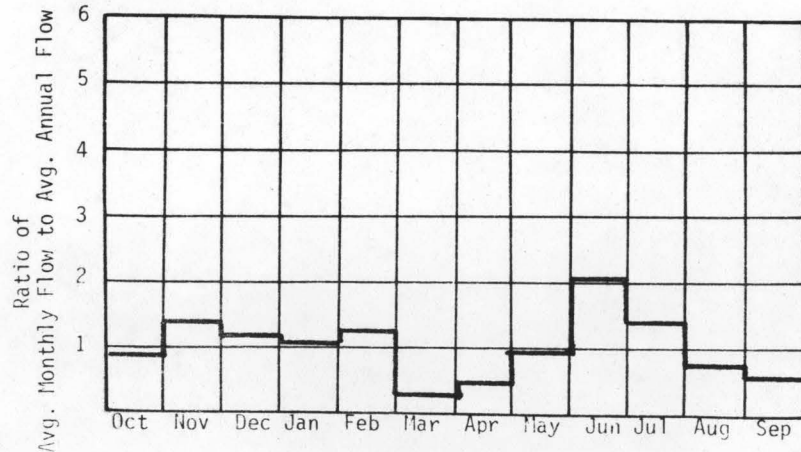
A. Upstream Elevation of Reach	<u>3000</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1760</u>	Ft. MSL
C. Total Available Head in Reach	<u>1240 + 66 = 1306</u>	Ft.
D. Average Slope in Reach	<u>214</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>22.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

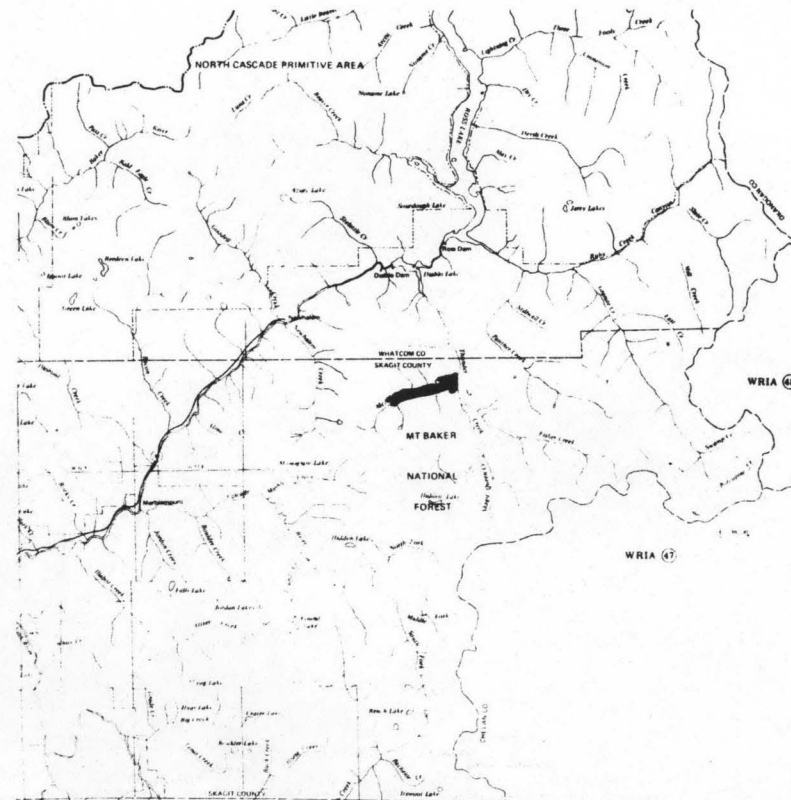
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	19.0	1.15	10.1	1.00
80	27.6	1.67	14.0	0.96
50	63.7	3.86	26.3	0.78
30	122	7.37	38.7	0.60
10	219	13.2	48.7	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 95 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0152

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R14E</u>
D. Latitude, Longitude	<u>48°35' 121°01'</u>
E. Stream Name	<u>Fisher Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

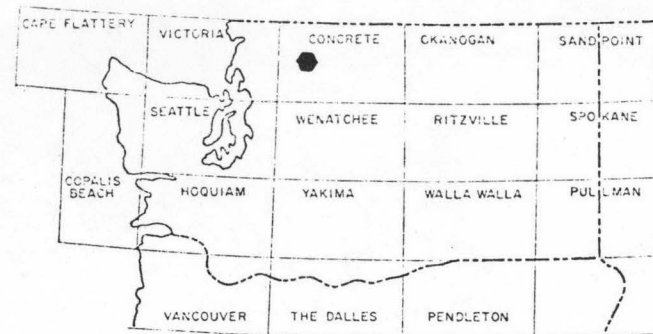
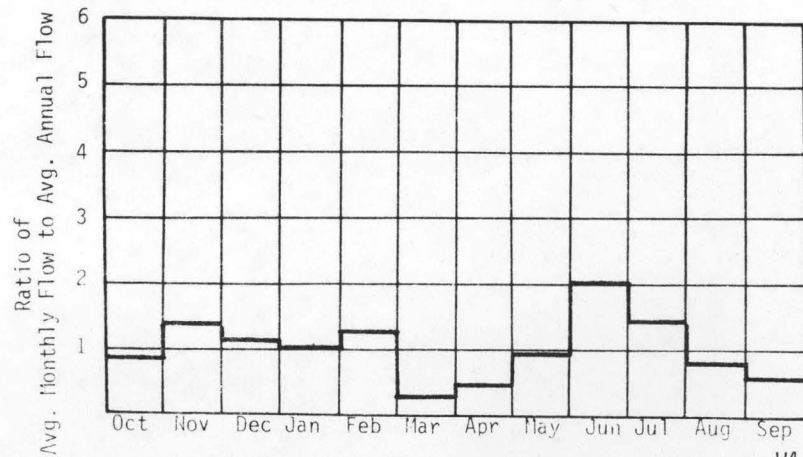
A. Upstream Elevation of Reach	<u>3505</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1930</u>	Ft. MSL
C. Total Available Head in Reach	<u>1575</u>	Ft.
D. Average Slope in Reach	<u>384</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>28.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	28.6	3.81	33.4	1.00
80	41.5	5.53	46.5	0.96
50	95.8	12.8	87.2	0.78
30	183	24.4	128	0.60
10	329	43.8	161	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 143 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0153

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°34' 120°56'</u>
E. Stream Name	<u>Fisher Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.1/8.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

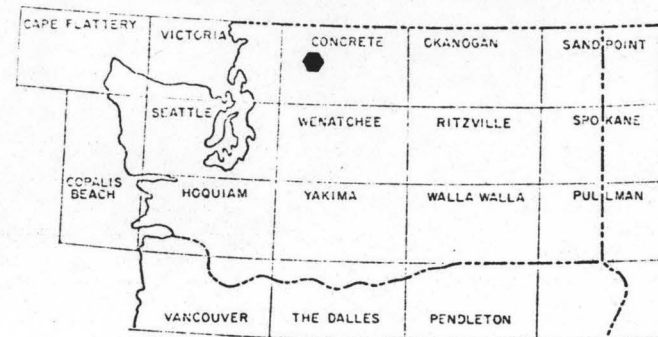
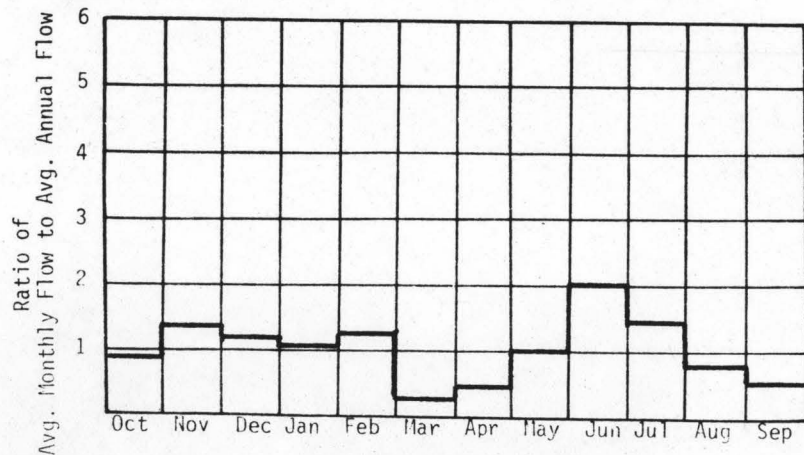
A. Upstream Elevation of Reach	<u>3825</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>3505</u>	Ft. MSL
C. Total Available Head in Reach	<u>320 + 66 = 386</u>	Ft.
D. Average Slope in Reach	<u>76.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>20.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

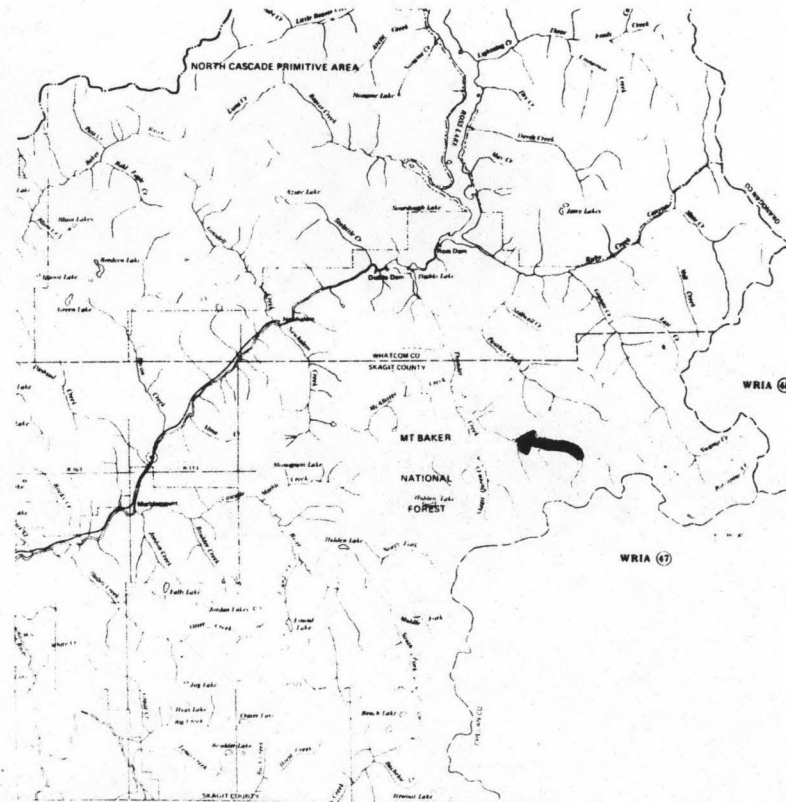
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.2	0.59	5.21	1.00
80	26.4	0.85	7.25	0.96
50	61.0	1.99	13.6	0.78
30	116	3.80	20.0	0.60
10	209	6.83	25.2	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 91 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0154

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skaqit</u>
C. Township, Range	<u>T37N R14E</u>
D. Latitude, Longitude	<u>48°33' 121°01'</u>
E. Stream Name	<u>W.F. Thunder Creek</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>0/2.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

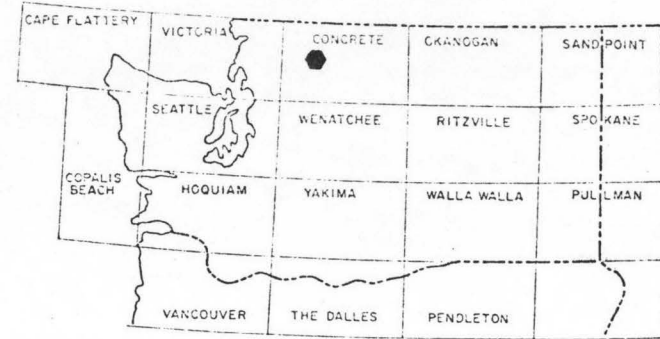
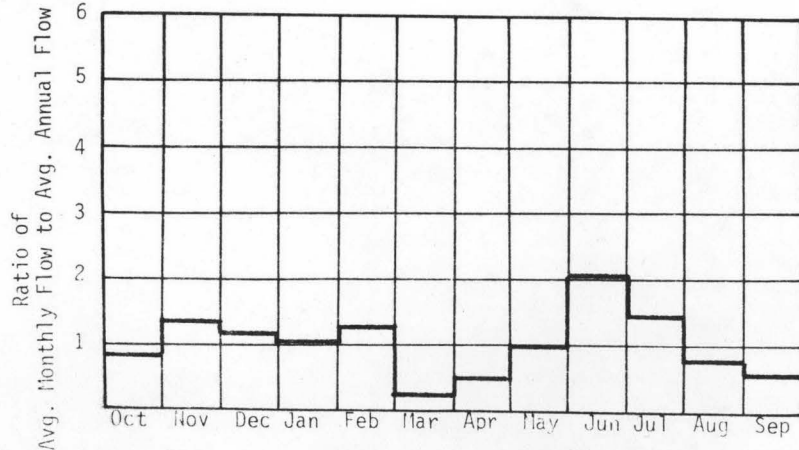
A. Upstream Elevation of Reach	<u>3320</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2070</u>	Ft. MSL
C. Total Available Head in Reach	<u>1250 + 66 = 1316</u>	Ft.
D. Average Slope in Reach	<u>463</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

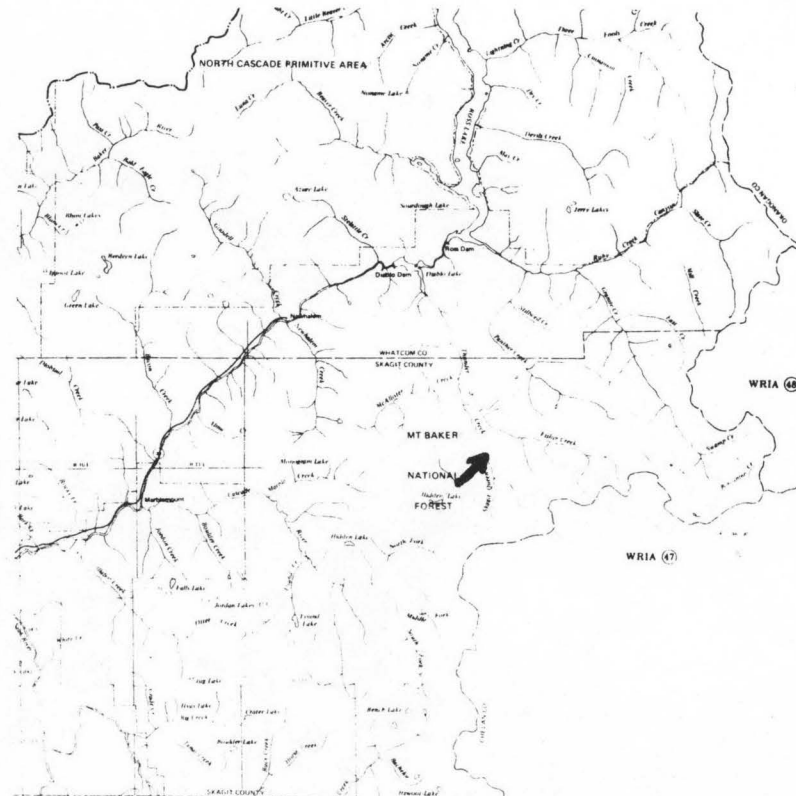
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	17.2	1.91	16.8	1.00
80	24.9	2.78	23.4	0.96
50	57.6	6.42	43.8	0.78
30	110	12.3	64.4	0.60
10	198	22.0	81.0	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 86 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0155

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°43' 120°59'</u>
E. Stream Name	<u>Ruby Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>3.8/4.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

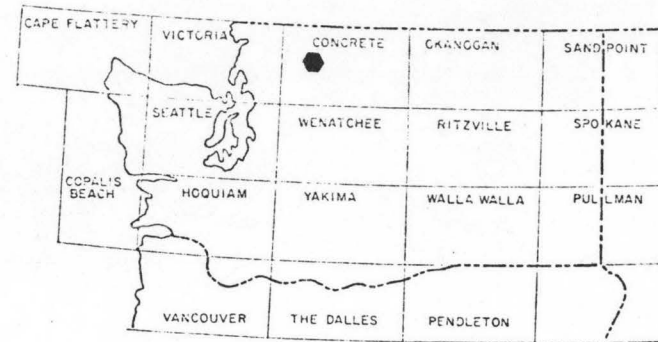
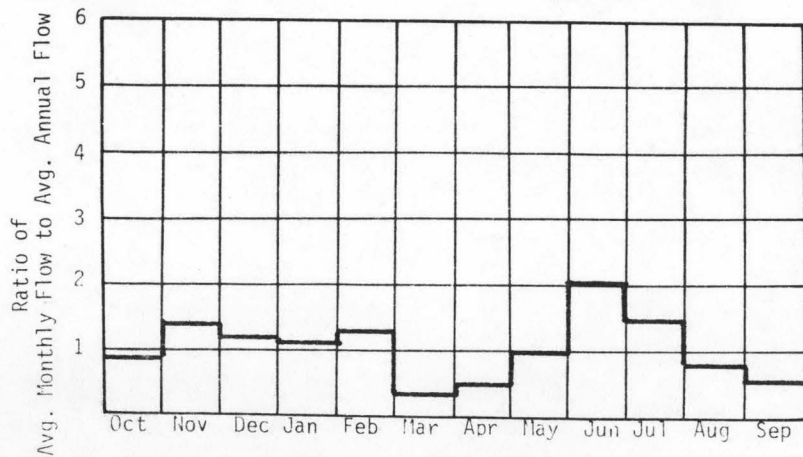
A. Upstream Elevation of Reach	<u>1655</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1603</u>	Ft. MSL
C. Total Available Head in Reach	<u>52</u>	Ft.
D. Average Slope in Reach	<u>87</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>204</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

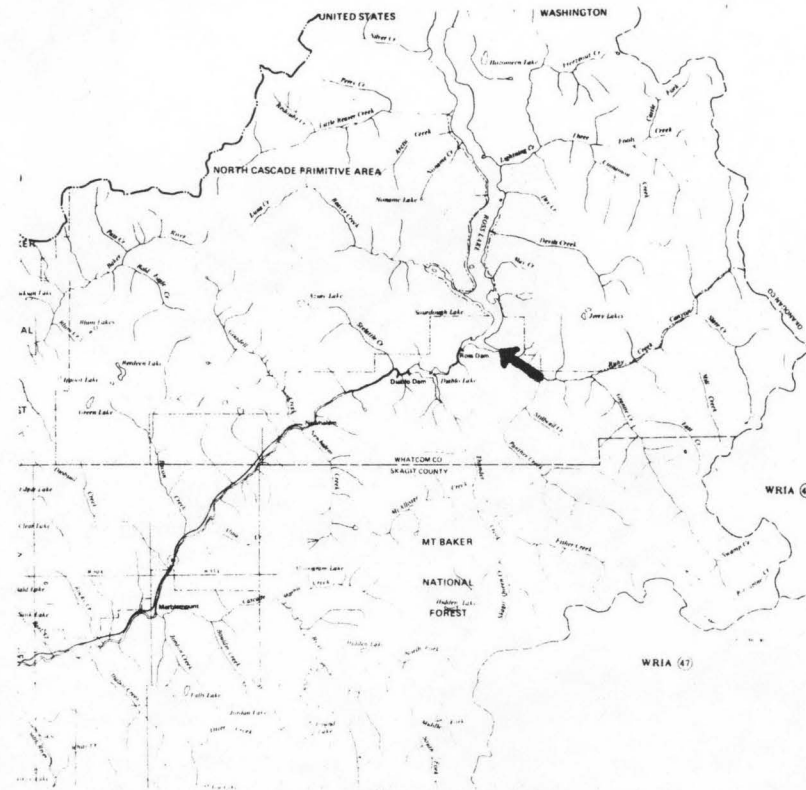
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	98.9	0.43	3.81	1.00
80	178	0.78	6.51	0.95
50	316	1.39	9.87	0.81
30	600	2.64	14.3	0.62
10	1850	8.12	23.5	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 659 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0156

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°32' 120°58'</u>
E. Stream Name	<u>Ruby Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.4/5.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

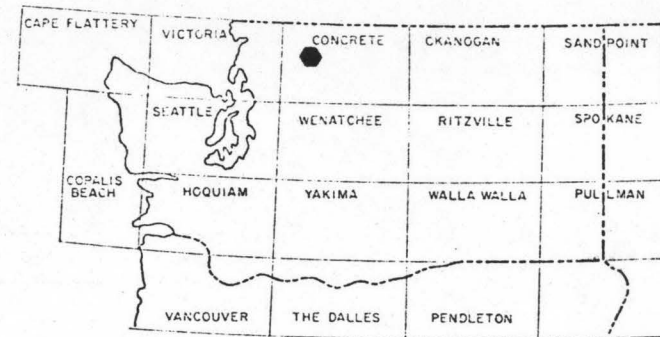
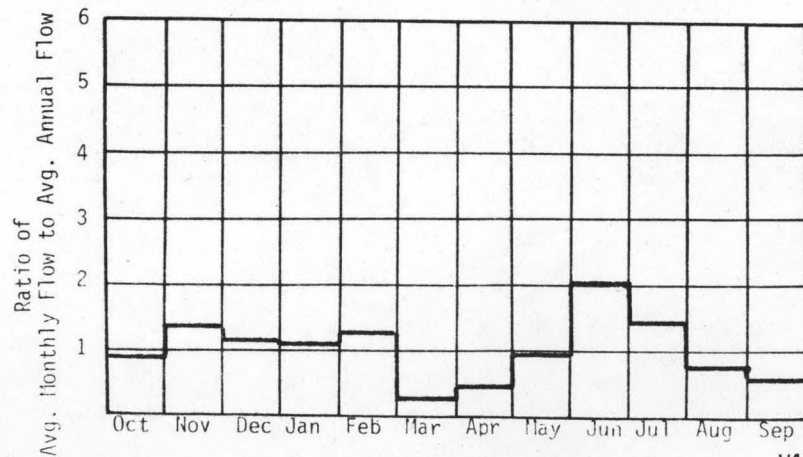
A. Upstream Elevation of Reach	<u>1710</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1655</u>	Ft. MSL
C. Total Available Head in Reach	<u>55</u>	Ft.
D. Average Slope in Reach	<u>69</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>166</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

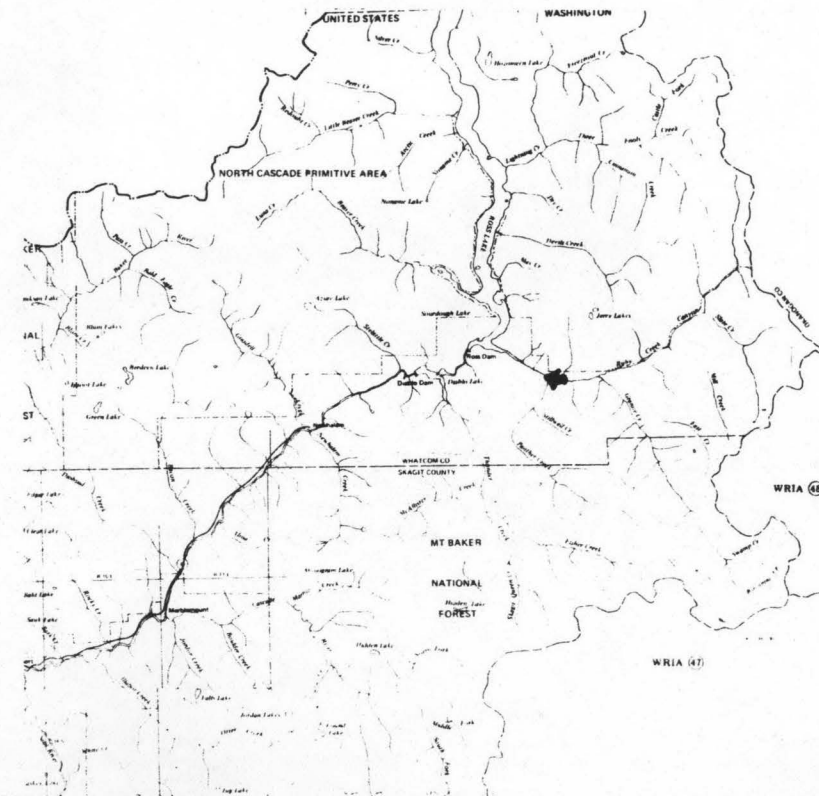
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	77.1	0.36	3.14	1.00
80	139	0.65	5.47	0.95
50	247	1.15	8.15	0.81
30	468	2.18	11.8	0.62
10	1440	6.70	19.4	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 514 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0157

### I. LOCATION

A. State	Washington
B. County	Whatcom
C. Township, Range	T37N R15E
D. Latitude, Longitude	48°42' 120°56'
E. Stream Name	Ruby Creek
F. Major Basin Name	Skagit
G. River Mile	5.2/7.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

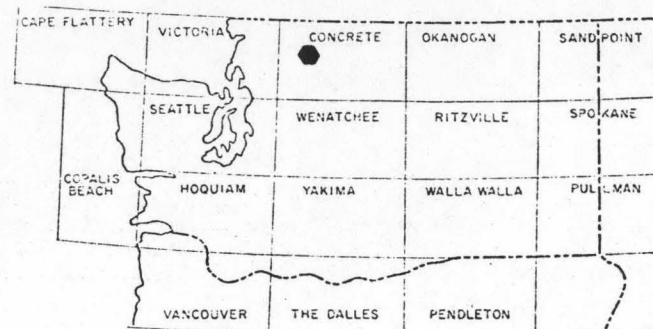
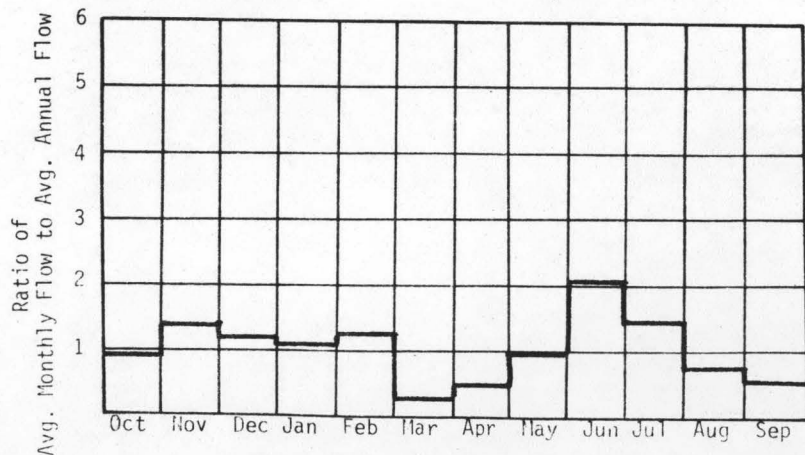
A. Upstream Elevation of Reach	1880	Ft. MSL
B. Downstream Elevation of Reach	1710	Ft. MSL
C. Total Available Head in Reach	170	Ft.
D. Average Slope in Reach	77	Ft./Mi.
E. Drainage Area above Reach Mouth	156	Sq.Mi.
F. Inflow Classification	Natural	

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

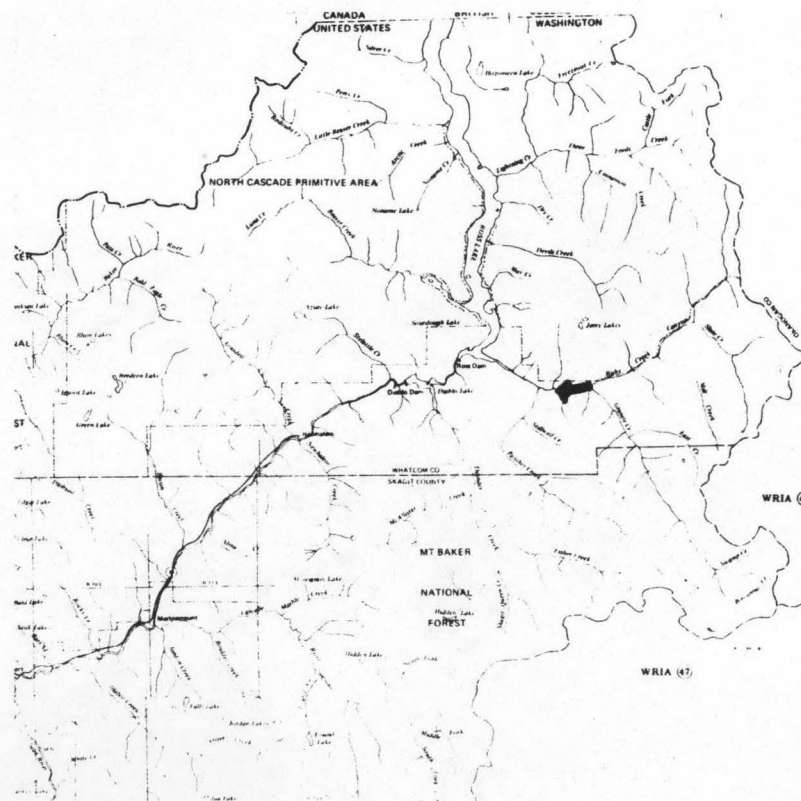
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	72.2	1.04	9.09	1.00
80	130	1.87	15.5	0.95
50	231	3.32	23.6	0.81
30	438	6.30	43.2	0.62
10	1350	19.4	56.0	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 481 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0158

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Shatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°42' 120°53'</u>
E. Stream Name	<u>Granite Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>7.4/11.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

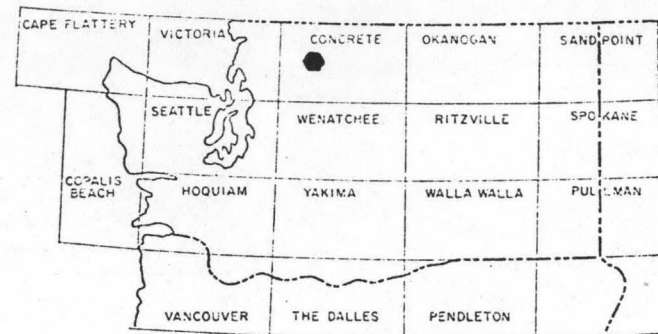
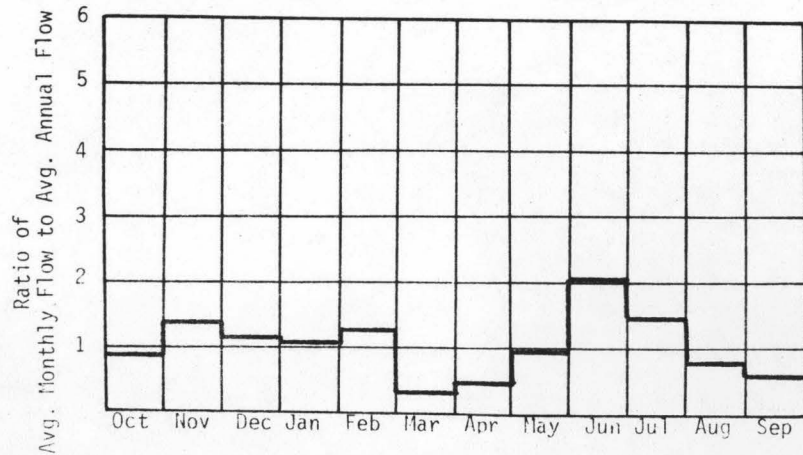
A. Upstream Elevation of Reach	<u>2480</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1880</u>	Ft. MSL
C. Total Available Head in Reach	<u>600</u>	Ft.
D. Average Slope in Reach	<u>140</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>72.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

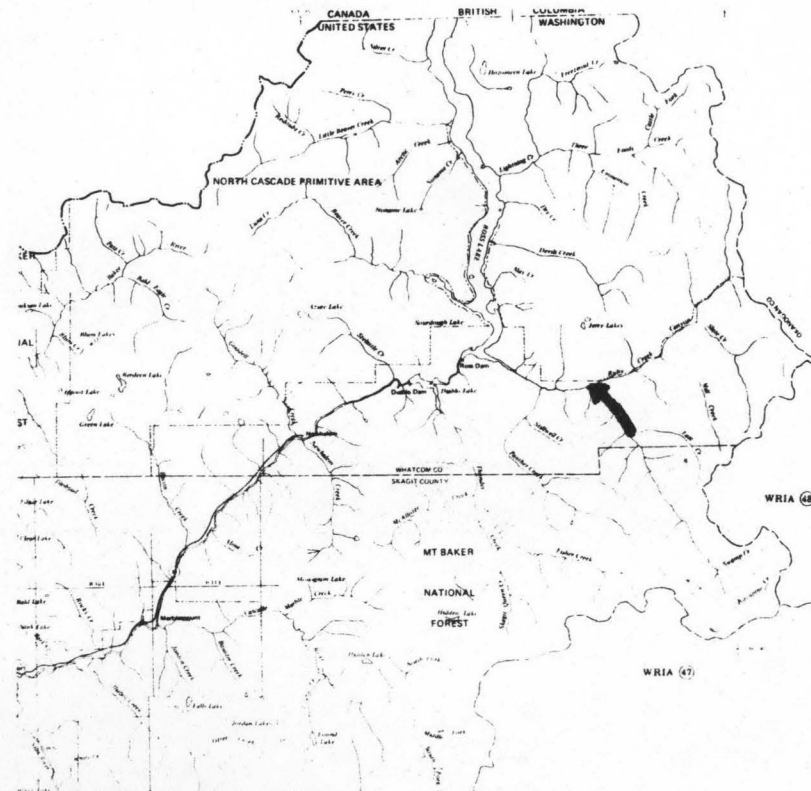
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	32.9	1.67	14.6	1.00
80	59.1	3.00	25.0	0.95
50	105	5.34	37.9	0.81
30	199	10.1	54.9	0.62
10	613	31.1	90.0	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 219 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0159

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T36N R16E</u>
D. Latitude, Longitude	<u>48°39' 121°51'</u>
E. Stream Name	<u>Granite Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>11.7/14.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

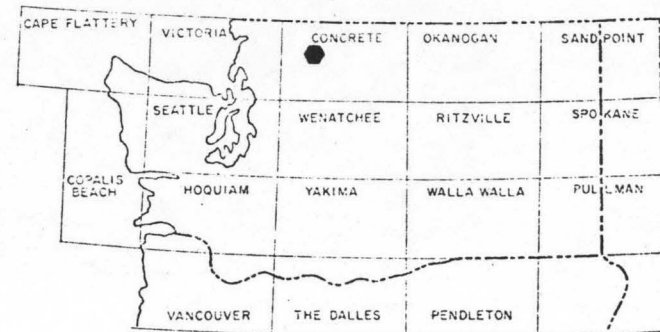
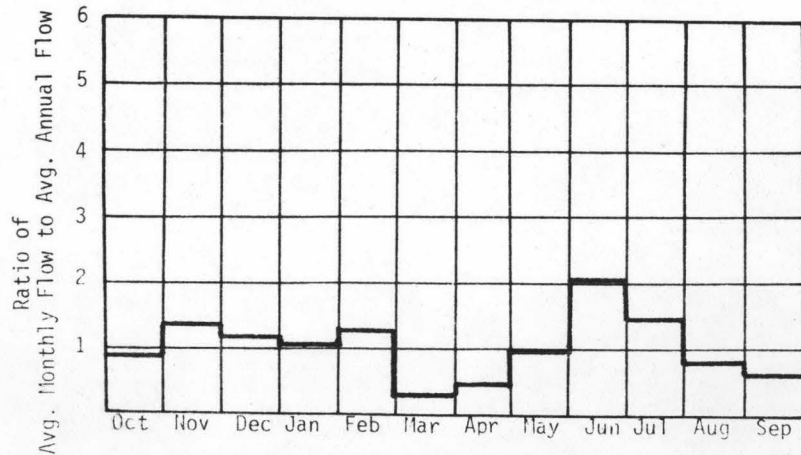
A. Upstream Elevation of Reach	<u>3095</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2480</u>	Ft. MSL
C. Total Available Head in Reach	<u>615</u>	Ft.
D. Average Slope in Reach	<u>228</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>52.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

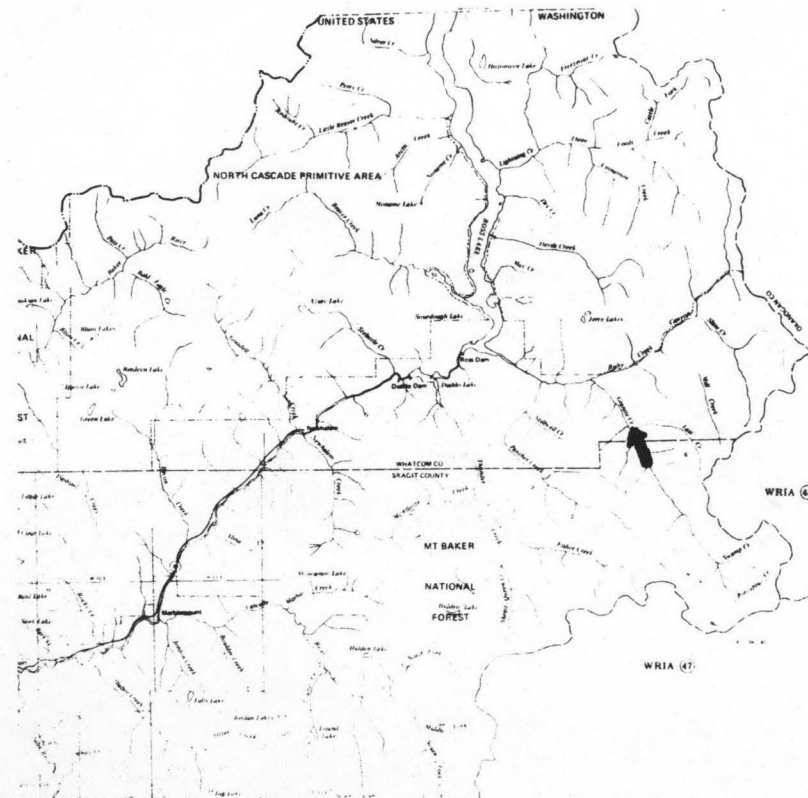
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	24.9	1.30	11.4	1.00
80	44.8	2.33	19.4	0.95
50	79.7	4.15	29.4	0.81
30	151	7.86	42.7	0.62
10	465	24.2	69.9	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 166 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0160

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skaqit</u>
C. Township, Range	<u>T36N R15E</u>
D. Latitude, Longitude	<u>48°36' 120°49'</u>
E. Stream Name	<u>Granite Creek</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>14.4/21.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

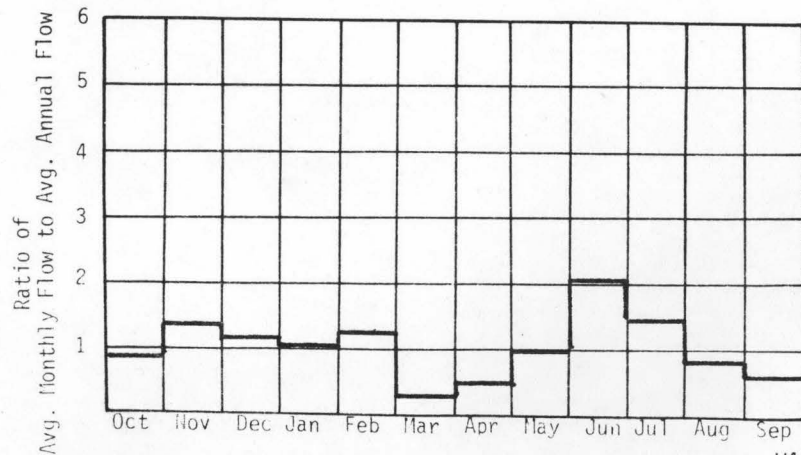
A. Upstream Elevation of Reach	<u>3860</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>3095</u>	Ft. MSL
C. Total Available Head in Reach	<u>765 + 66 = 831</u>	Ft.
D. Average Slope in Reach	<u>102</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>41.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

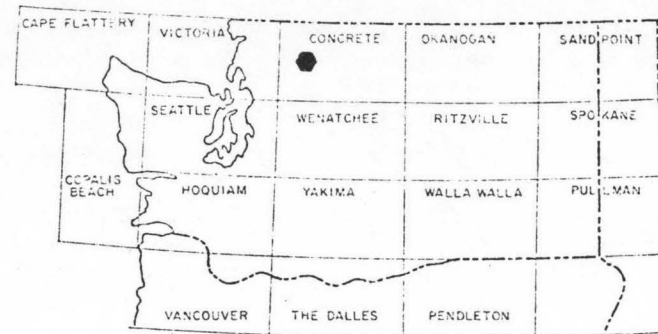
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.5	1.16	10.2	1.00
80	29.7	2.09	17.4	0.95
50	52.8	2.71	26.3	0.81
30	100	7.04	38.2	0.62
10	308	21.7	62.6	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

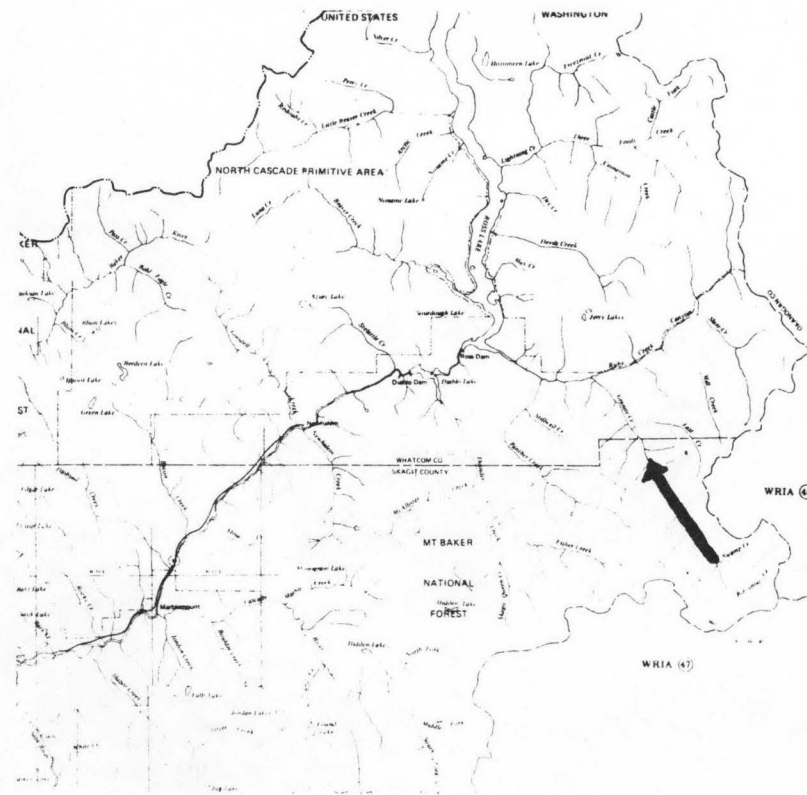
QMR = 110 cfs



W4-216



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0161

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°42' 120°59'</u>
E. Stream Name	<u>Panther Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

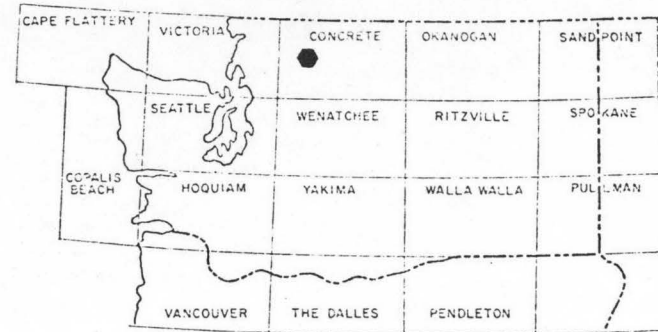
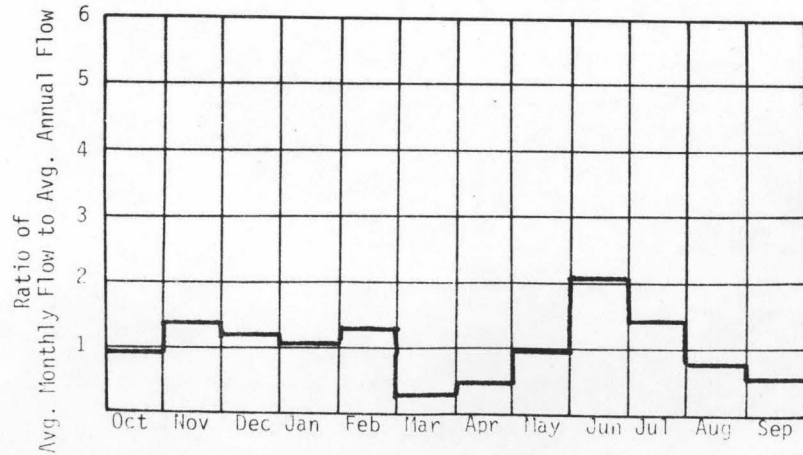
A. Upstream Elevation of Reach	<u>2340</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1655</u>	Ft. MSL
C. Total Available Head in Reach	<u>685</u>	Ft.
D. Average Slope in Reach	<u>311</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>37.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

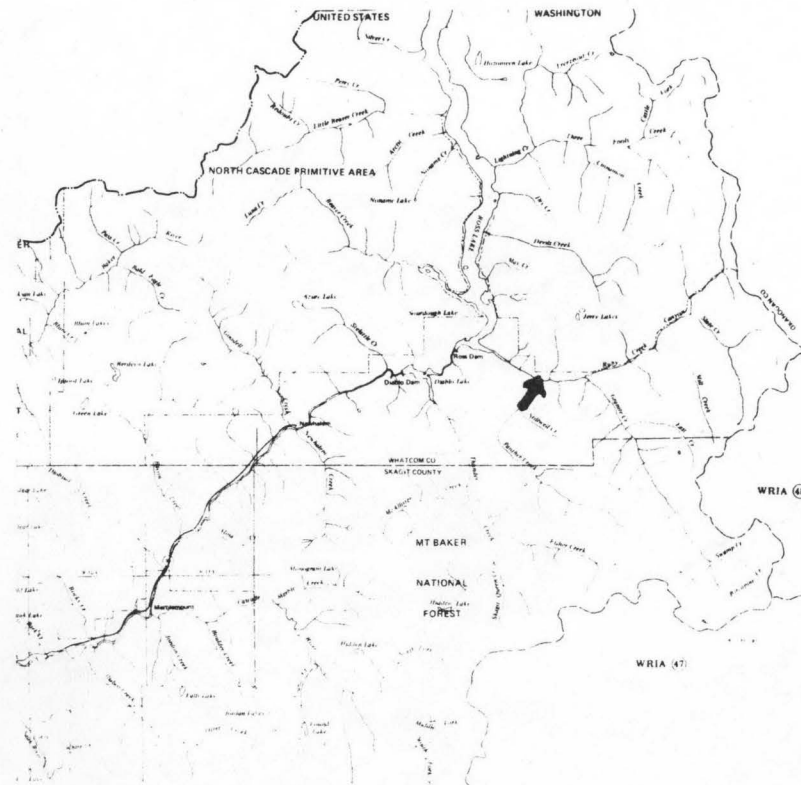
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	20.7	1.20	10.5	1.00
80	37.3	2.16	18.0	0.95
50	66.2	3.84	27.2	0.81
30	126	7.28	39.5	0.62
10	386	22.4	64.7	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 138 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0162

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Shatcom</u>
C. Township, Range	<u>T37N R14E</u>
D. Latitude, Longitude	<u>48°40' 121°01'</u>
E. Stream Name	<u>Panther Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>2.2/7.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

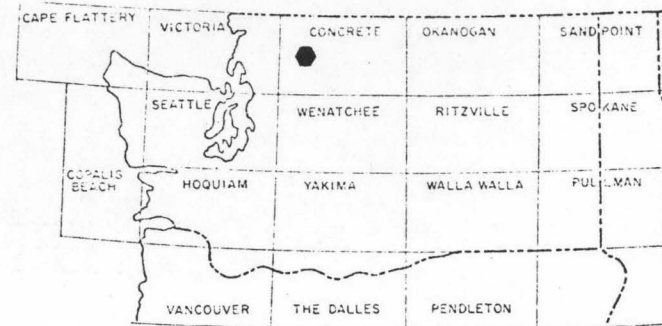
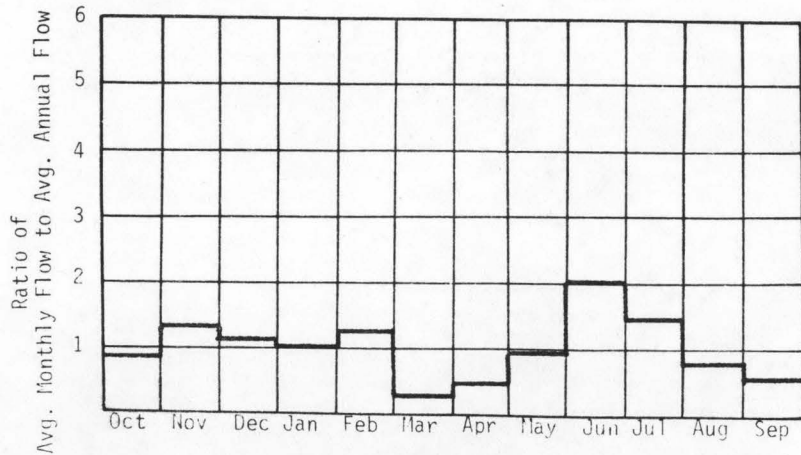
A. Upstream Elevation of Reach	<u>3140</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2340</u>	Ft. MSL
C. Total Available Head in Reach	<u>800 + 66 = 866</u>	Ft.
D. Average Slope in Reach	<u>148</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>28.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

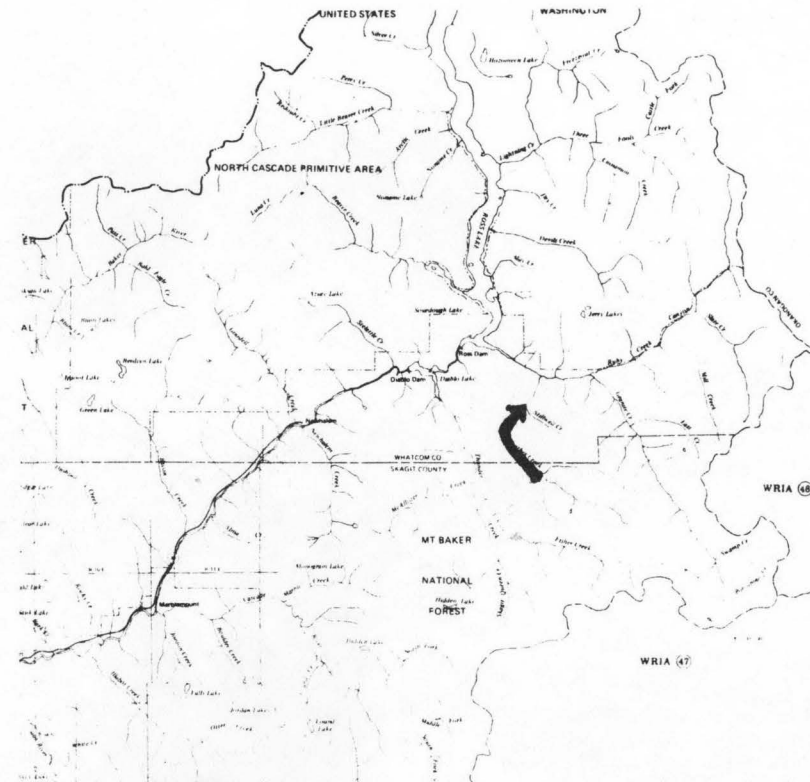
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.8	1.01	8.86	1.00
80	24.8	1.82	15.1	0.95
50	44.2	3.24	23.0	0.81
30	83.7	6.13	33.3	0.62
10	258	18.9	54.6	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 92 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0163

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R16E</u>
D. Latitude, Longitude	<u>48°43' 120°53'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/2.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

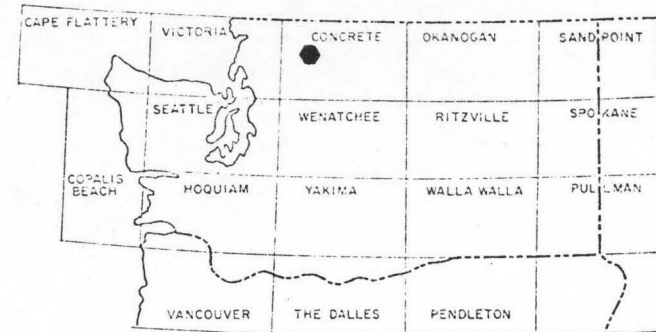
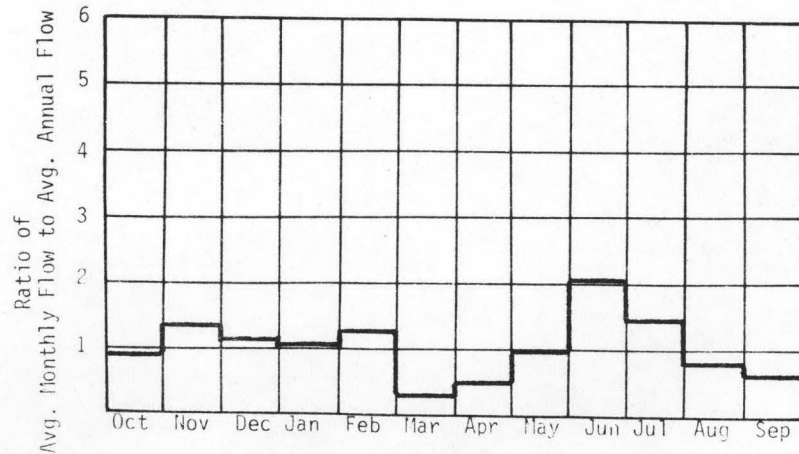
A. Upstream Elevation of Reach	<u>2200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1880</u>	Ft. MSL
C. Total Available Head in Reach	<u>320</u>	Ft.
D. Average Slope in Reach	<u>110</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>79.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

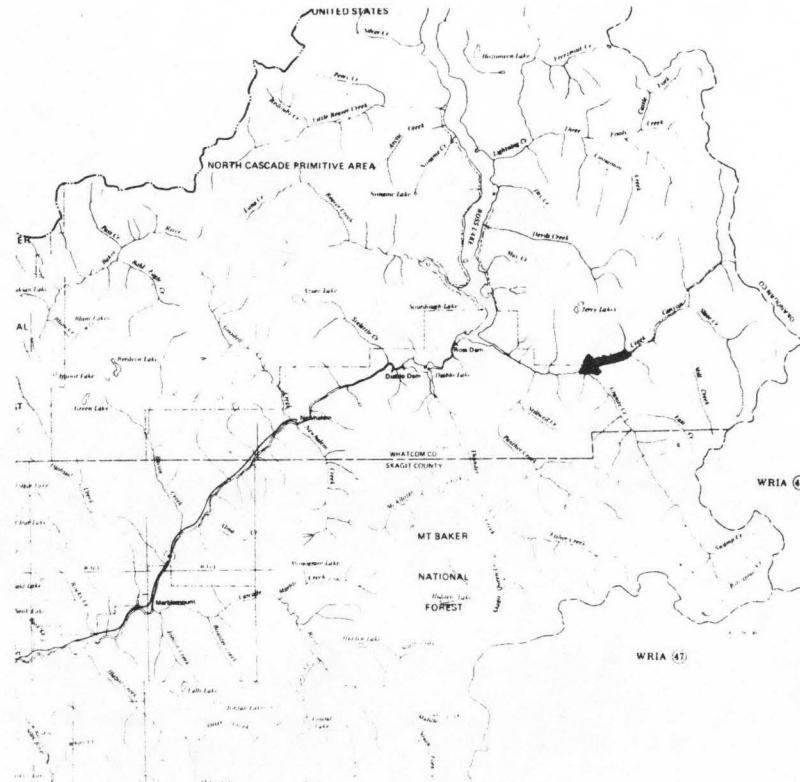
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	35.1	0.95	8.32	1.00
80	63.2	1.71	14.2	0.95
50	112	3.04	21.6	0.81
30	213	5.76	31.3	0.62
10	655	17.7	51.3	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 234 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0164

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°43' 120°51'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>2.9/4.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

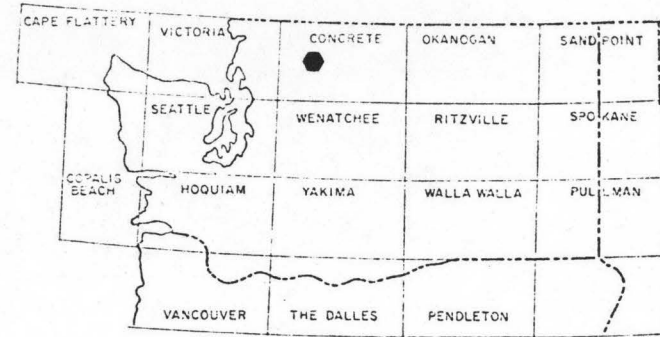
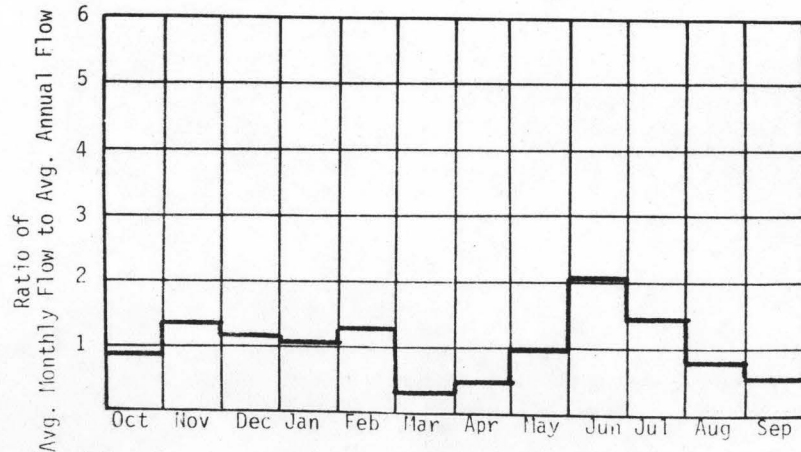
A. Upstream Elevation of Reach	<u>2430</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2200</u>	Ft. MSL
C. Total Available Head in Reach	<u>230</u>	Ft.
D. Average Slope in Reach	<u>128</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>72.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

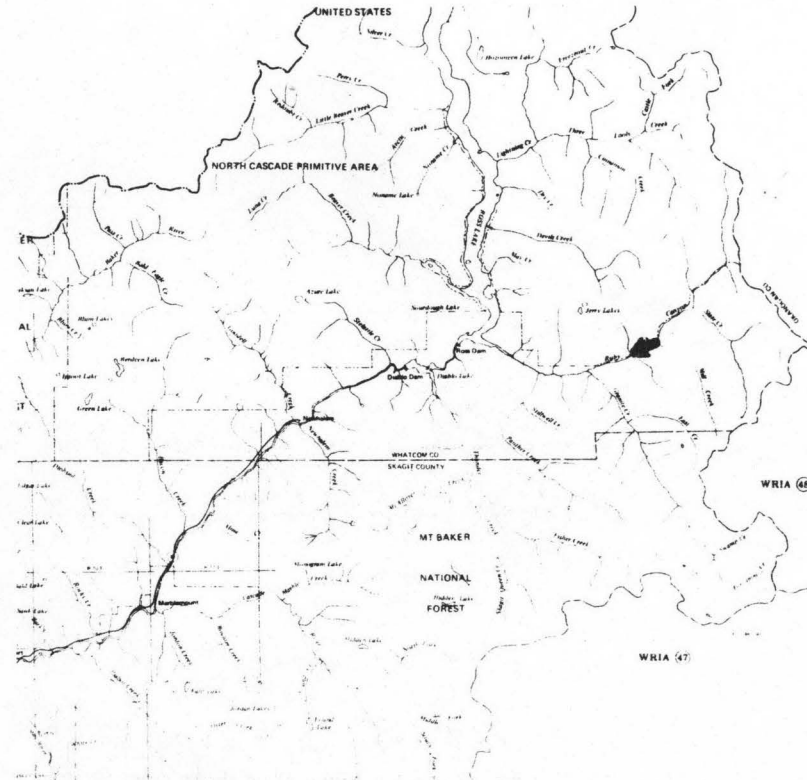
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	32.0	0.62	5.45	1.00
80	57.5	1.12	9.31	0.95
50	102	1.99	14.1	0.81
30	194	3.77	20.5	0.62
10	596	11.6	33.6	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 213 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0165

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°45' 120°48'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.7/7.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

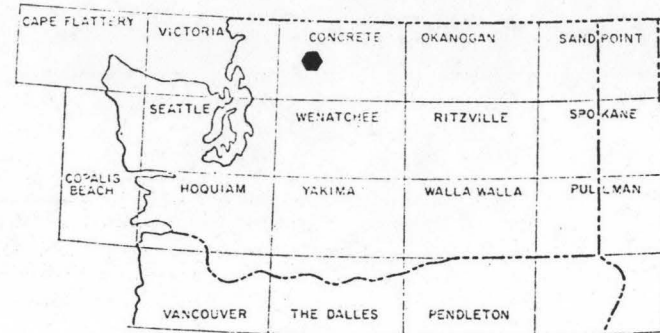
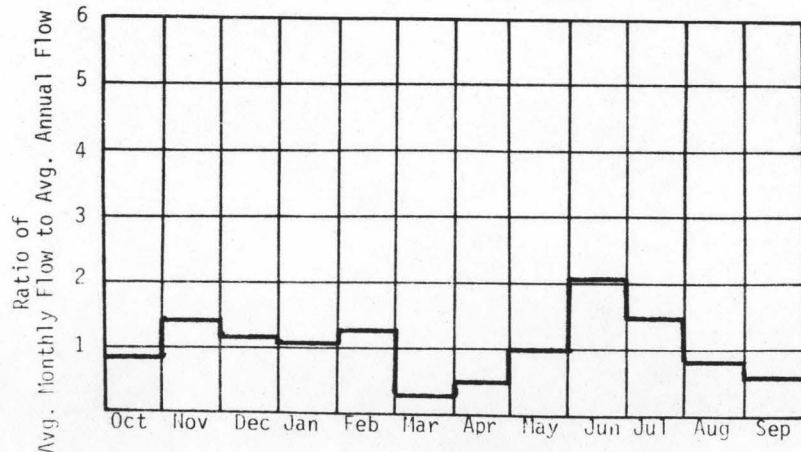
A. Upstream Elevation of Reach	<u>2830</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2430</u>	Ft. MSL
C. Total Available Head in Reach	<u>400</u>	Ft.
D. Average Slope in Reach	<u>129</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>59.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

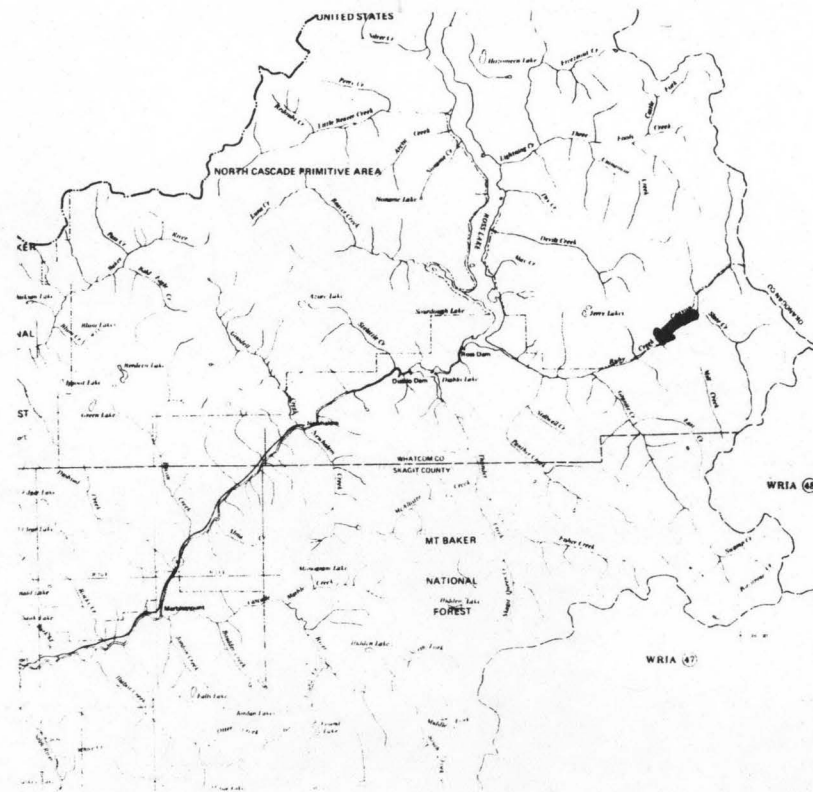
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.5	0.86	7.56	1.00
80	45.9	1.55	12.9	0.95
50	81.6	2.76	19.6	0.81
30	155	5.24	28.4	0.62
10	476	16.1	46.6	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 170 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0166

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T37N R15E</u>
D. Latitude, Longitude	<u>48°46' 120°47'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>7.8/8.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

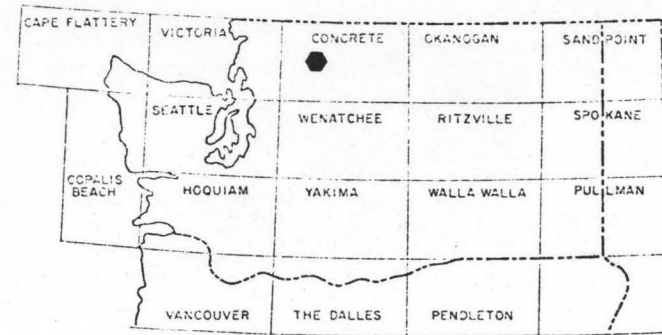
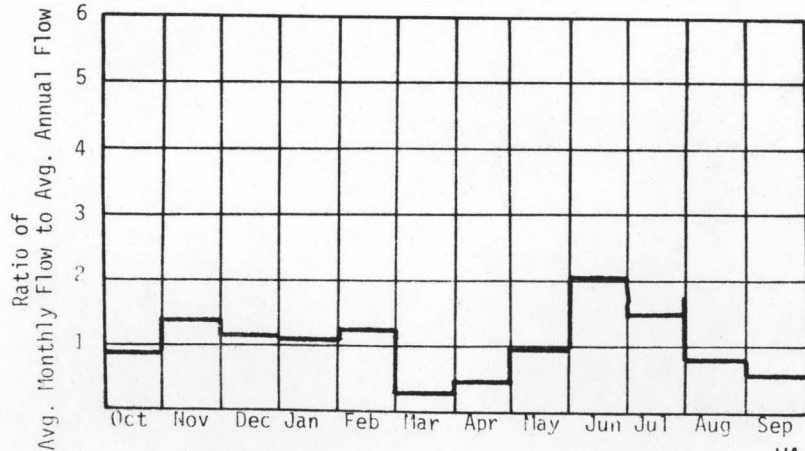
A. Upstream Elevation of Reach	<u>2940</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2830</u>	Ft. MSL
C. Total Available Head in Reach	<u>110 + 66 = 176</u>	Ft.
D. Average Slope in Reach	<u>157</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>27.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

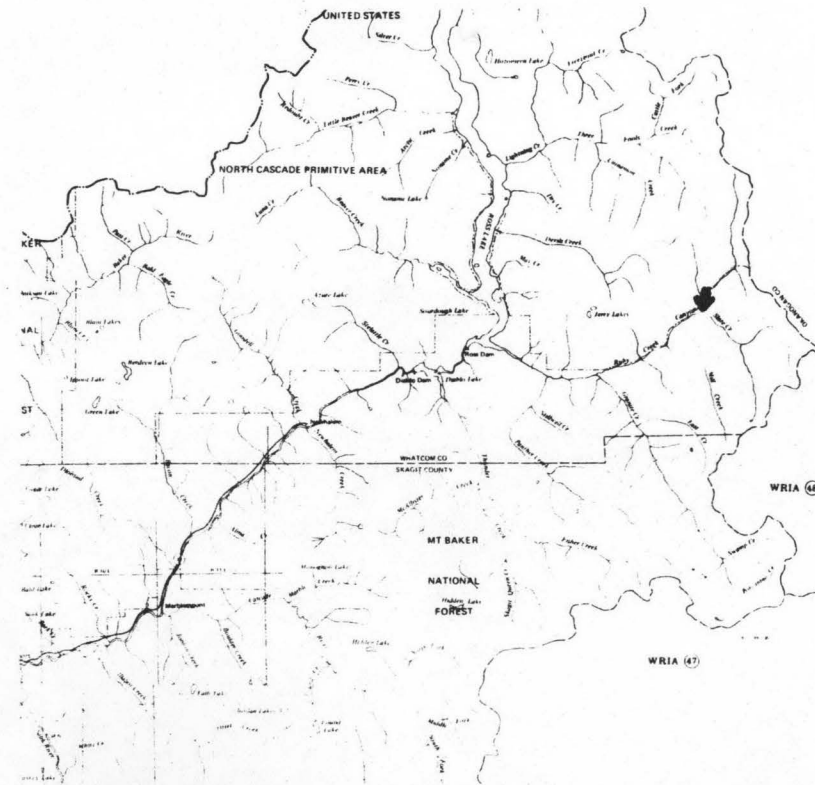
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.9	0.19	1.68	1.00
80	23.2	0.35	2.88	0.95
50	41.3	0.61	4.36	0.81
30	78.3	1.17	6.33	0.62
10	241	3.59	10.4	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 86 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0167

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R14E</u>
D. Latitude, Longitude	<u>48°48' 121°07'</u>
E. Stream Name	<u>Big Beaver Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/10.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

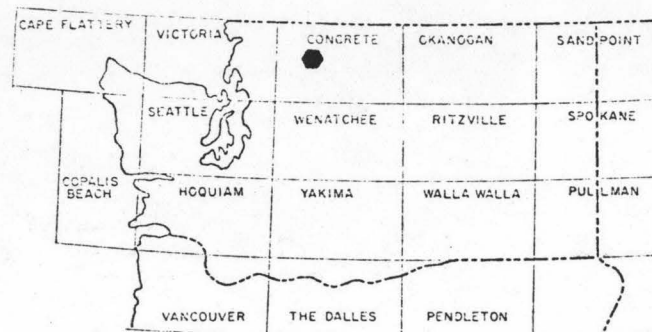
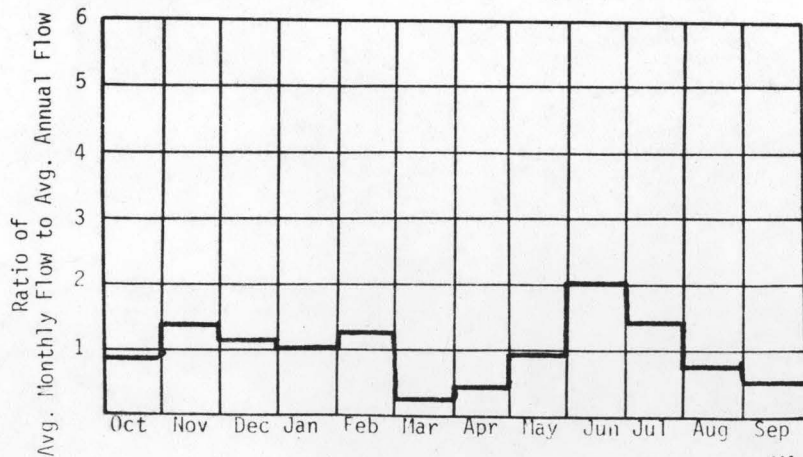
A. Upstream Elevation of Reach	<u>1900</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1604</u>	Ft. MSL
C. Total Available Head in Reach	<u>296</u>	Ft.
D. Average Slope in Reach	<u>27.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>63.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

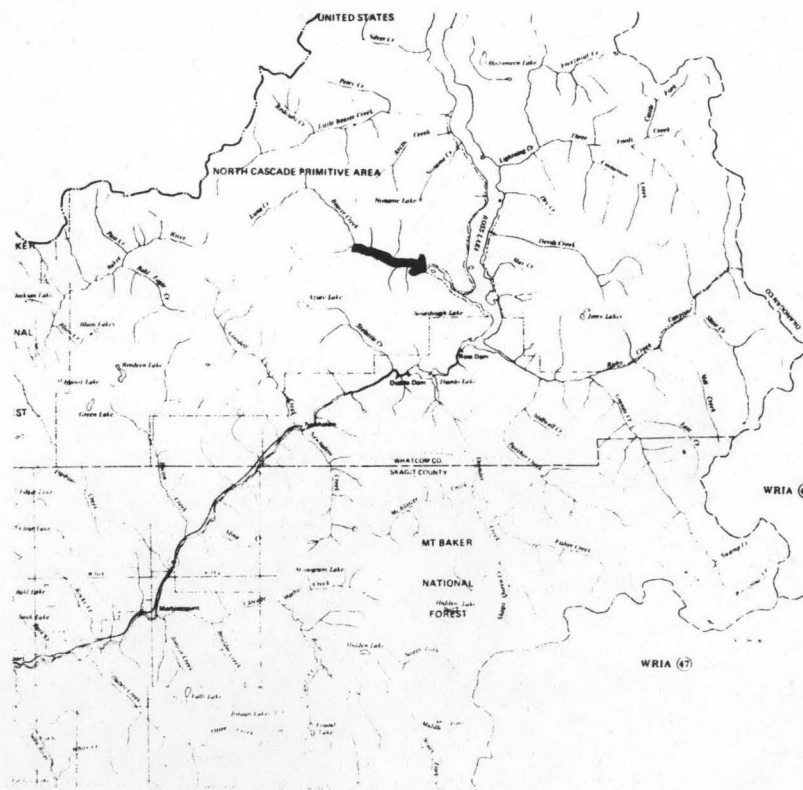
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	87.8	2.20	19.3	1.00
80	135	3.39	28.5	0.96
50	234	6.60	46.8	0.81
30	421	10.5	60.0	0.65
10	776	19.4	74.9	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 366 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0168

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R14E</u>
D. Latitude, Longitude	<u>48°52' 121°14'</u>
E. Stream Name	<u>Big Beaver Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>10.6/18.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

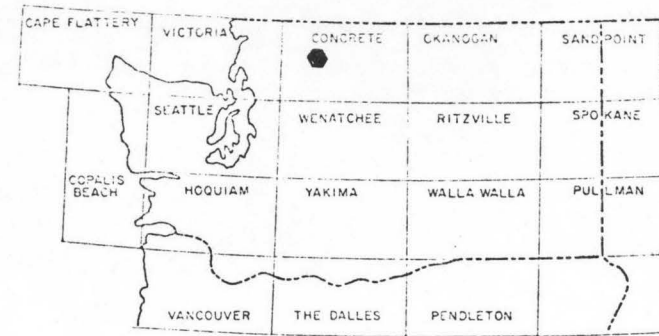
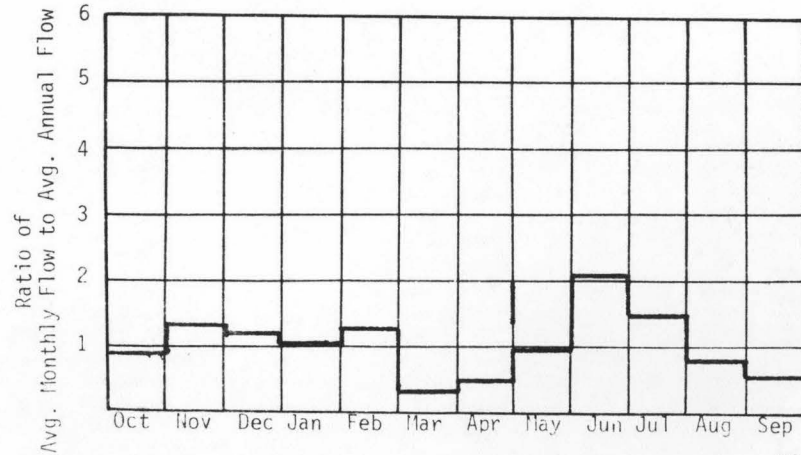
A. Upstream Elevation of Reach	<u>3120</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1900</u>	Ft. MSL
C. Total Available Head in Reach	<u>1220 + 66 = 1286</u>	Ft.
D. Average Slope in Reach	<u>158</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>22.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	40.6	4.41	38.7	1.00
80	62.5	6.80	57.2	0.96
50	122	13.2	98.9	0.81
30	194	21.1	120	0.65
10	358	39.0	150	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 169 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0169

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R14E</u>
D. Latitude, Longitude	<u>48°48' 121°14'</u>
E. Stream Name	<u>McMillian Creek</u>
F. Major Basin Name	<u>Skaqit</u>
G. River Mile	<u>0/3.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

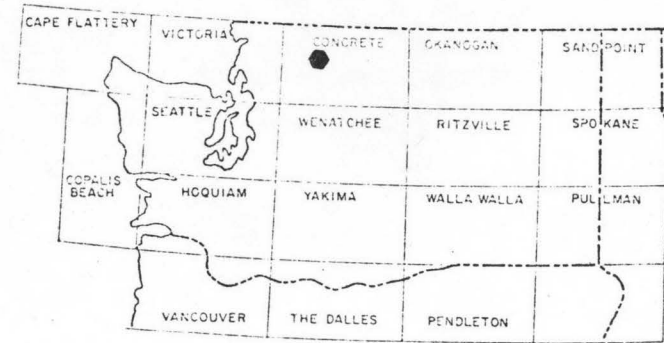
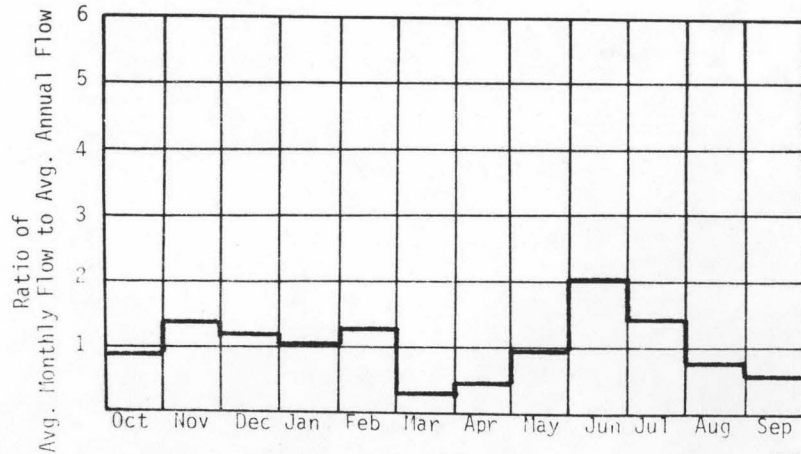
A. Upstream Elevation of Reach	<u>2480</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1900</u>	Ft. MSL
C. Total Available Head in Reach	<u>590 + 66 = 656</u>	Ft.
D. Average Slope in Reach	<u>169</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.2</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

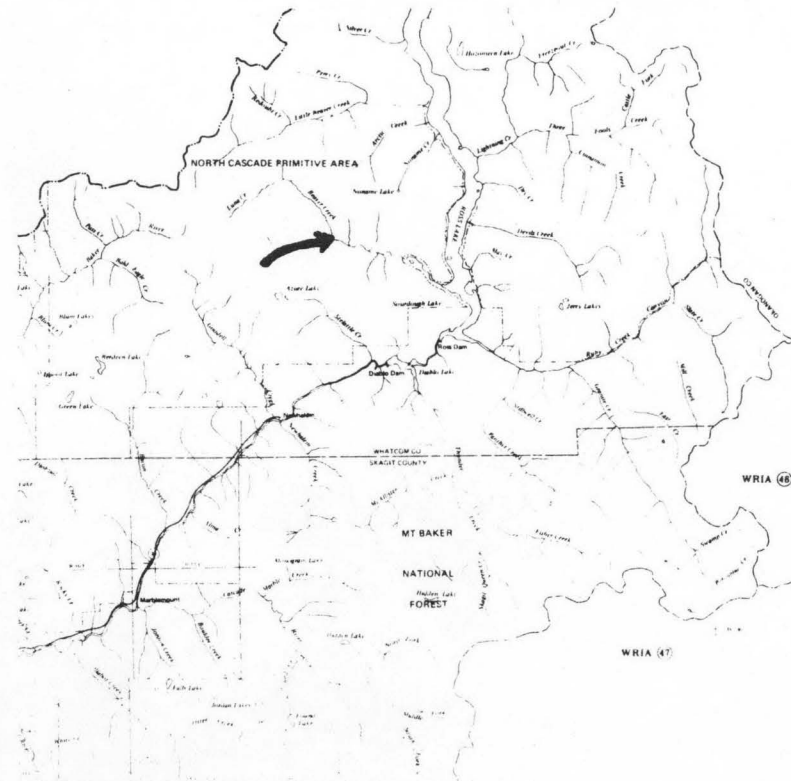
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.4	1.19	10.4	1.00
80	32.9	1.83	15.4	0.96
50	64.1	3.56	25.2	0.81
30	102	5.68	32.3	0.65
10	189	10.5	40.4	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 89 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0170

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T38N R15E</u>
D. Latitude, Longitude	<u>48°49' 120°59'</u>
E. Stream Name	<u>Devil's Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/5.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

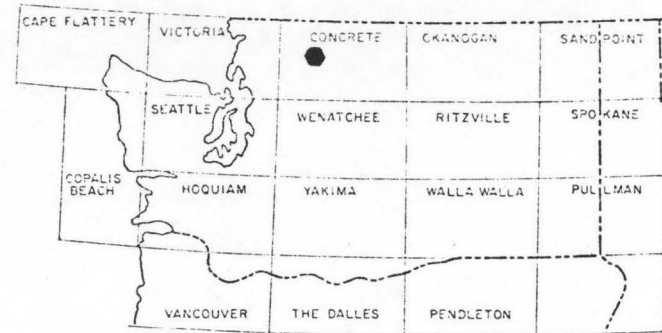
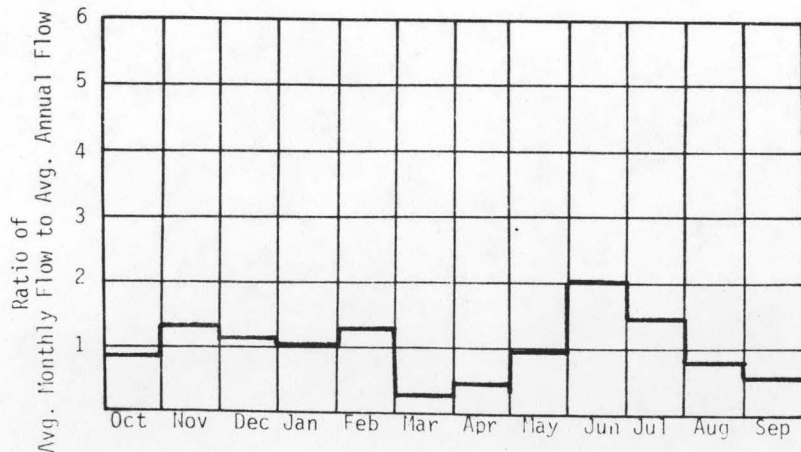
A. Upstream Elevation of Reach	<u>2780</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1604</u>	Ft. MSL
C. Total Available Head in Reach	<u>1176 + 66 = 1242</u>	Ft.
D. Average Slope in Reach	<u>214</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>31.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

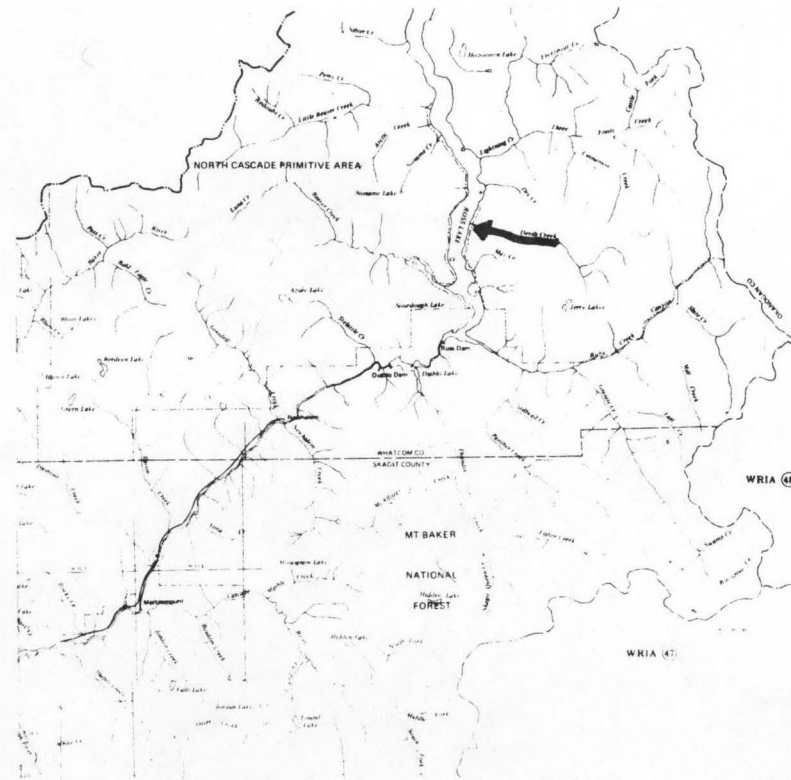
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	20.9	2.20	19.3	1.00
80	26.4	2.77	23.6	0.97
50	40.0	4.21	31.7	0.86
30	75.5	7.94	44.5	0.64
10	244	25.6	74.1	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 91 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0171

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R15E</u>
D. Latitude, Longitude	<u>48°53' 120°59'</u>
E. Stream Name	<u>Lightning Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

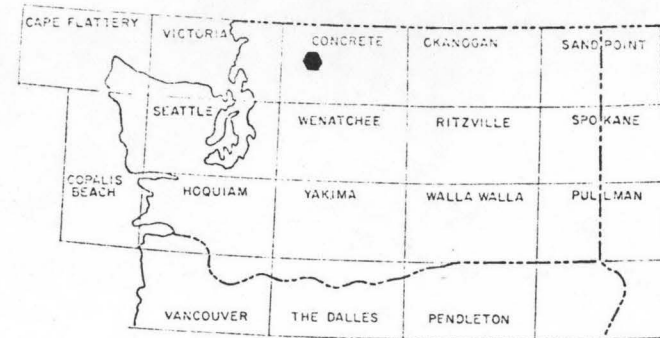
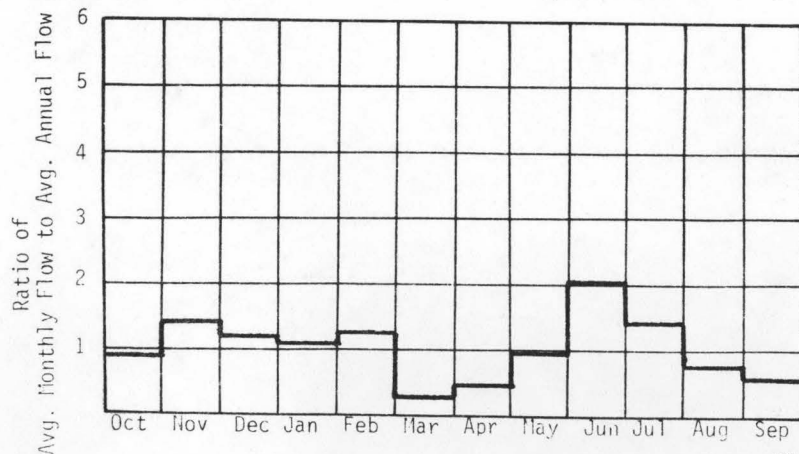
A. Upstream Elevation of Reach	<u>1870</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1604</u>	Ft. MSL
C. Total Available Head in Reach	<u>266</u>	Ft.
D. Average Slope in Reach	<u>68</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>134.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	81.4	1.83	16.1	1.00
80	103	2.31	19.3	0.97
50	156	3.51	26.4	0.86
30	294	6.61	37.1	0.64
10	949	21.4	61.7	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 354 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0172

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R15E</u>
D. Latitude, Longitude	<u>48°57' 120°58'</u>
E. Stream Name	<u>Lightning Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>3.9/8.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

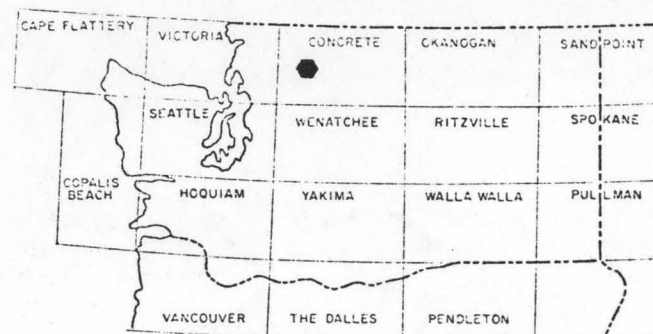
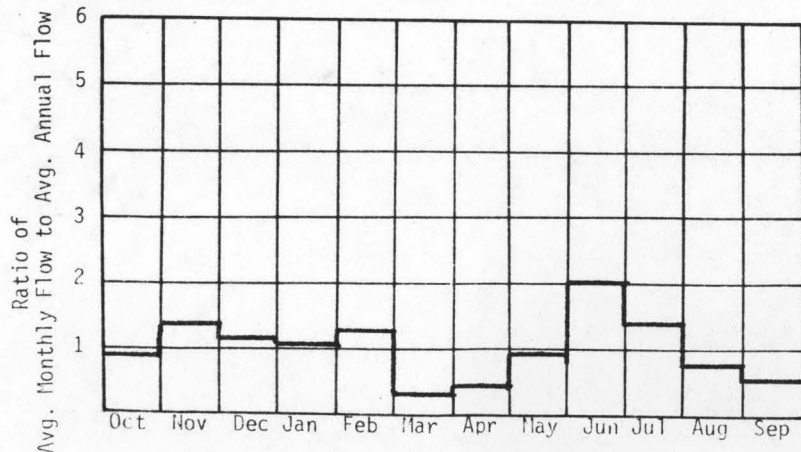
A. Upstream Elevation of Reach	<u>2240</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1870</u>	Ft. MSL
C. Total Available Head in Reach	<u>370</u>	Ft.
D. Average Slope in Reach	<u>80</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>62.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	39.1	1.22	10.7	1.00
80	49.3	1.54	13.1	0.97
50	74.8	2.34	17.6	0.87
30	141	4.42	24.8	0.64
10	456	14.3	41.2	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 170 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0173

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R15E</u>
D. Latitude, Longitude	<u>48°57' 120°58'</u>
E. Stream Name	<u>Lightning Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>8.5/9.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

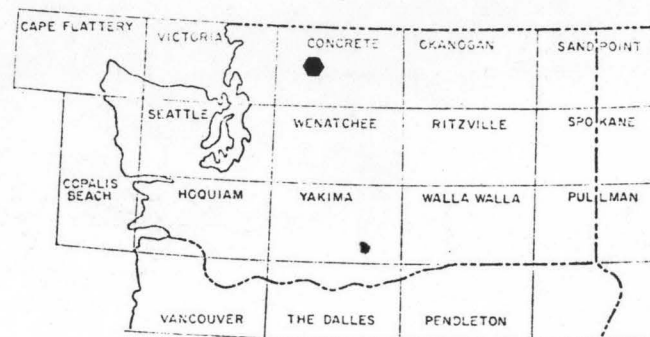
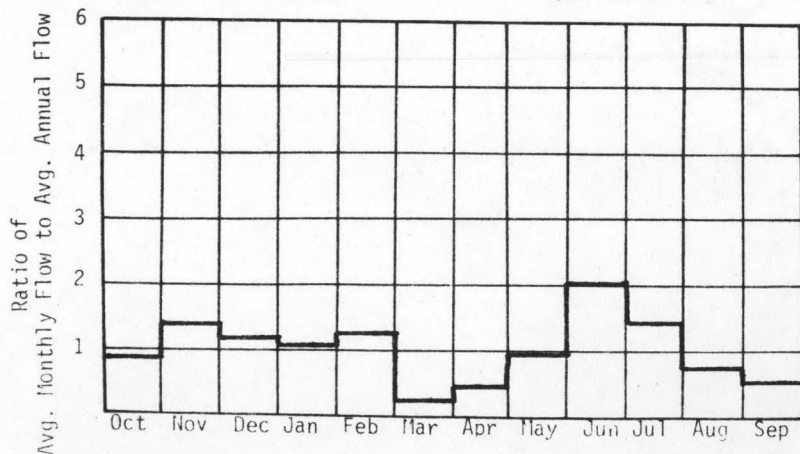
A. Upstream Elevation of Reach	<u>2530</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2260</u>	Ft. MSL
C. Total Available Head in Reach	<u>270</u>	Ft.
D. Average Slope in Reach	<u>193</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>54.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

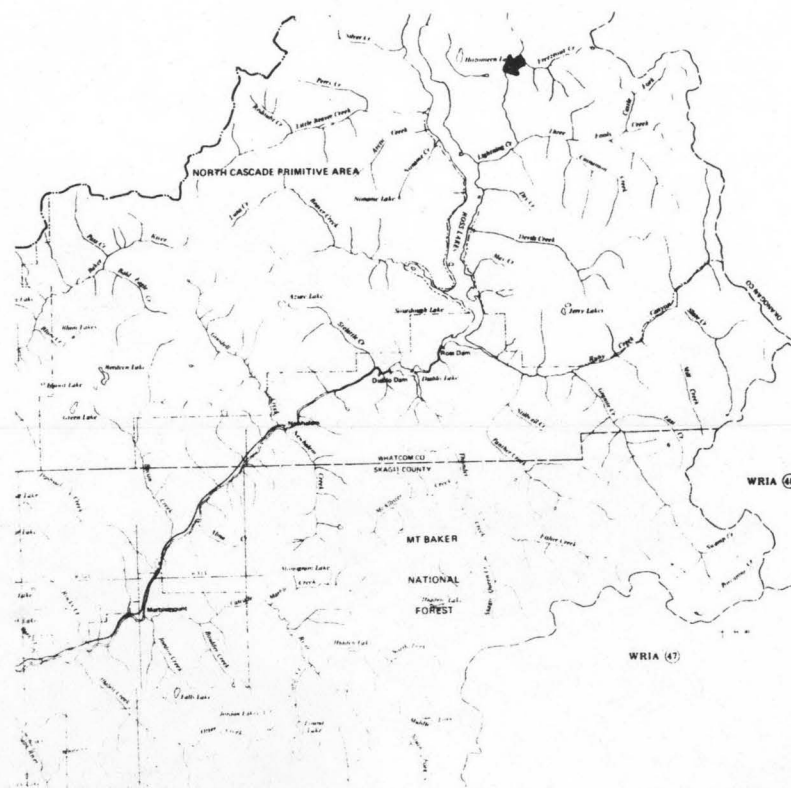
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	36.1	0.82	7.23	1.00
80	45.5	1.04	8.84	0.97
50	69.1	1.58	11.9	0.86
30	130	2.98	16.7	0.64
10	421	9.61	27.8	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 157 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0174

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R15E</u>
D. Latitude, Longitude	<u>48°59' 120°58'</u>
E. Stream Name	<u>Lightning Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>9.9/13.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

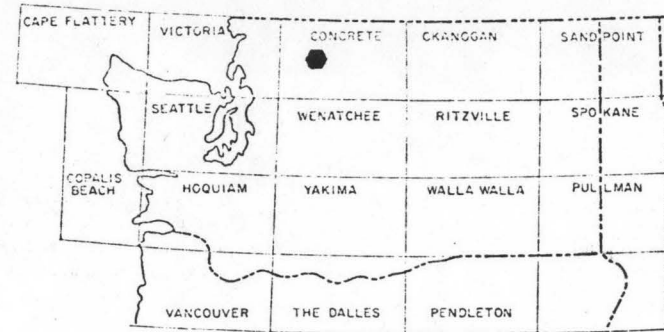
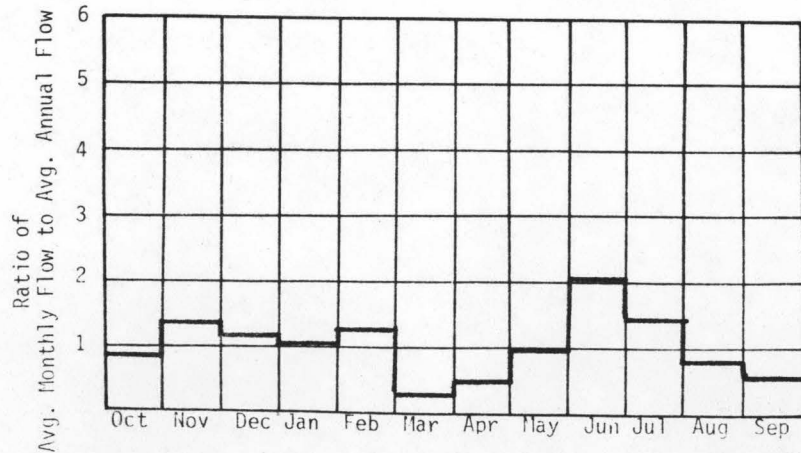
A. Upstream Elevation of Reach	<u>3240</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2530</u>	Ft. MSL
C. Total Available Head in Reach	<u>710</u>	Ft.
D. Average Slope in Reach	<u>203</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>52.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

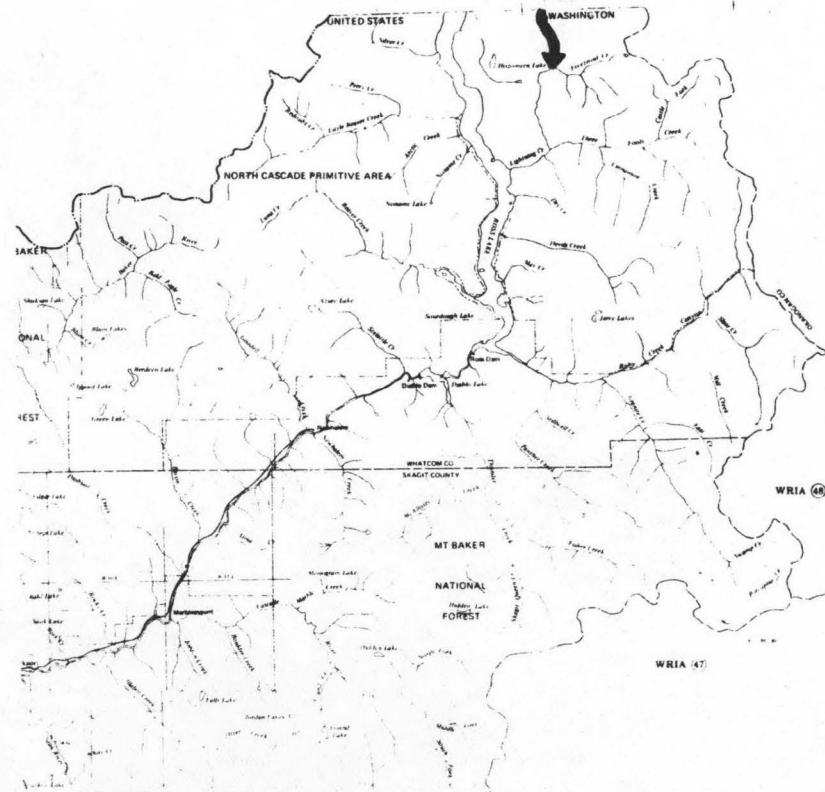
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	27.6	1.66	14.5	1.00
80	34.8	2.09	17.8	0.97
50	52.8	3.17	23.9	0.86
30	99.6	5.98	33.5	0.64
10	322	19.3	55.8	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 120 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0175

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R15E</u>
D. Latitude, Longitude	<u>48°52' 120°56'</u>
E. Stream Name	<u>Three Fools Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

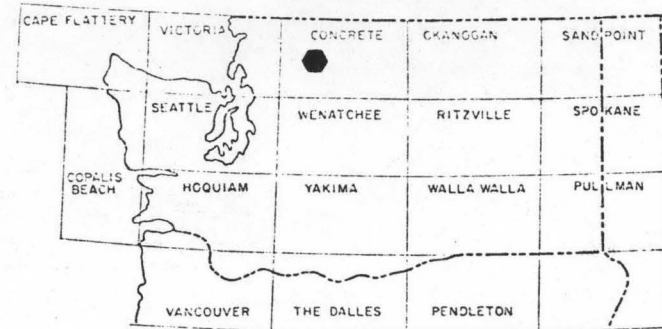
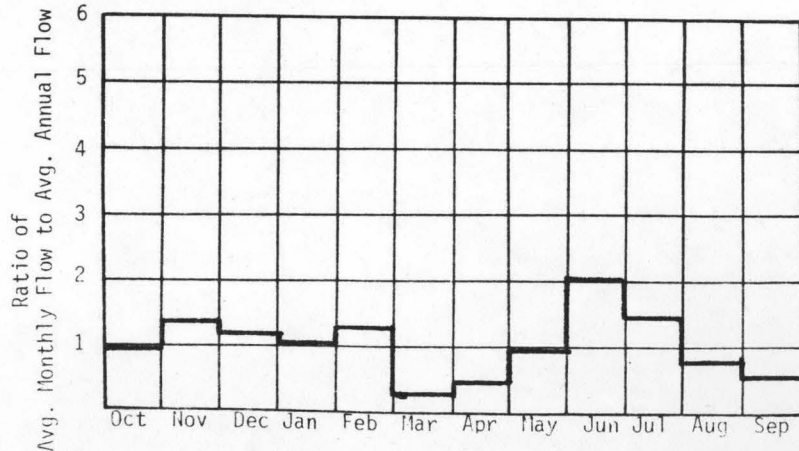
A. Upstream Elevation of Reach	<u>2460</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1870</u>	Ft. MSL
C. Total Available Head in Reach	<u>590</u>	Ft.
D. Average Slope in Reach	<u>184</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>67.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

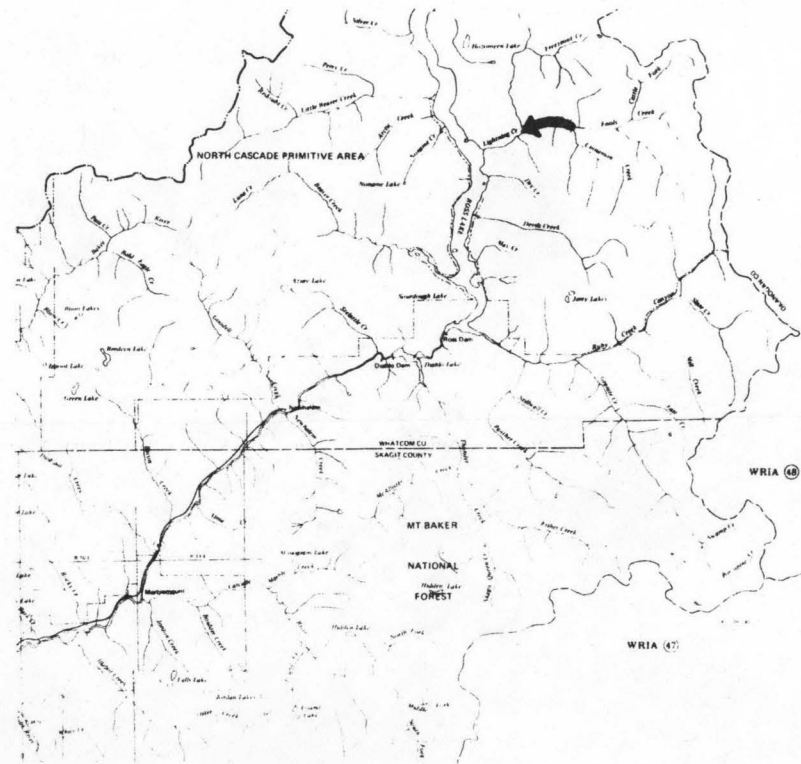
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	38.0	1.89	16.6	1.00
80	47.9	2.39	20.3	0.97
50	72.6	3.62	27.3	0.87
30	137	6.84	38.3	0.64
10	442	22.1	63.8	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 165 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0176

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R15E</u>
D. Latitude, Longitude	<u>48°53' 120°53'</u>
E. Stream Name	<u>Three Fools Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>3.2/6.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

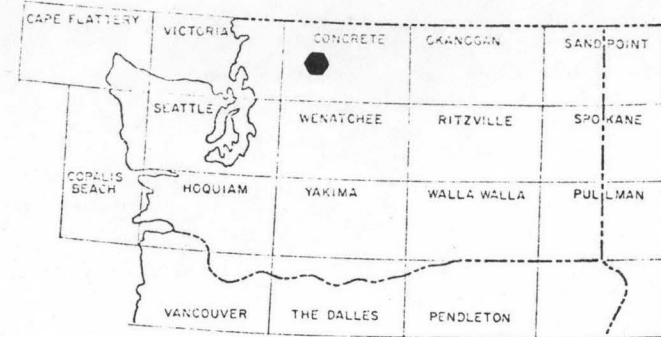
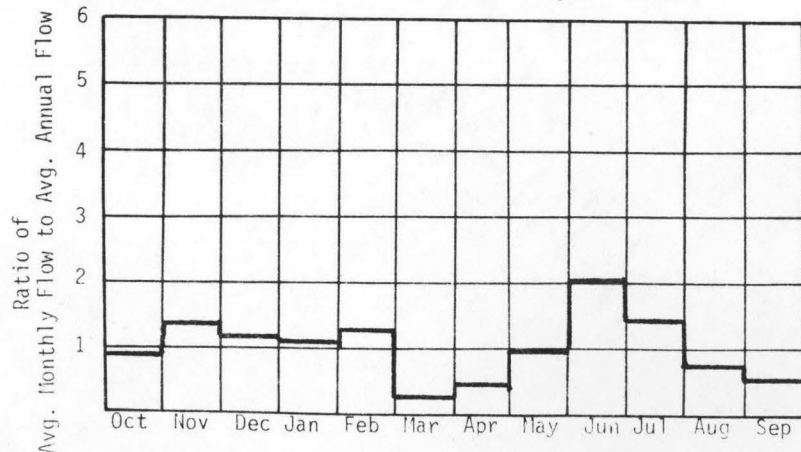
A. Upstream Elevation of Reach	<u>2935</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2460</u>	Ft. MSL
C. Total Available Head in Reach	<u>475 + 66 = 541</u>	Ft.
D. Average Slope in Reach	<u>170</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>43.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

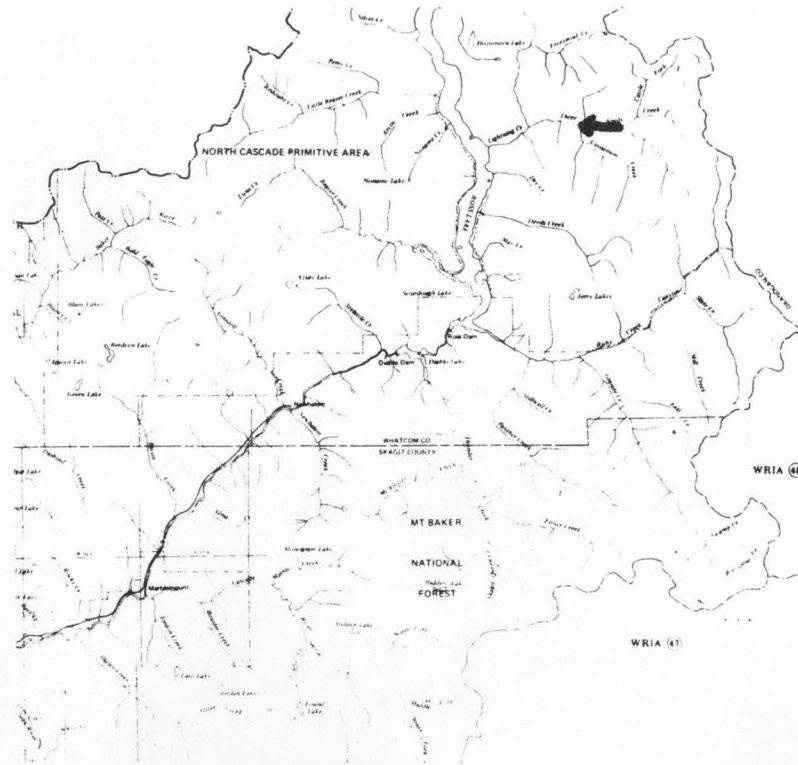
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.2	0.97	8.48	1.00
80	26.7	1.22	10.4	0.97
50	40.5	1.85	14.0	0.86
30	76.4	3.49	19.6	0.64
10	247	11.3	32.6	0.33

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 92 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0177

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R15E</u>
D. Latitude, Longitude	<u>48°55' 121°07'</u>
E. Stream Name	<u>Little Beaver Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

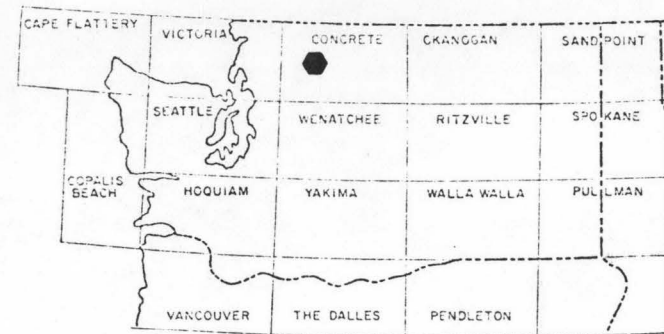
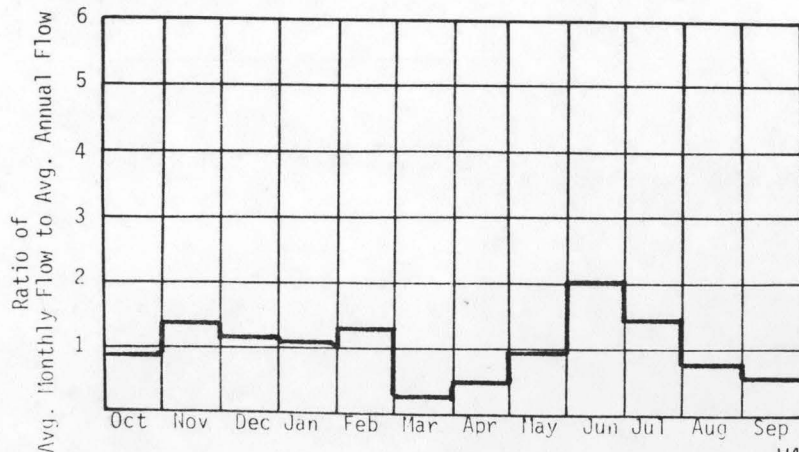
A. Upstream Elevation of Reach	<u>1985</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1604</u>	Ft. MSL
C. Total Available Head in Reach	<u>381</u>	Ft.
D. Average Slope in Reach	<u>93</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>54.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	90.0	2.90	25.4	1.00
80	139	4.47	37.6	0.96
50	270	8.70	61.8	0.81
30	431	13.9	79.2	0.65
10	795	25.6	98.8	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 375 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0178

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R14E</u>
D. Latitude, Longitude	<u>38°55' 121°11'</u>
E. Stream Name	<u>Little Beaver Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>4.1/9.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

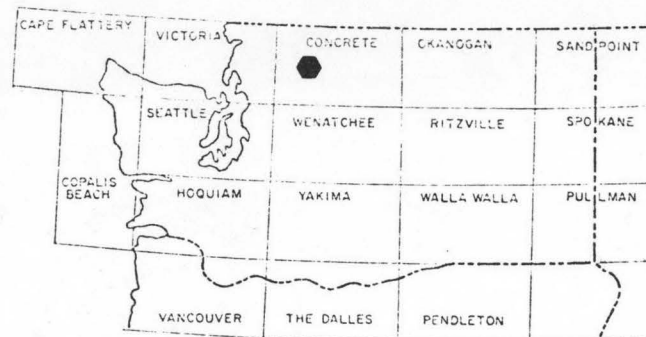
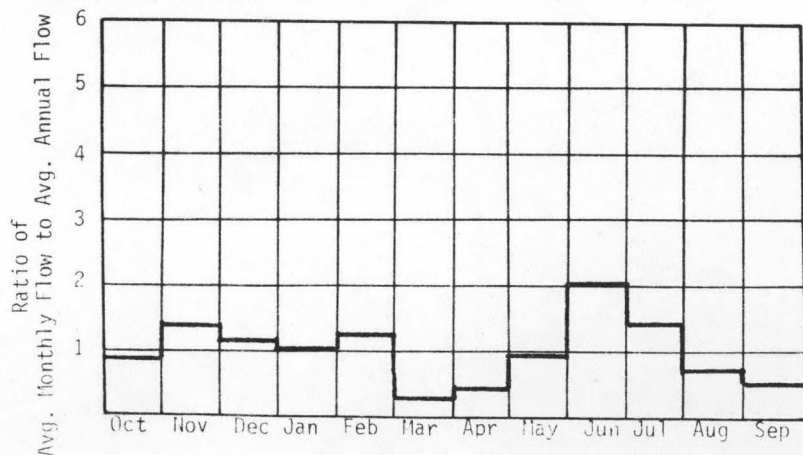
A. Upstream Elevation of Reach	<u>2200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1985</u>	Ft. MSL
C. Total Available Head in Reach	<u>215</u>	Ft.
D. Average Slope in Reach	<u>43</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>38.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

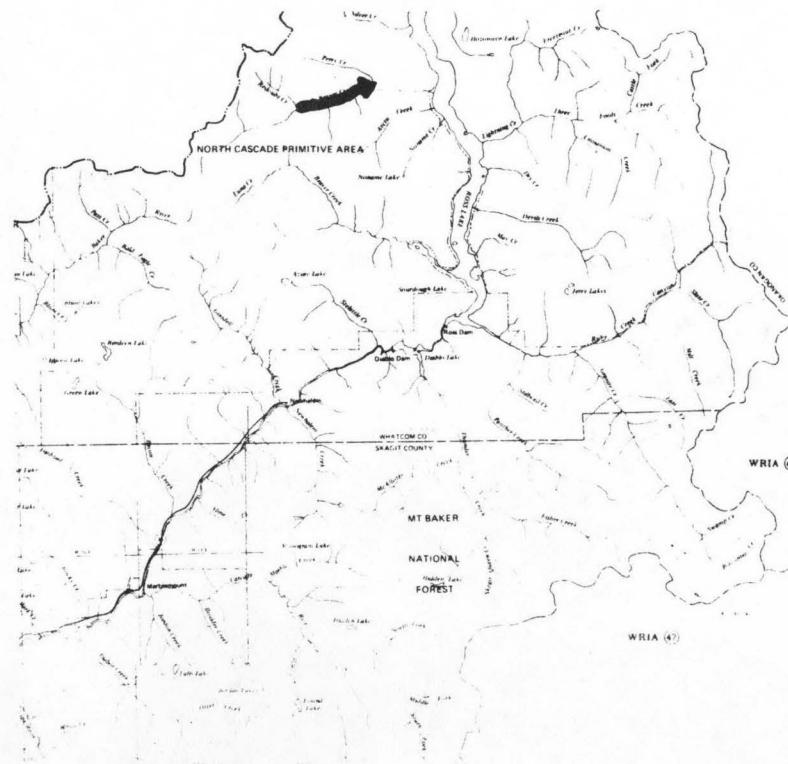
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	60.2	1.10	9.60	1.00
80	92.9	1.69	14.2	0.96
50	181	3.29	23.3	0.81
30	289	5.25	29.9	0.65
10	532	9.68	37.3	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 251 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0179

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R12E</u>
D. Latitude, Longitude	<u>48°52' 121°16'</u>
E. Stream Name	<u>Little Beaver Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>9.1/14.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

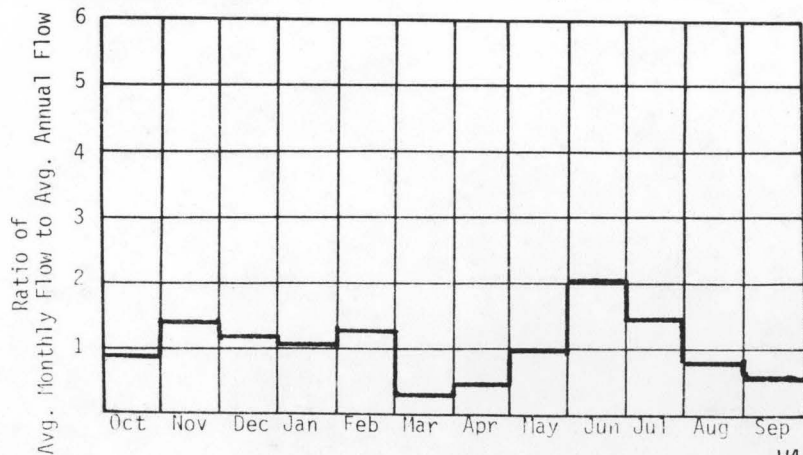
A. Upstream Elevation of Reach	<u>2780</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2200</u>	Ft. MSL
C. Total Available Head in Reach	<u>580 + 66 = 646</u>	Ft.
D. Average Slope in Reach	<u>118</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>19.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

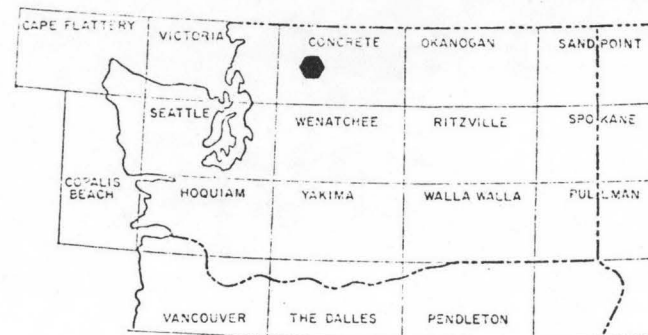
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	26.9	1.47	12.9	1.00
80	41.4	2.26	19.1	0.96
50	80.6	4.41	31.3	0.81
30	129	7.04	40.1	0.65
10	237	13.0	50.0	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

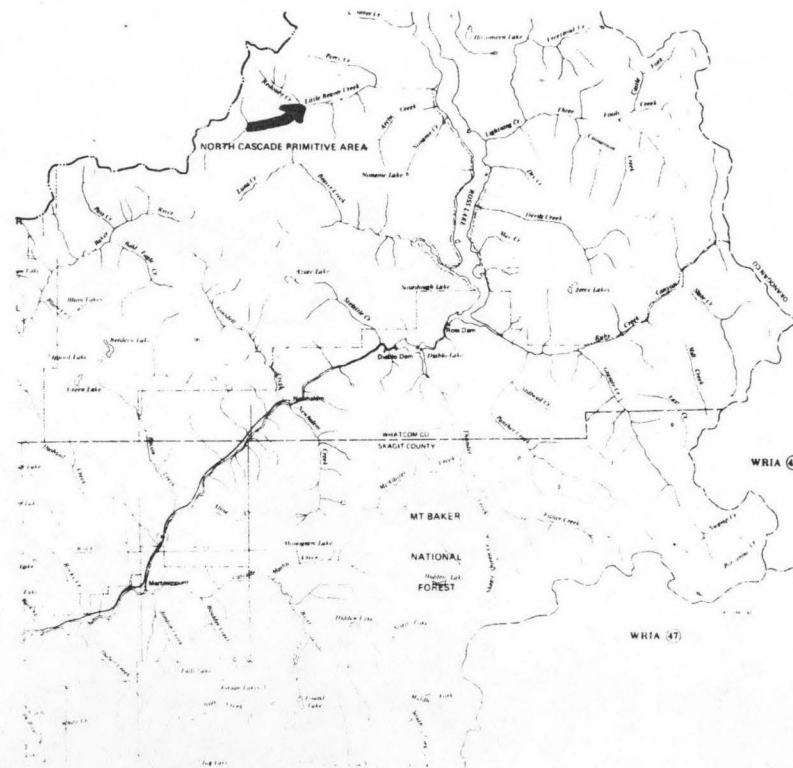
QMR = 112 cfs



W4-235



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-R0180

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R13E</u>
D. Latitude, Longitude	<u>48°56' 121°08'</u>
E. Stream Name	<u>Perry Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/3.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

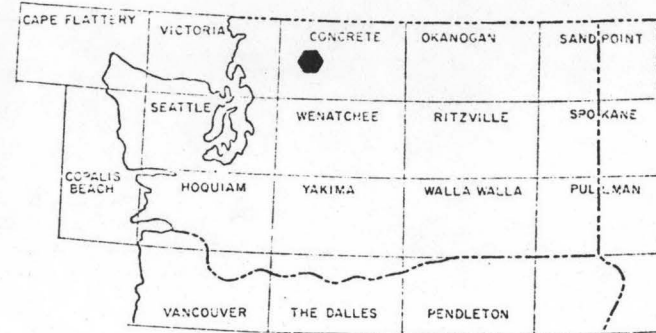
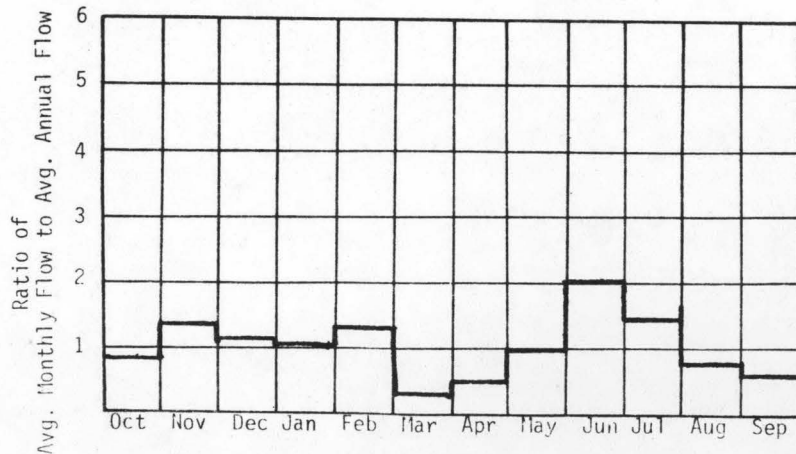
A. Upstream Elevation of Reach	<u>3880</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1985</u>	Ft. MSL
C. Total Available Head in Reach	<u>1895 + 66 = 1961</u>	Ft.
D. Average Slope in Reach	<u>632</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

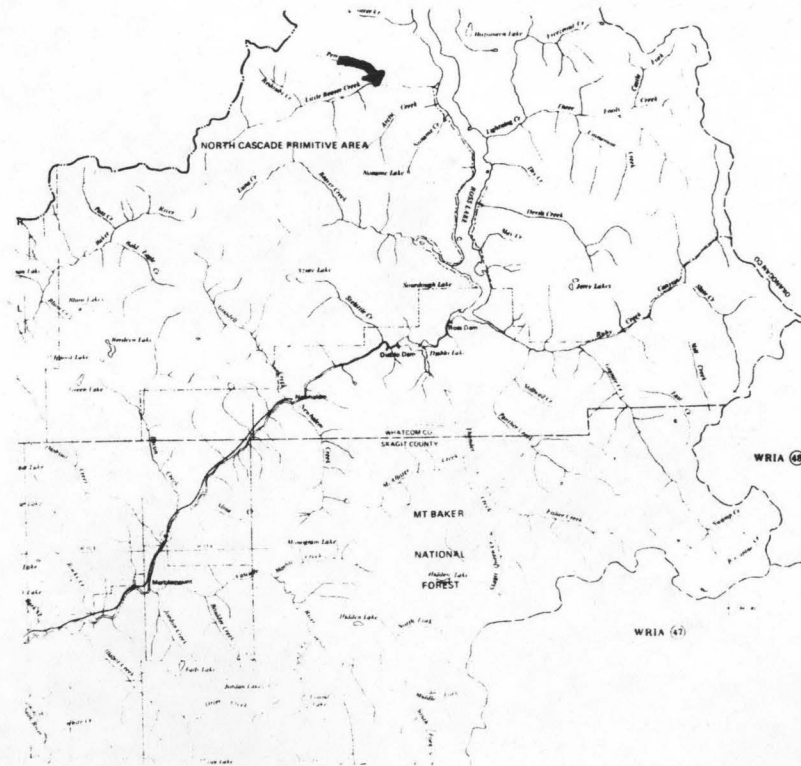
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.3	2.71	23.7	1.00
80	25.2	4.17	35.1	0.96
50	49.0	8.12	57.6	0.81
30	78.2	13.0	73.9	0.65
10	144	23.9	92.2	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 68 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0181

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T39N R12E</u>
D. Latitude, Longitude	<u>48°54' 121°14'</u>
E. Stream Name	<u>Redoubt Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/1.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

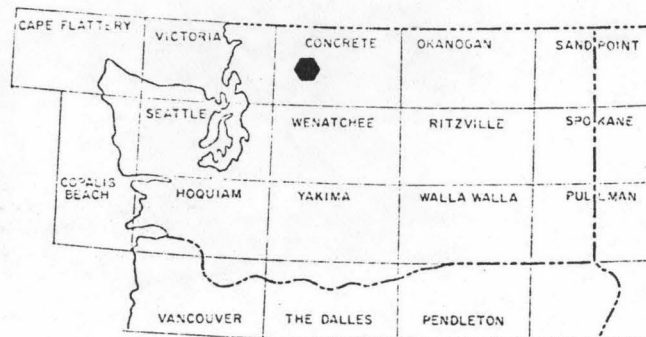
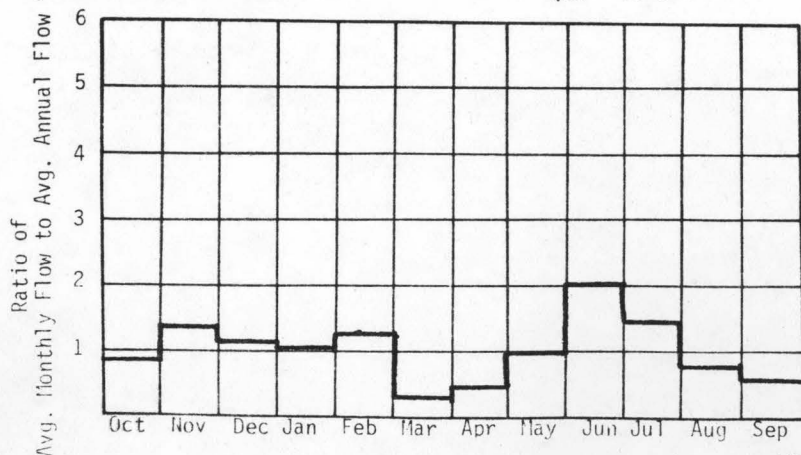
A. Upstream Elevation of Reach	<u>3200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2200</u>	Ft. MSL
C. Total Available Head in Reach	<u>1000 + 66 = 1066</u>	Ft.
D. Average Slope in Reach	<u>667</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.6	1.41	12.3	1.00
80	24.1	2.17	18.2	0.96
50	46.8	4.22	30.0	0.81
30	74.8	6.75	38.4	0.65
10	138	12.4	47.9	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 65 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0182

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Whatcom</u>
C. Township, Range	<u>T40N R14E</u>
D. Latitude, Longitude	<u>48°58' 121°08'</u>
E. Stream Name	<u>Silver Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/4.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

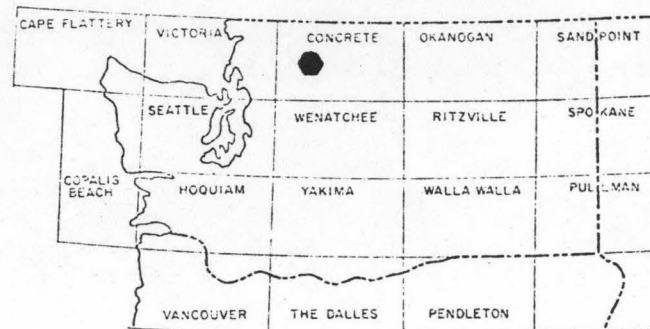
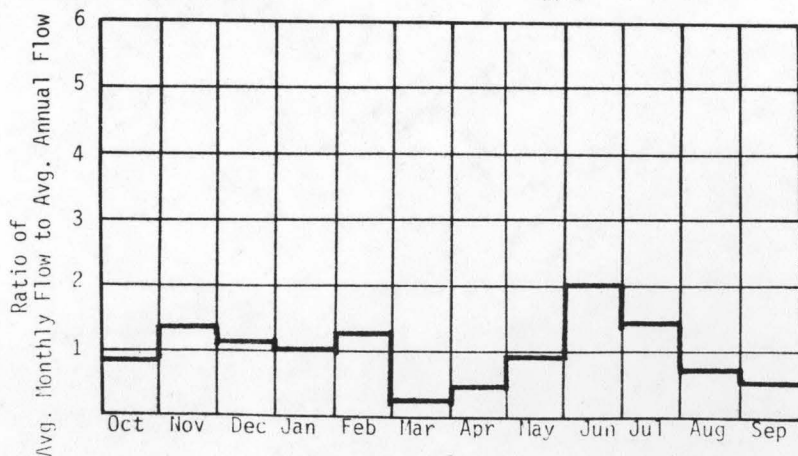
A. Upstream Elevation of Reach	<u>3460</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1604</u>	Ft. MSL
C. Total Available Head in Reach	<u>1856 + 66 = 1922</u>	Ft.
D. Average Slope in Reach	<u>387</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>16.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

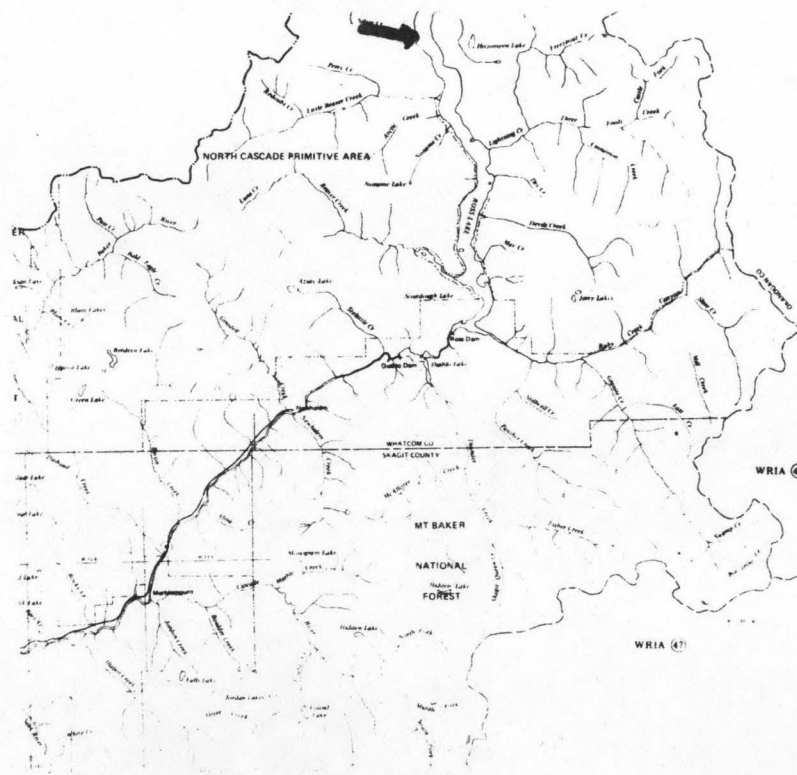
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	20.9	3.40	29.7	1.00
80	32.2	5.23	44.0	0.96
50	62.6	10.2	72.3	0.81
30	100	16.3	92.6	0.65
10	184	30.0	116	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 87 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0183

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T30N R12E
D. Latitude, Longitude	48°03' 121°12'
E. Stream Name	N.E. Sauk River
F. Major Basin Name	Skagit
G. River Mile	50.8/58.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

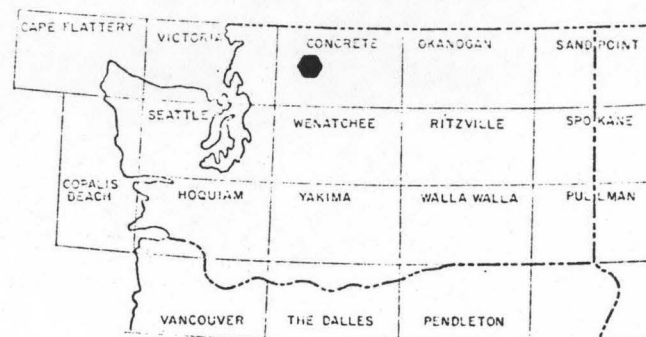
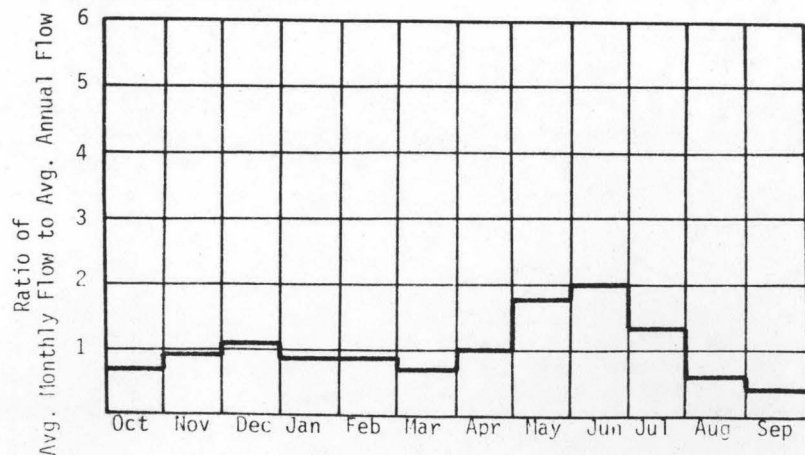
A. Upstream Elevation of Reach	3300	Ft. MSL
B. Downstream Elevation of Reach	2020	Ft. MSL
C. Total Available Head in Reach	1280 + 66 = 1346	Ft.
D. Average Slope in Reach	175	Ft./Mi.
E. Drainage Area above Reach Mouth	26.0	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	24.4	2.78	24.4	1.00
80	38.9	4.42	37.2	0.96
50	79.9	9.10	63.0	0.79
30	134	15.3	84.4	0.63
10	226	25.8	104	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 111 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-061-000-000-000-R0184

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R12E</u>
D. Latitude, Longitude	<u>48°03' 121°18'</u>
E. Stream Name	<u>Cadet Creek</u>
F. Major Basin Name	<u>Skagit</u>
G. River Mile	<u>0/0.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

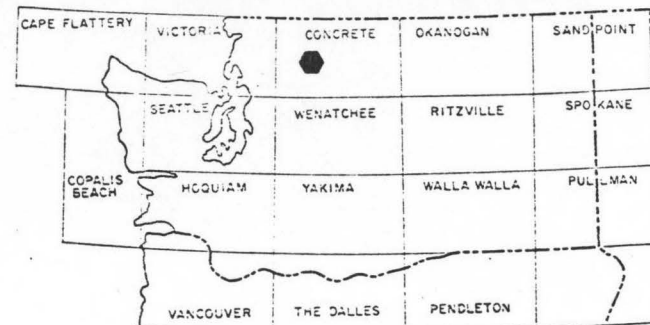
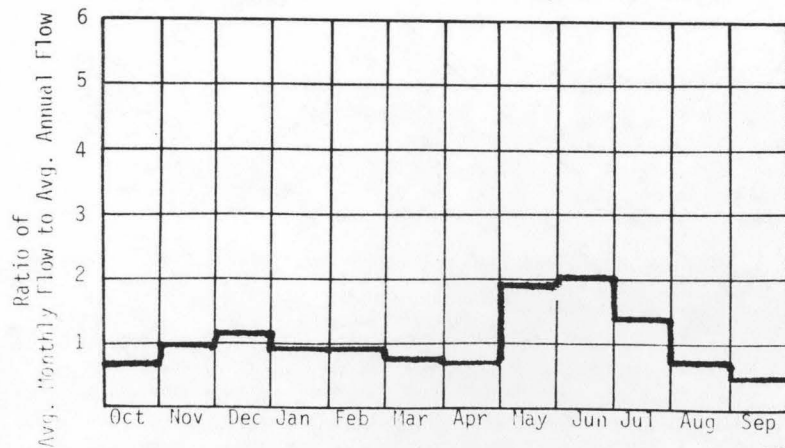
A. Upstream Elevation of Reach	<u>2300</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2295</u>	Ft. MSL
C. Total Available Head in Reach	<u>5 + 66 = 71</u>	Ft.
D. Average Slope in Reach	<u>142</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>7.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

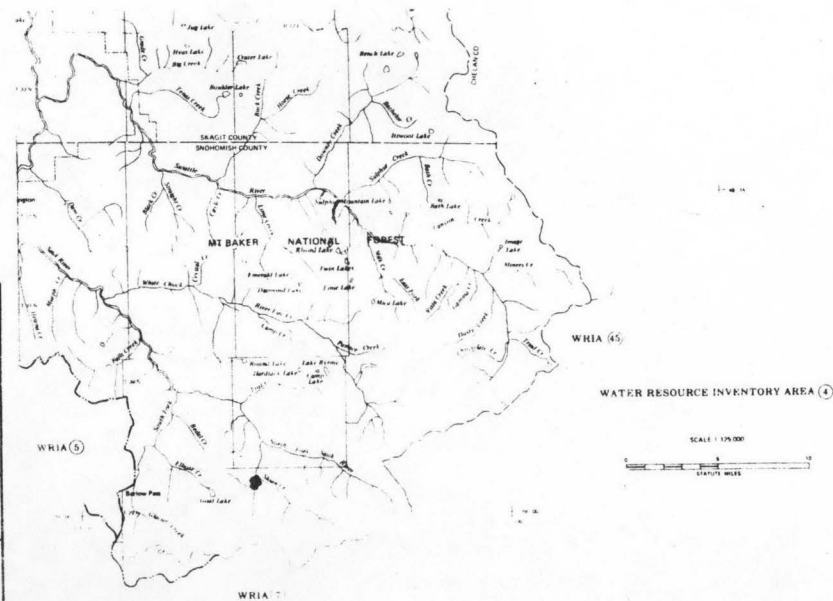
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.3	0.07	0.65	1.00
80	19.6	0.12	0.99	0.96
50	40.3	0.24	1.68	0.79
30	67.8	0.41	2.25	0.63
10	114	0.69	2.77	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 56 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R4E</u>
D. Latitude, Longitude	<u>48°12' 122°17'</u>
E. Stream Name	<u>Stillaguamish River</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/9.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

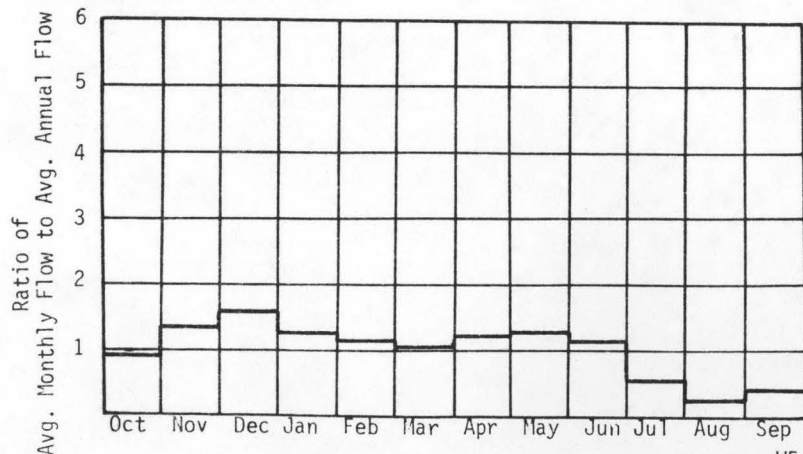
A. Upstream Elevation of Reach	<u>20</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>0</u>	Ft. MSL
C. Total Available Head in Reach	<u>20</u>	Ft.
D. Average Slope in Reach	<u>2.15</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>669.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

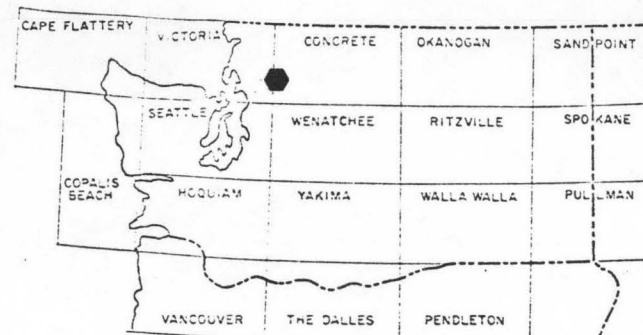
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	635	1.11	9.68	1.00
80	1130	1.92	15.9	0.95
50	3570	6.04	40.2	0.76
30	4830	8.18	47.3	0.66
10	8180	13.9	57.0	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

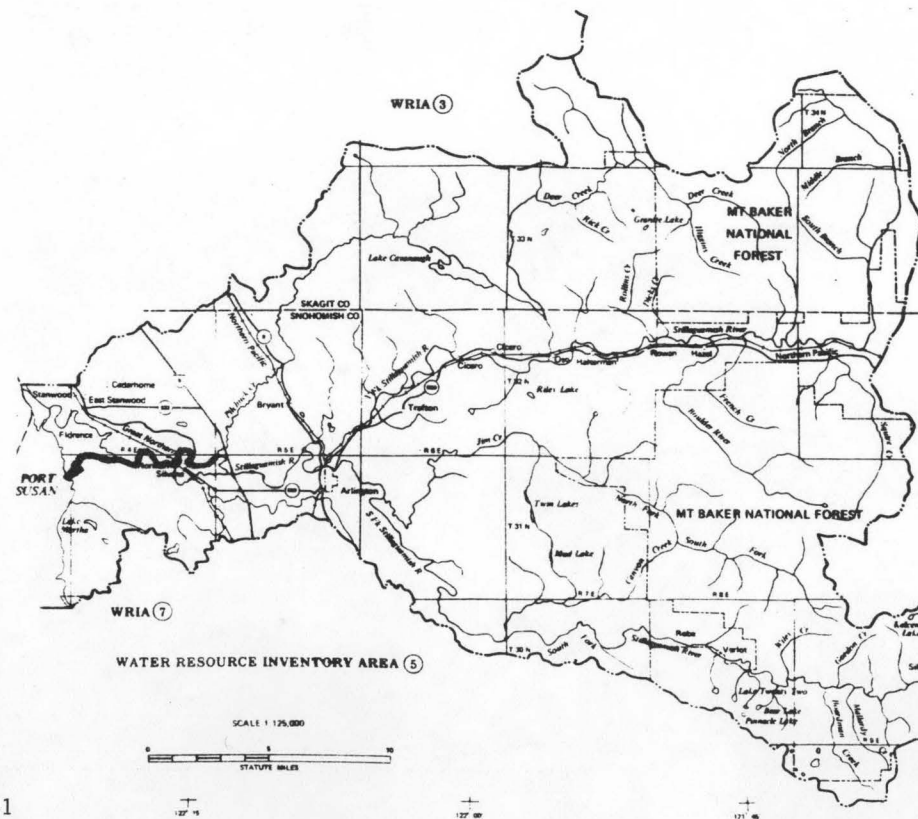
QMR = 4352 cfs



W5-241



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R5E</u>
D. Latitude, Longitude	<u>48°11' 122°10'</u>
E. Stream Name	<u>Stillaguamish River</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>9.3/18.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

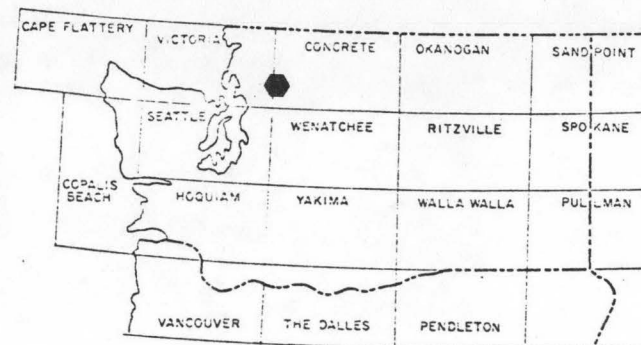
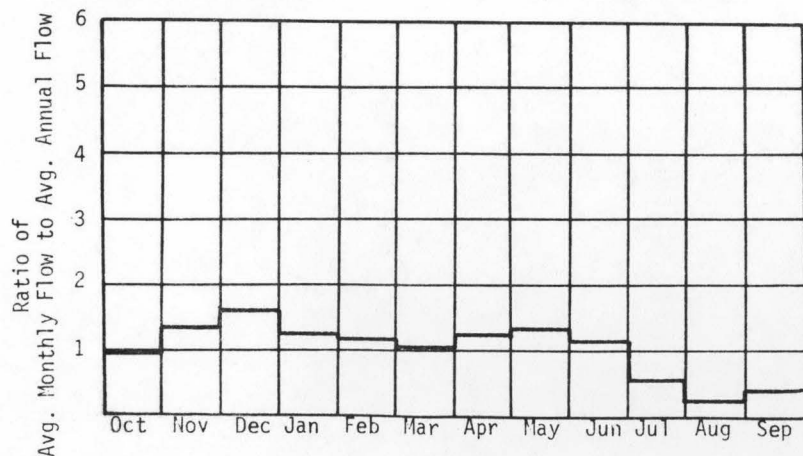
A. Upstream Elevation of Reach	<u>50</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>20</u>	Ft. MSL
C. Total Available Head in Reach	<u>30</u>	Ft.
D. Average Slope in Reach	<u>3.71</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>561.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

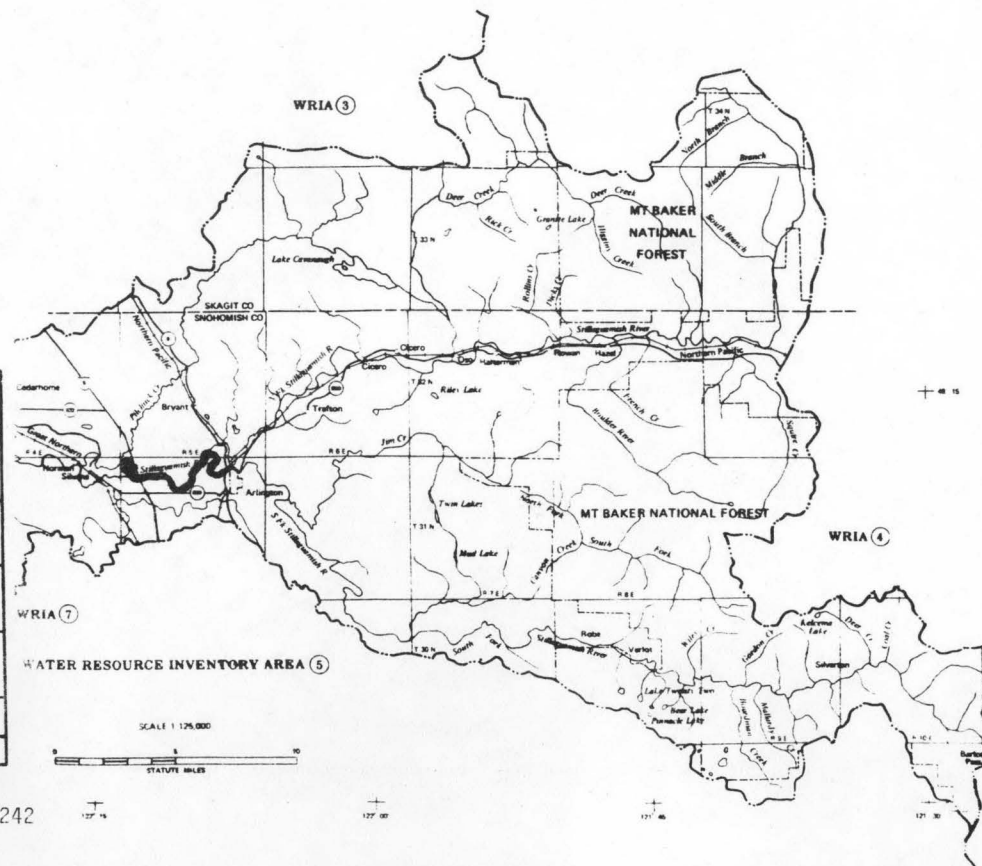
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	584	1.48	13.0	1.00
80	1010	2.57	21.4	0.95
50	3190	8.11	54.6	0.76
30	4320	11.0	63.5	0.66
10	7320	18.6	76.6	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3895 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R5E</u>
D. Latitude, Longitude	<u>48°15' 122°12'</u>
E. Stream Name	<u>Pilchuck Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>6.3/20.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

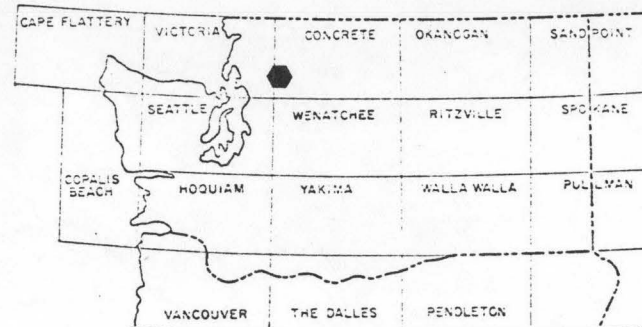
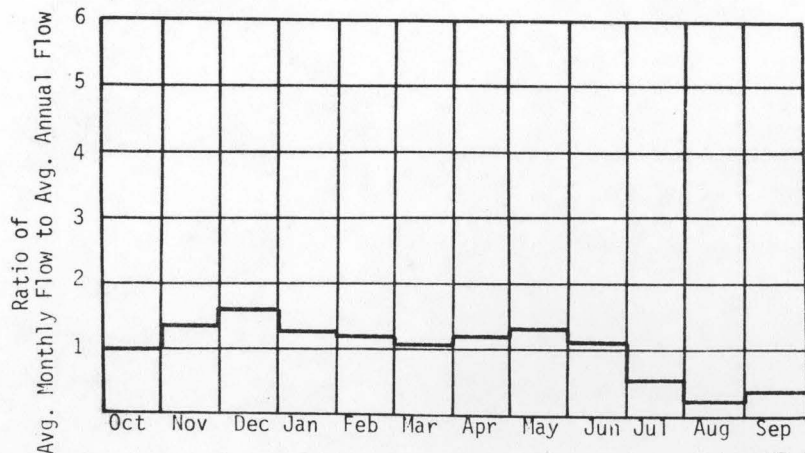
A. Upstream Elevation of Reach	<u>140</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>20</u>	Ft. MSL
C. Total Available Head in Reach	<u>120</u>	Ft.
D. Average Slope in Reach	<u>19</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>77.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

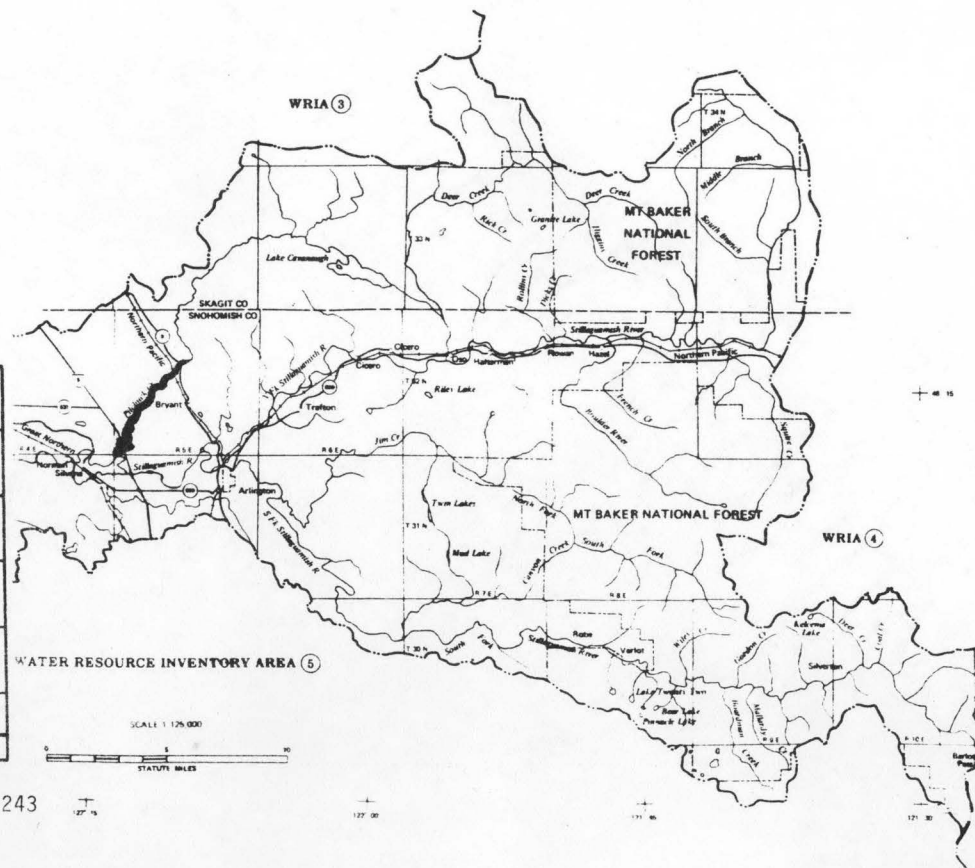
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6.28	0.06	0.56	1.00
80	37.7	0.38	2.95	0.88
50	201	2.04	12.3	0.69
30	352	3.57	17.8	0.57
10	760	7.72	24.3	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 314 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R5E</u>
D. Latitude, Longitude	<u>48°20' 122°07'</u>
E. Stream Name	<u>Pilchuck Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>6.3/20.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

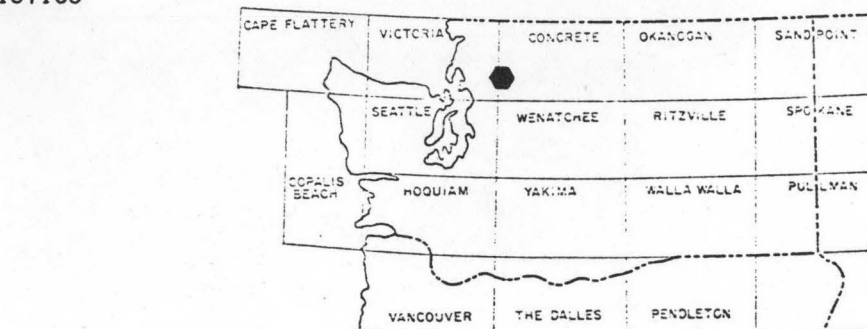
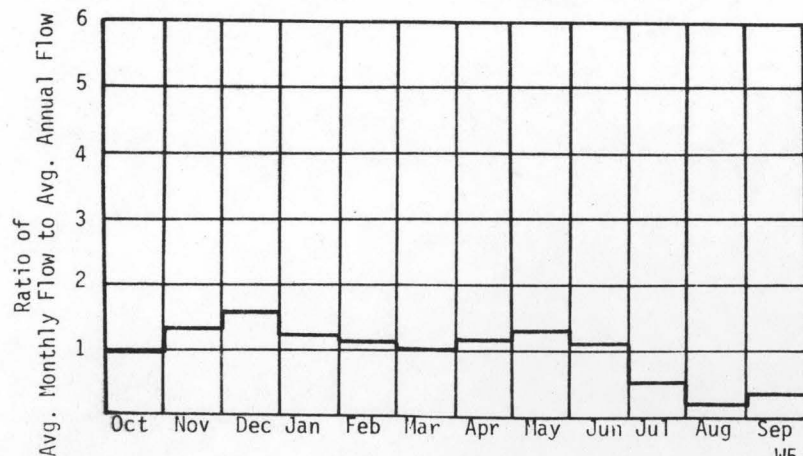
A. Upstream Elevation of Reach	<u>1100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>140</u>	Ft. MSL
C. Total Available Head in Reach	<u>960 + 66 = 1026</u>	Ft.
D. Average Slope in Reach	<u>69.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>69.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

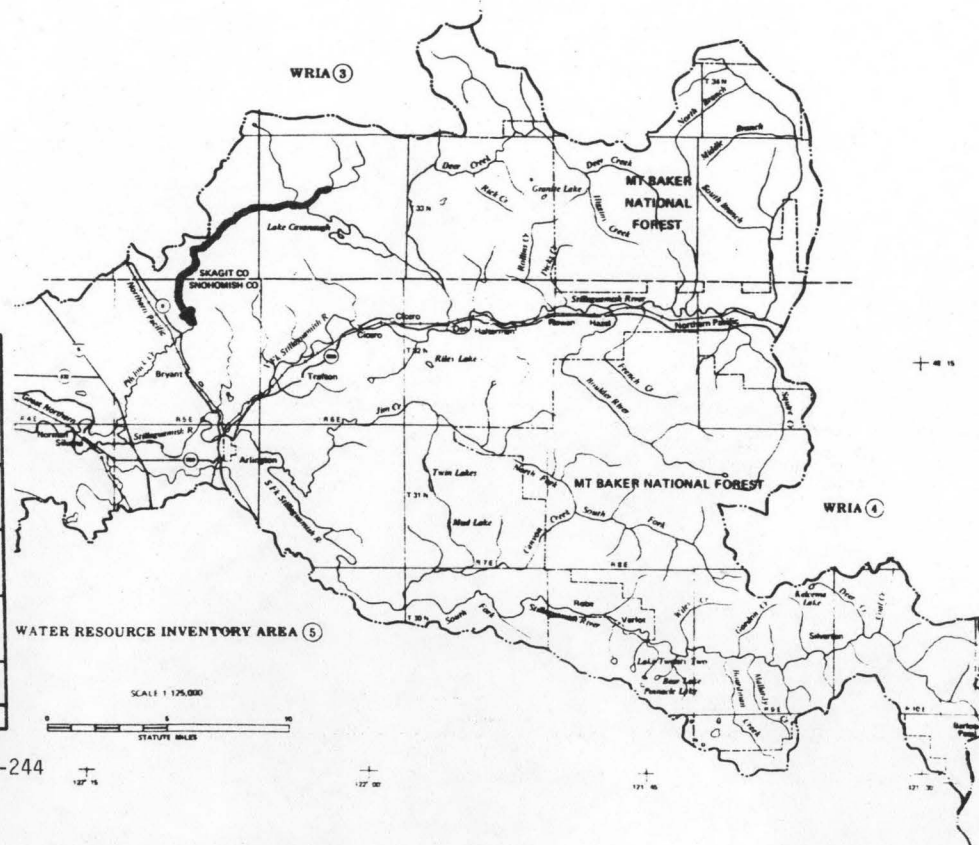
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	2.20	0.19	1.67	1.00
80	13.2	1.15	8.84	0.88
50	70.4	6.11	37.0	0.69
30	123	10.7	53.4	0.57
10	266	23.1	72.9	0.36

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 110 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



W5-244



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R6E</u>
D. Latitude, Longitude	<u>48°15' 122°03'</u>
E. Stream Name	<u>N.F. Stillaguamish Riv.</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/14.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

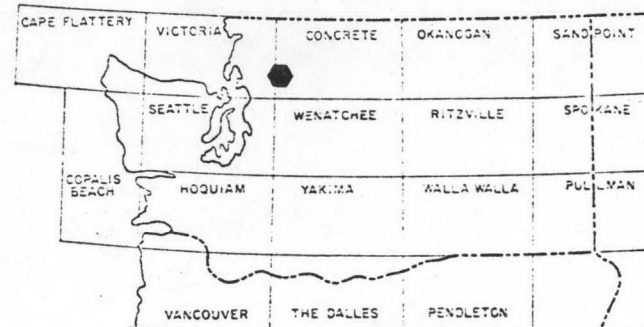
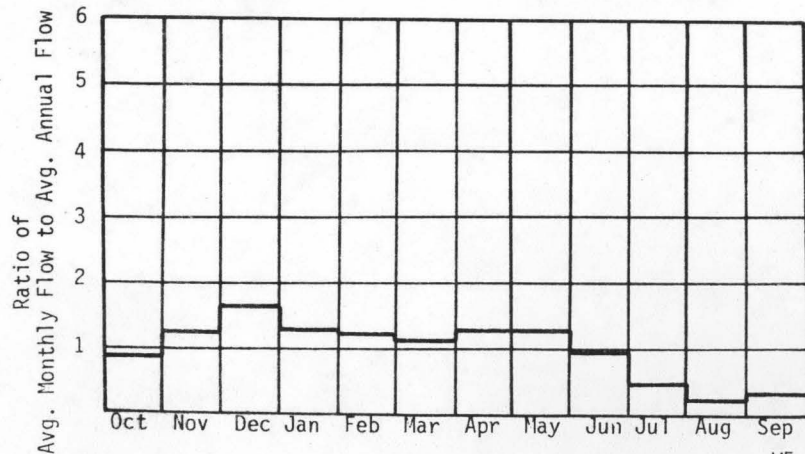
A. Upstream Elevation of Reach	<u>165</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>50</u>	Ft. MSL
C. Total Available Head in Reach	<u>115</u>	Ft.
D. Average Slope in Reach	<u>8.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>286.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

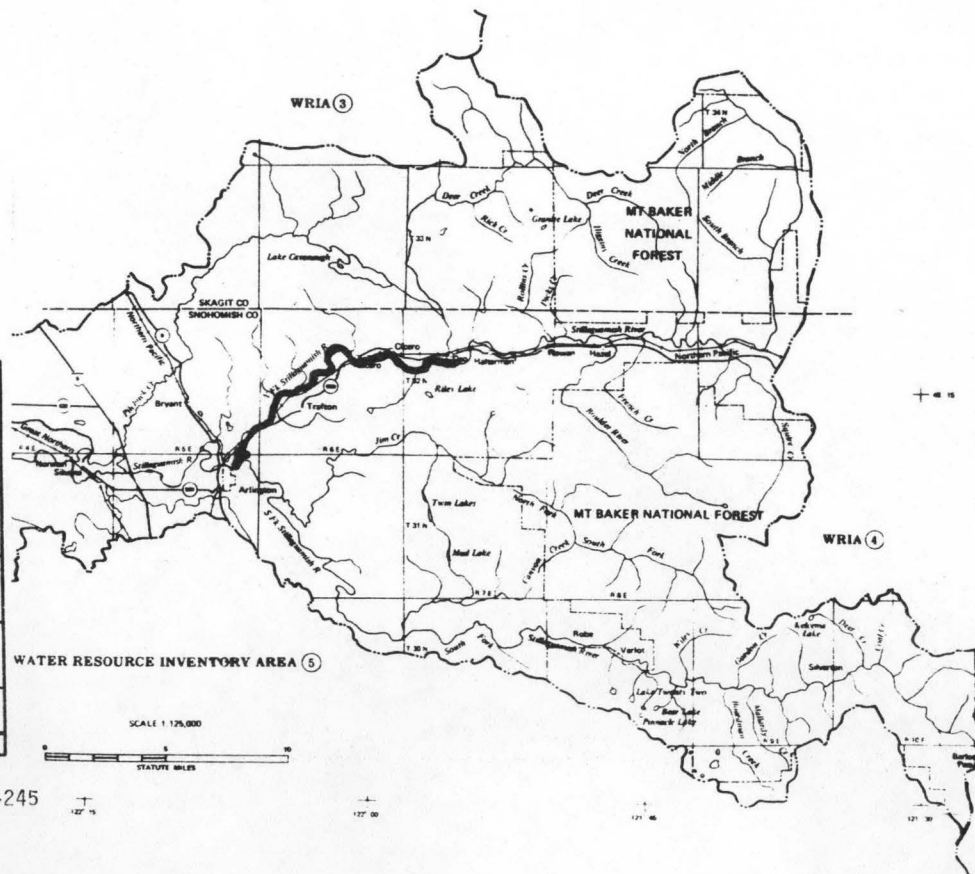
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	268	2.61	22.9	1.00
80	574	5.59	45.5	0.93
50	1400	13.6	90.5	0.76
30	2140	20.9	117	0.64
10	3808	37.1	143	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1914 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0006

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R7E</u>
D. Latitude, Longitude	<u>48°16' 121°52'</u>
E. Stream Name	<u>N.F. Stillaguamish Riv.</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>14.3/24.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

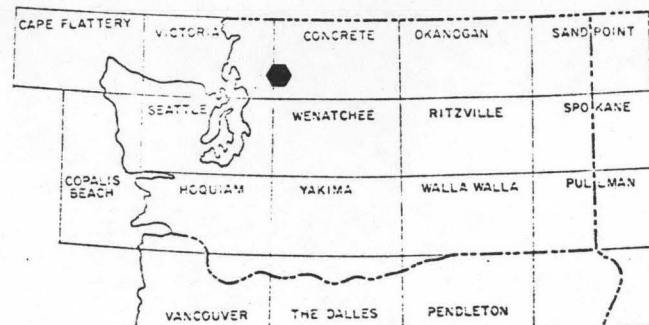
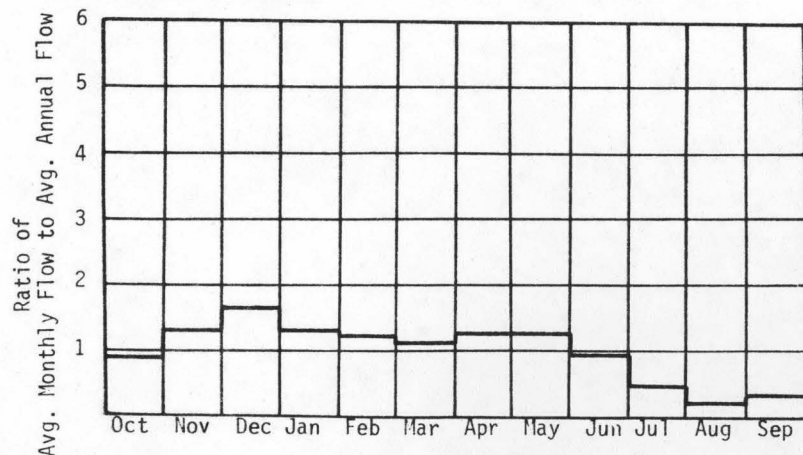
A. Upstream Elevation of Reach	<u>310</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>165</u>	Ft. MSL
C. Total Available Head in Reach	<u>145</u>	Ft.
D. Average Slope in Reach	<u>14.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>174.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

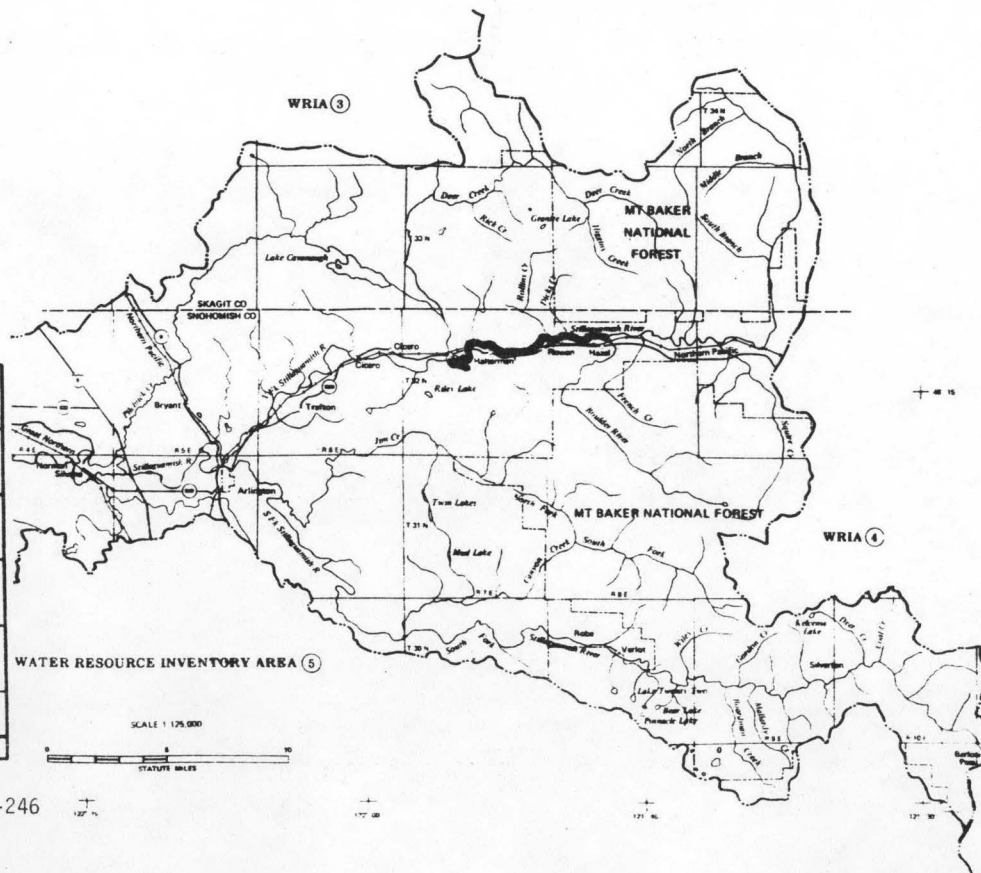
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	112	1.38	12.1	1.00
80	303	3.72	30.0	0.92
50	832	10.2	67.1	0.75
30	1230	15.0	84.3	0.64
10	2270	27.9	105	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1124 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0008

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R8E</u>
D. Latitude, Longitude	<u>48°17' 121°44'</u>
E. Stream Name	<u>N.F. Stillaguamish Riv.</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>25.9/31.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

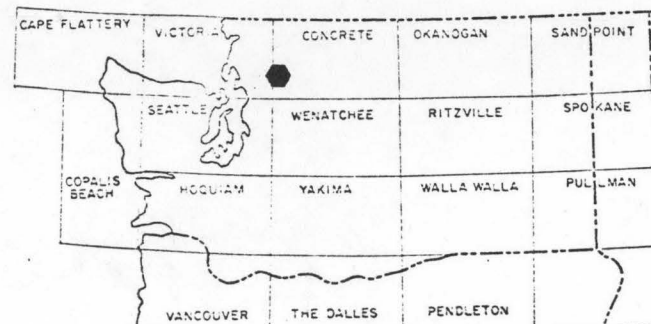
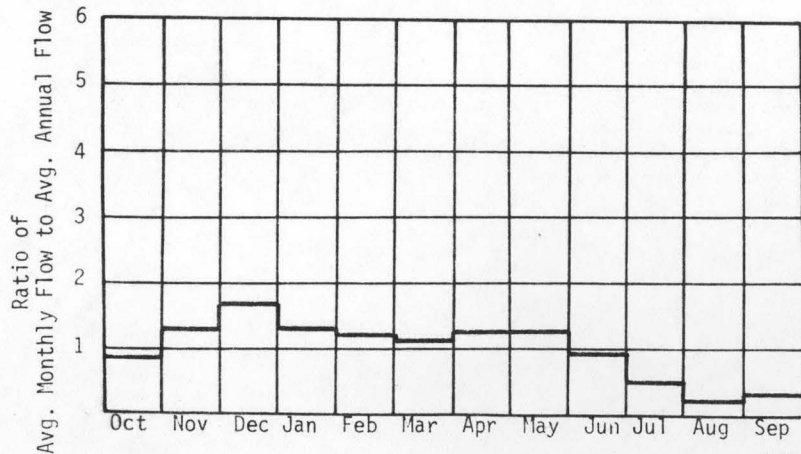
A. Upstream Elevation of Reach	<u>422</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>320</u>	Ft. MSL
C. Total Available Head in Reach	<u>102</u>	Ft.
D. Average Slope in Reach	<u>18.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>99.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

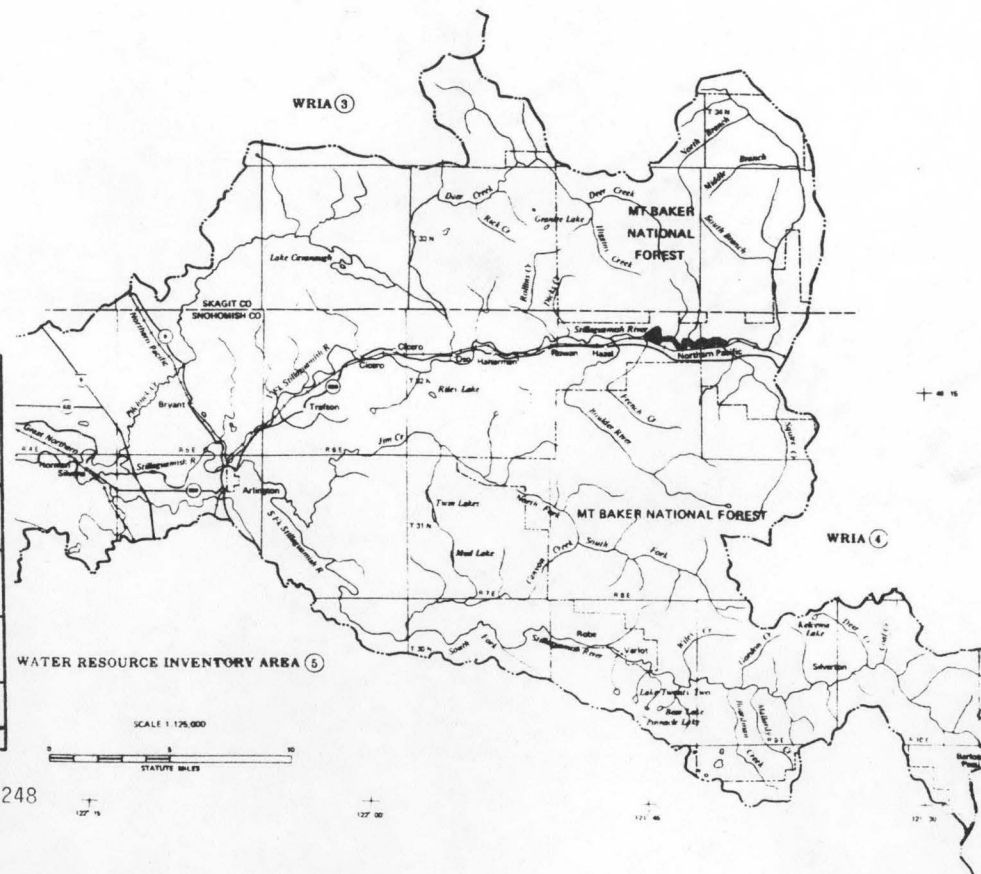
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	61.6	0.53	4.66	1.00
80	166	1.44	11.6	0.92
50	456	3.94	25.9	0.75
30	671	5.80	32.5	0.64
10	1240	10.7	40.5	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 616 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0009

### I. LOCATION

A. State	Washington
B. County	Skagit
C. Township, Range	T33N R9E
D. Latitude, Longitude	48°18' 121°38'
E. Stream Name	N.F. Stillaguamish Riv.
F. Major Basin Name	Stillaguamish
G. River Mile	31.5/43.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

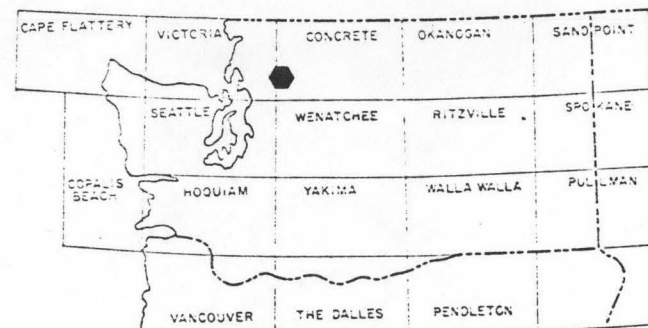
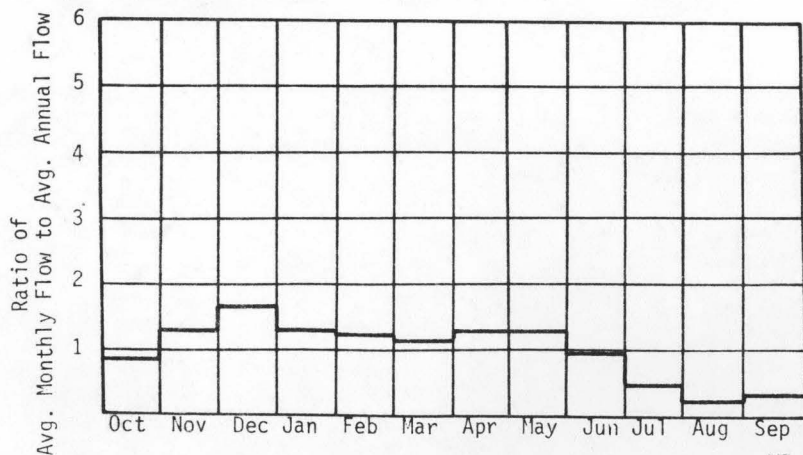
A. Upstream Elevation of Reach	1260	Ft. MSL
B. Downstream Elevation of Reach	422	Ft. MSL
C. Total Available Head in Reach	838	Ft.
D. Average Slope in Reach	70.4	Ft./Mi.
E. Drainage Area above Reach Mouth	54.9	Sq.Mi.
F. Inflow Classification	Natural	

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

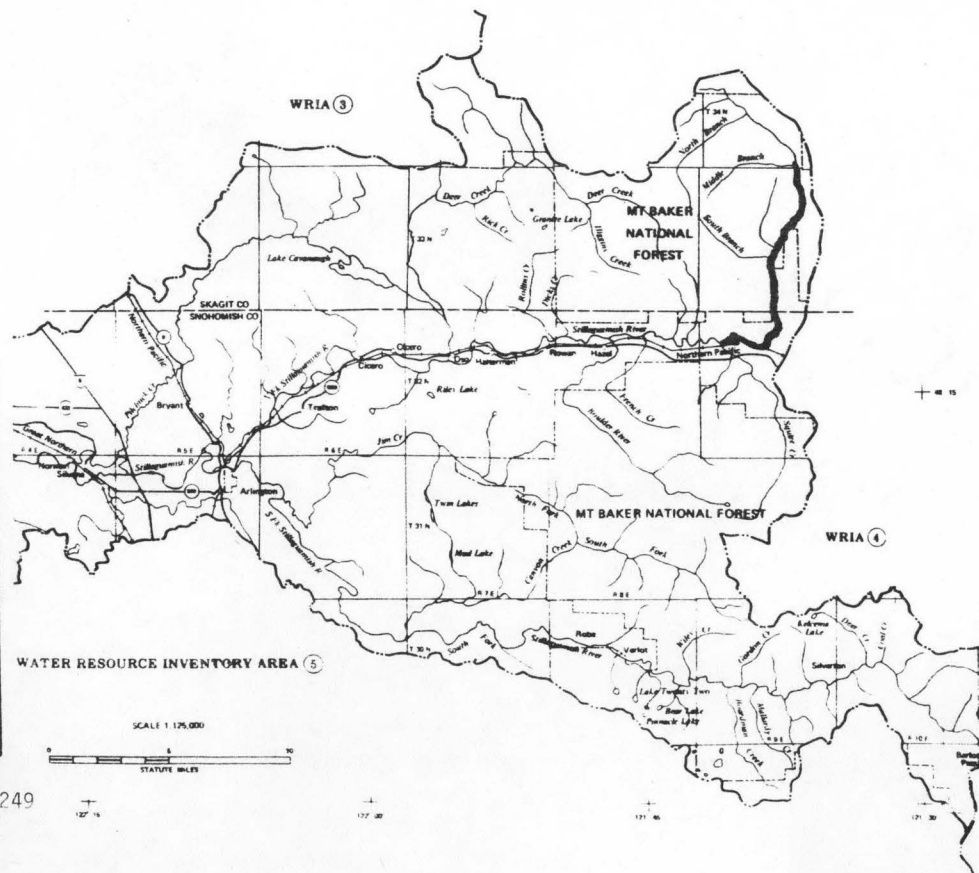
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	36.8	2.61	22.9	1.00
80	80.5	5.71	46.5	0.93
50	173	12.2	83.6	0.78
30	251	17.8	103	0.66
10	432	30.7	124	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 320 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0010

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R9E</u>
D. Latitude, Longitude	<u>48°24' 121°38'</u>
E. Stream Name	<u>N.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>43.4/49.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

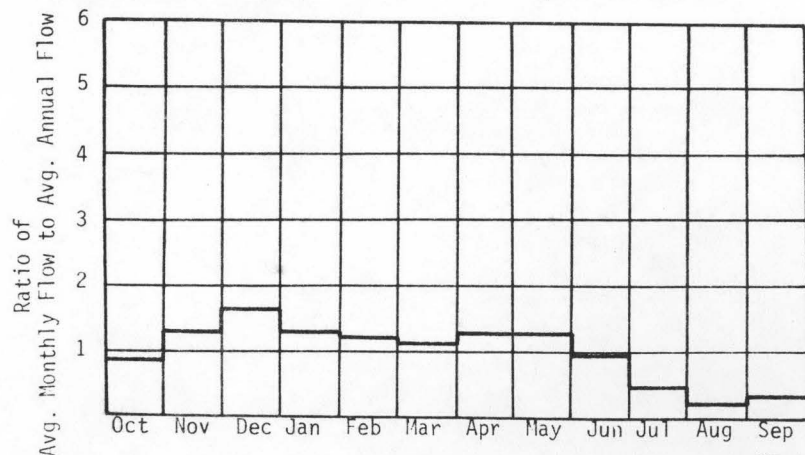
A. Upstream Elevation of Reach	<u>2160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1260</u>	Ft. MSL
C. Total Available Head in Reach	<u>900 + 66 = 966</u>	Ft.
D. Average Slope in Reach	<u>160.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>16.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

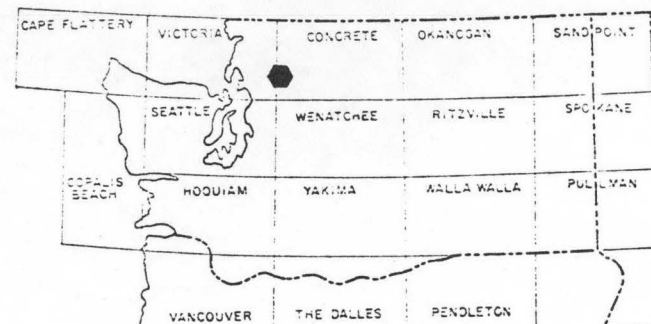
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.8	1.13	9.86	1.00
80	30.1	2.46	20.1	0.93
50	64.5	5.27	36.0	0.78
30	93.7	7.66	44.3	0.66
10	162	13.2	53.3	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

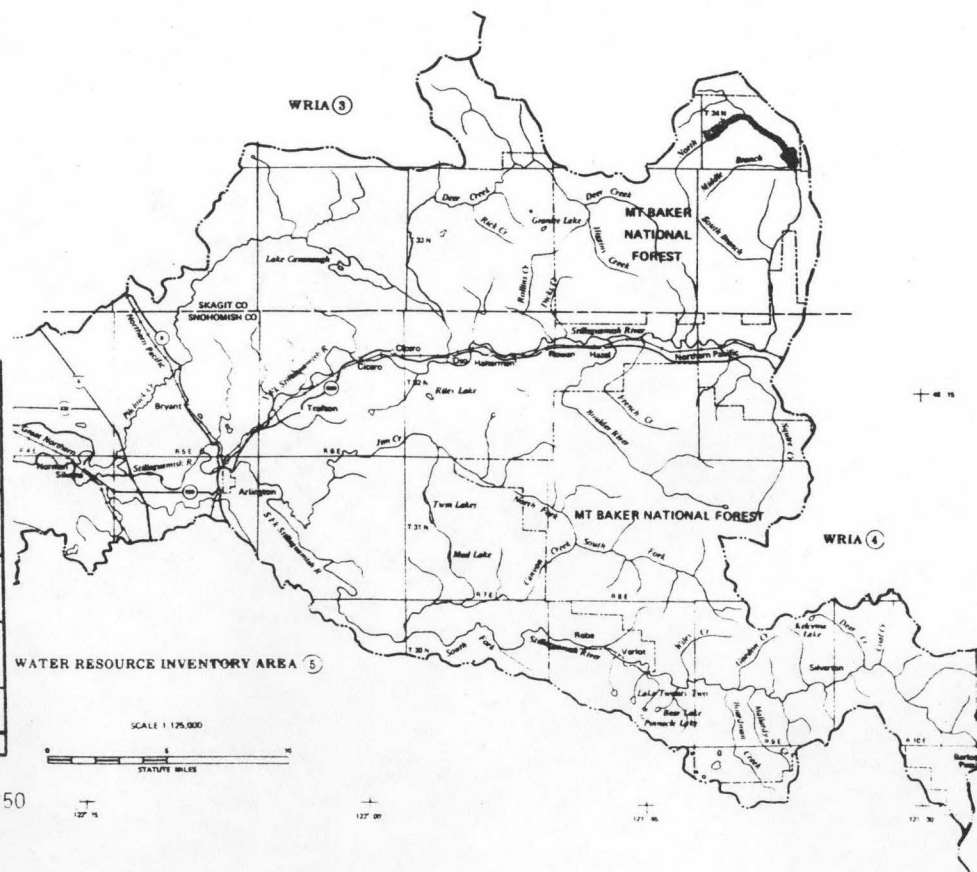
QMR = 86 cfs



W5-250



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0011

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R6E</u>
D. Latitude, Longitude	<u>48°21' 121°58'</u>
E. Stream Name	<u>Deer Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/13.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

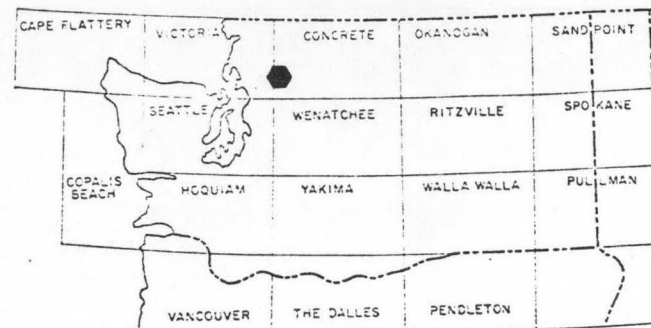
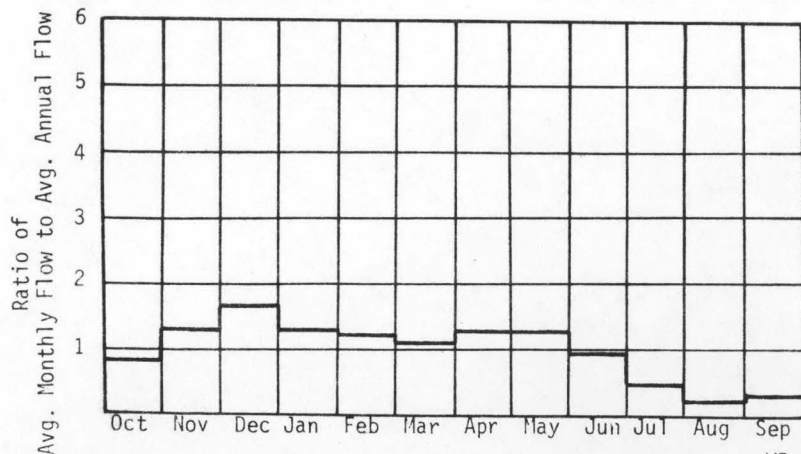
A. Upstream Elevation of Reach	<u>1515</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>165</u>	Ft. MSL
C. Total Available Head in Reach	<u>1350</u>	Ft.
D. Average Slope in Reach	<u>9.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>67.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

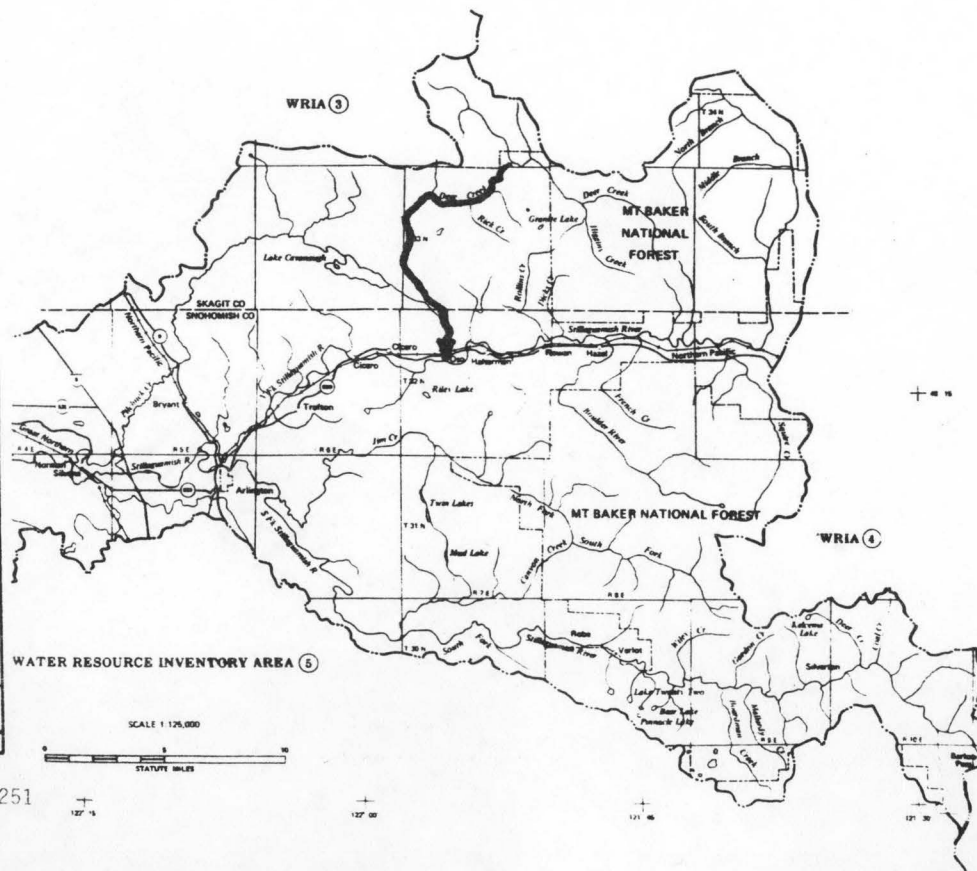
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.4	2.90	25.4	1.00
80	67.7	7.73	62.4	0.92
50	250	28.5	180	0.72
30	440	50.3	255	0.58
10	943	108	349	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 423 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0012

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T34N R7E</u>
D. Latitude, Longitude	<u>48°25' 121°54'</u>
E. Stream Name	<u>Little Deer Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>13.9/17.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

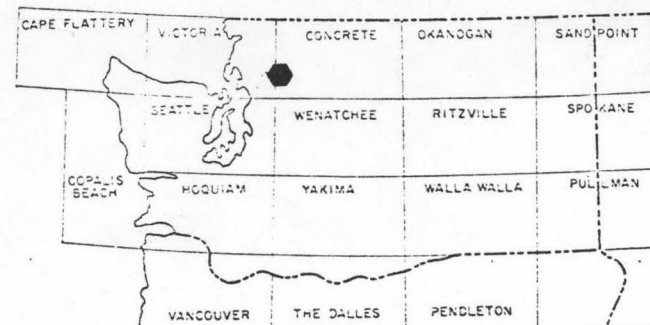
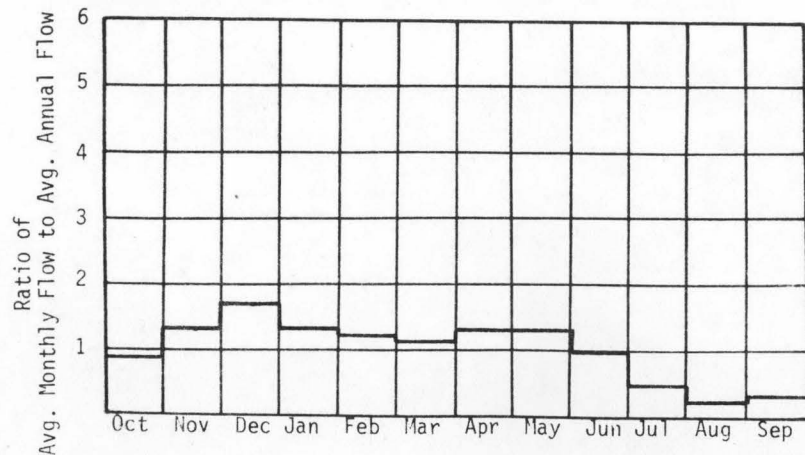
A. Upstream Elevation of Reach	<u>2030</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1515</u>	Ft. MSL
C. Total Available Head in Reach	<u>515 + 66 = 581</u>	Ft.
D. Average Slope in Reach	<u>166.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>380</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

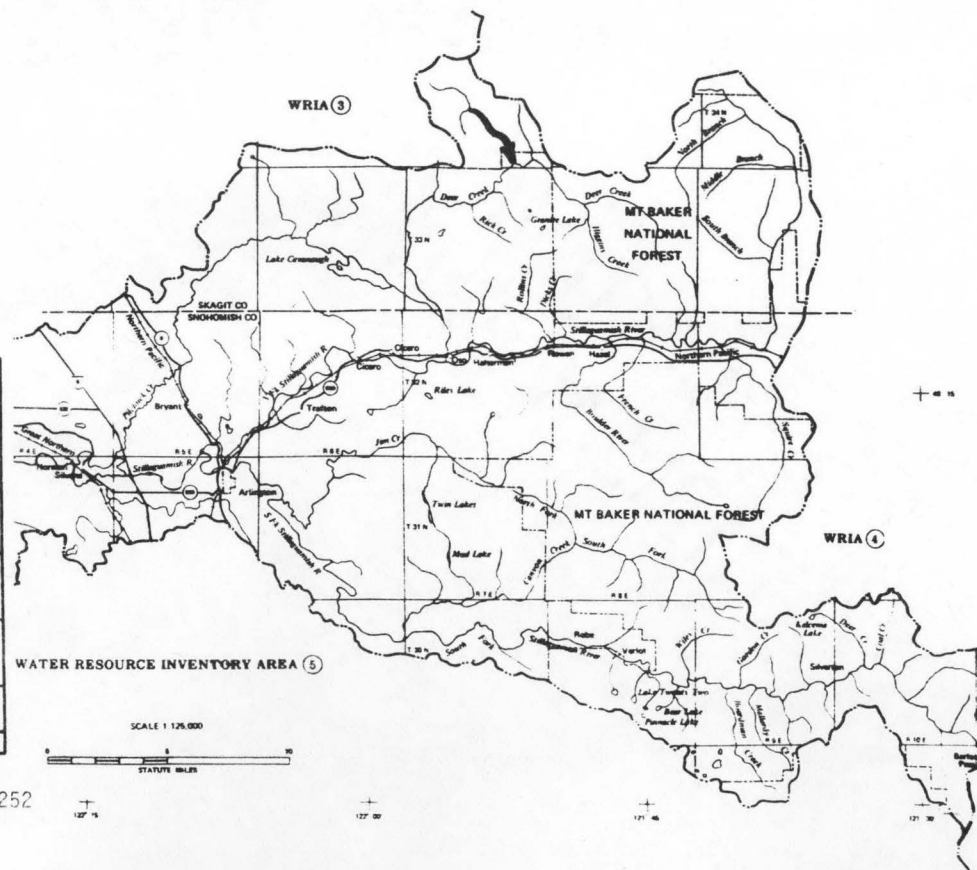
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4.62	0.23	1.99	1.00
80	12.3	0.61	4.88	0.92
50	45.4	2.23	14.1	0.72
30	80.1	3.94	20.0	0.58
10	172	8.44	27.4	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 77 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0013

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R7E</u>
D. Latitude, Longitude	<u>48°23' 121°50'</u>
E. Stream Name	<u>Deer Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/4.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

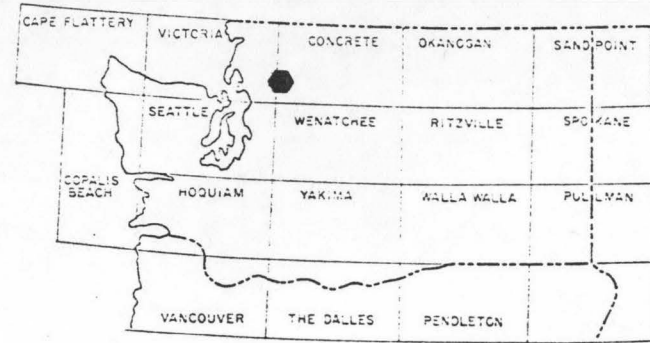
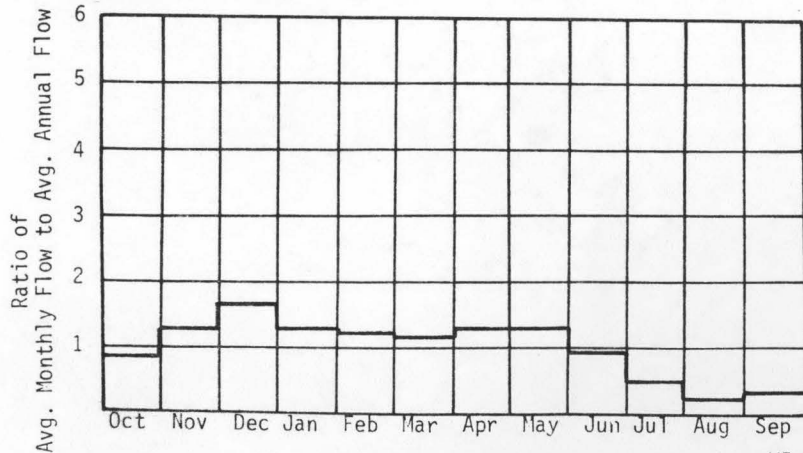
A. Upstream Elevation of Reach	<u>1940</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1515</u>	Ft. MSL
C. Total Available Head in Reach	<u>425</u>	Ft.
D. Average Slope in Reach	<u>96.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>26.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

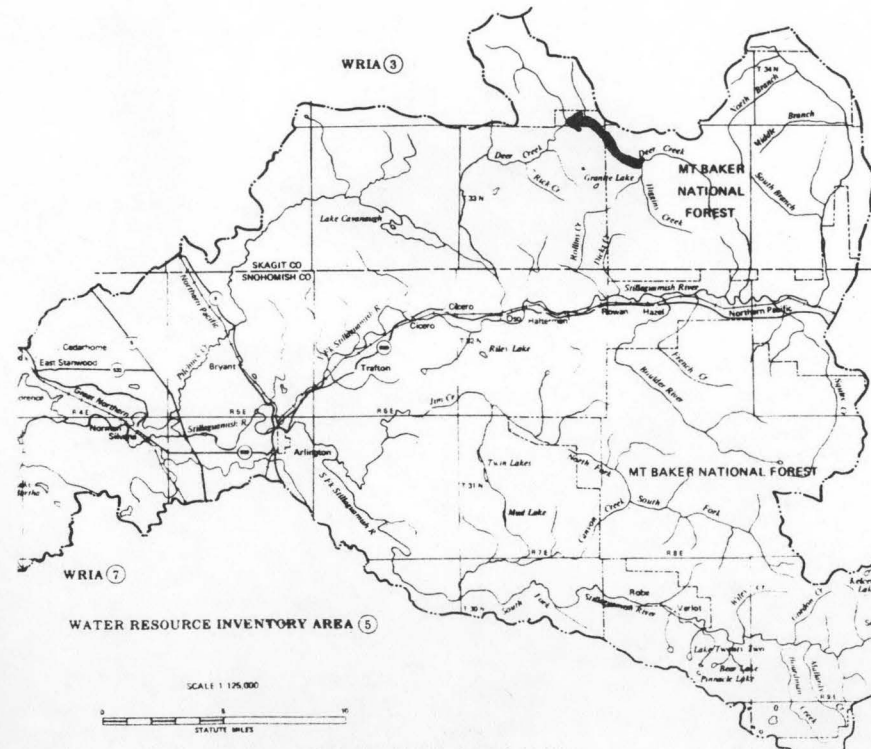
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.4	0.41	3.59	1.00
80	30.4	1.09	8.81	0.92
50	112	4.03	25.4	0.72
30	198	7.11	36.1	0.58
10	424	15.2	49.4	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 190 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0014

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R8E</u>
D. Latitude, Longitude	<u>48°21' 121°48'</u>
E. Stream Name	<u>Higgins Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>4.4/6.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

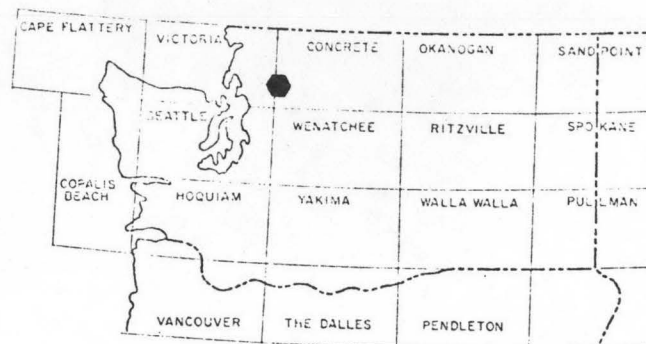
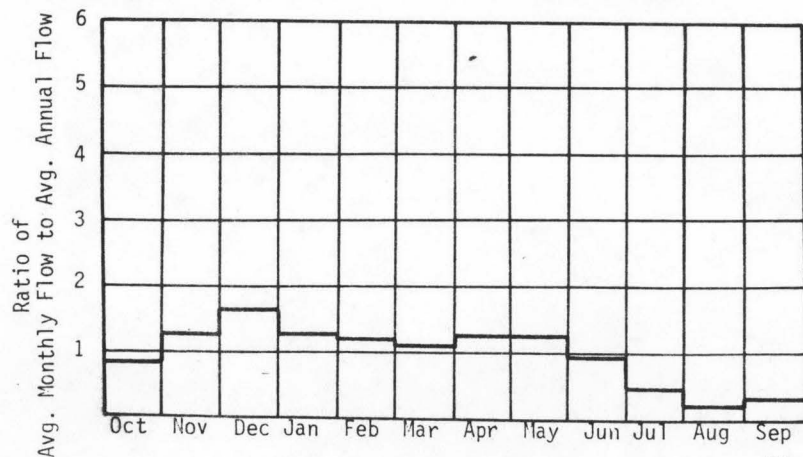
A. Upstream Elevation of Reach	<u>2320</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1940</u>	Ft. MSL
C. Total Available Head in Reach	<u>380 + 66 = 446</u>	Ft.
D. Average Slope in Reach	<u>200</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>18.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

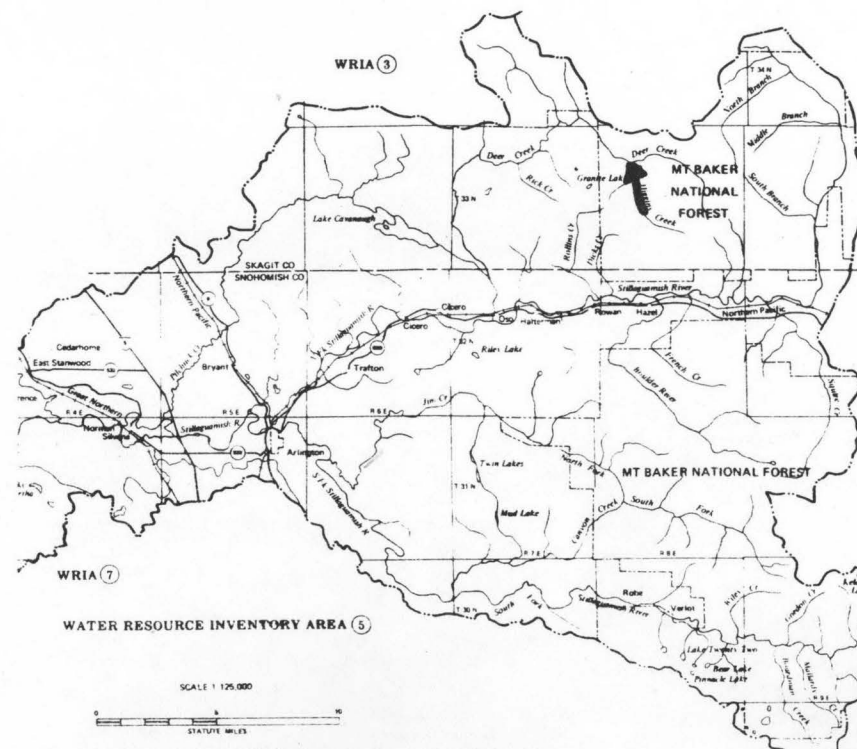
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	5.94	0.22	1.96	1.00
80	15.8	0.6	4.82	0.92
50	58.4	2.20	13.9	0.72
30	103	3.89	19.8	0.58
10	221	8.33	27.0	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 99 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0015

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T33N R8E</u>
D. Latitude, Longitude	<u>48°22' 121°46'</u>
E. Stream Name	<u>Deer Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/3.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

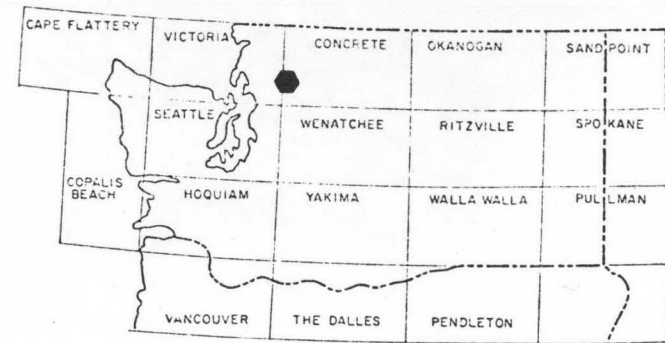
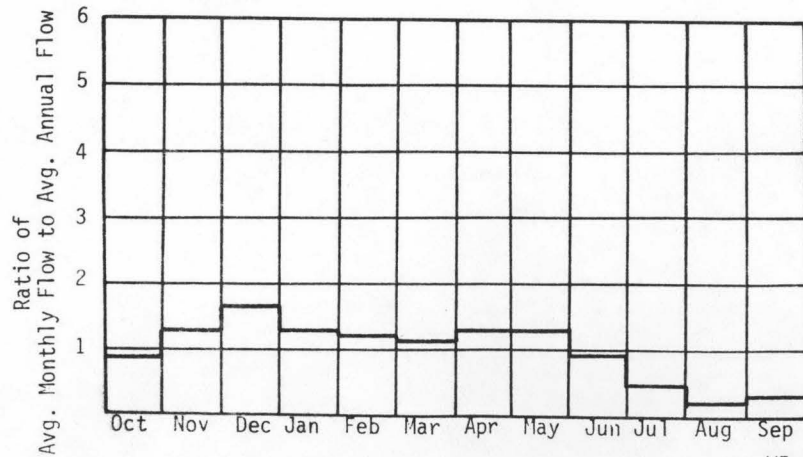
A. Upstream Elevation of Reach	<u>2465</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1940</u>	Ft. MSL
C. Total Available Head in Reach	<u>525 + 66 = 591</u>	Ft.
D. Average Slope in Reach	<u>164.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>9.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

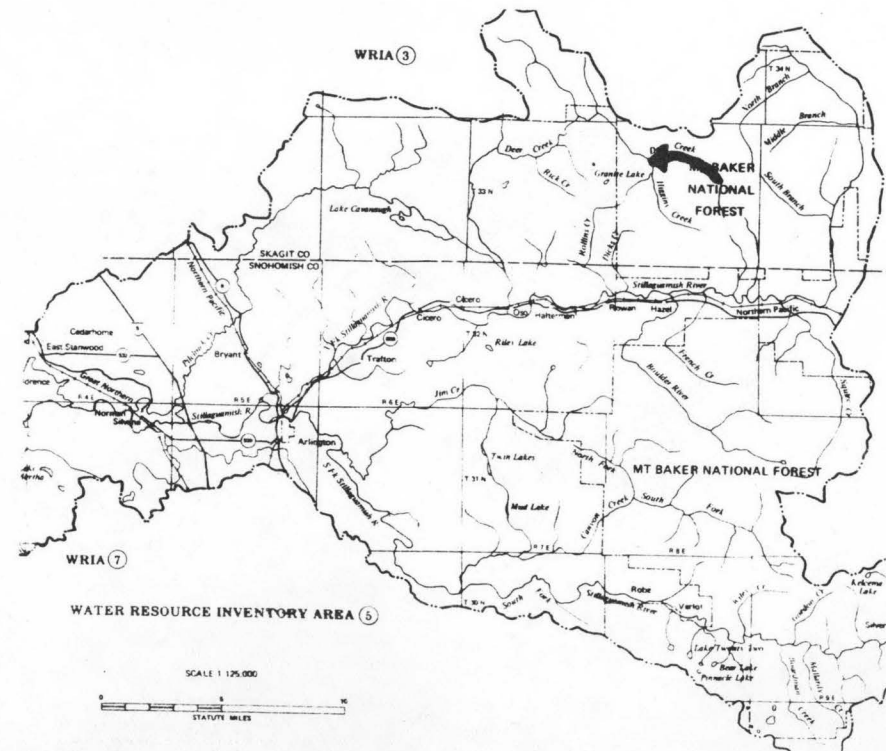
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4.08	0.20	1.79	1.00
80	10.9	0.54	4.39	0.92
50	40.1	2.01	12.7	0.72
30	70.7	3.54	18.0	0.58
10	152	7.59	24.6	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 68 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0016

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Skagit</u>
C. Township, Range	<u>T32N R8E</u>
D. Latitude, Longitude	<u>48°14' 121°49'</u>
E. Stream Name	<u>Boulder River</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/11.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

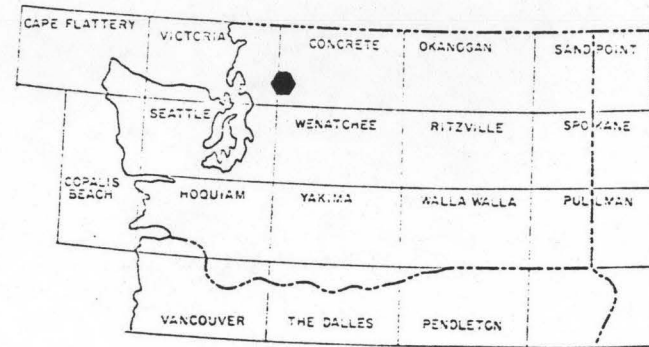
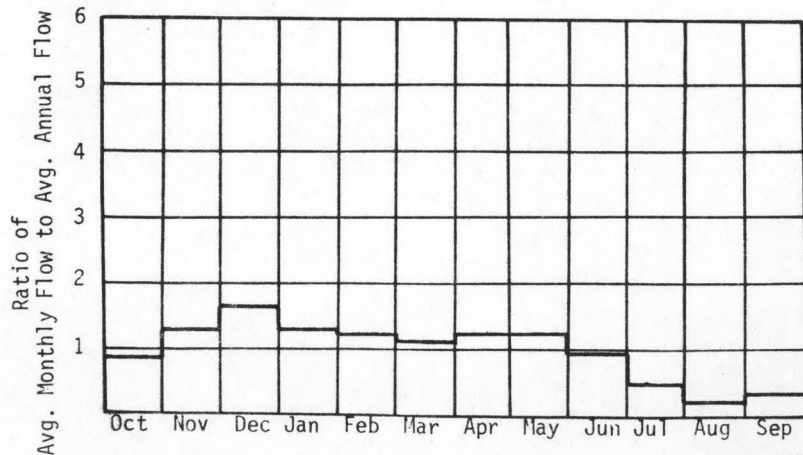
A. Upstream Elevation of Reach	<u>1650</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>310</u>	Ft. MSL
C. Total Available Head in Reach	<u>1340</u>	Ft.
D. Average Slope in Reach	<u>119.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

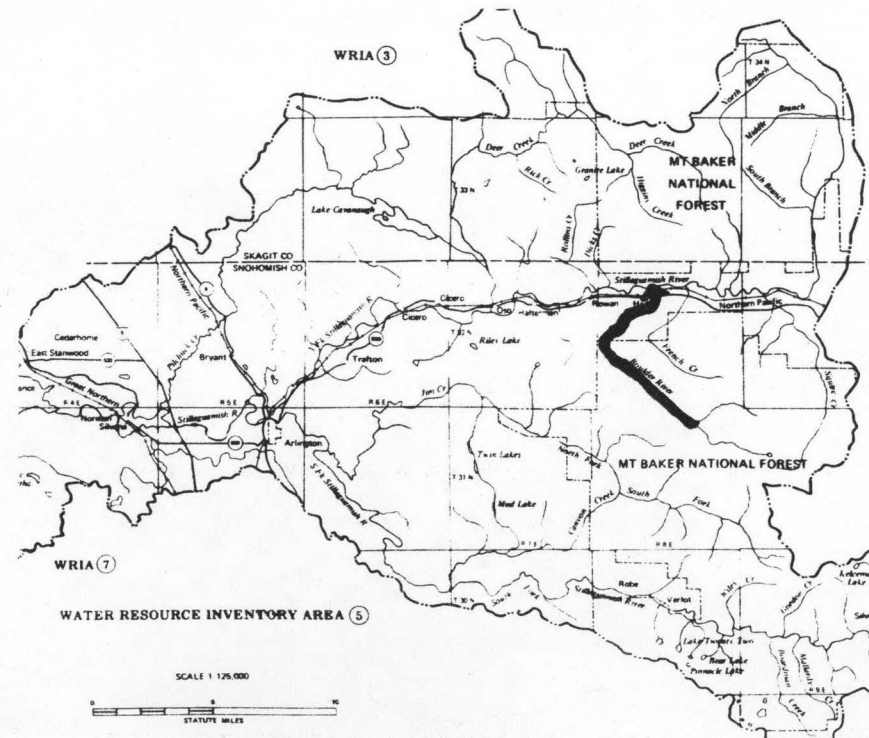
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.9	1.92	16.8	1.00
80	45.6	5.18	41.7	0.92
50	125	14.2	93.1	0.75
30	184	20.9	117	0.64
10	341	38.7	146	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 169 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0017

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R8E</u>
D. Latitude, Longitude	<u>48°12' 121°44'</u>
E. Stream Name	<u>Boulder River</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>11.2/12.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

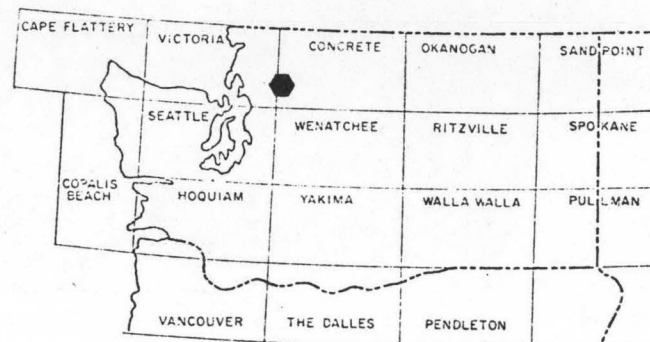
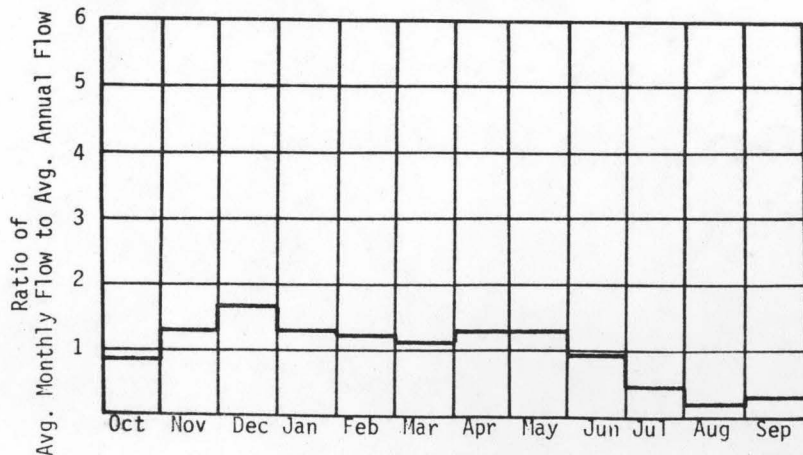
A. Upstream Elevation of Reach	<u>2040</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1650</u>	Ft. MSL
C. Total Available Head in Reach	<u>390 + 66 = 456</u>	Ft.
D. Average Slope in Reach	<u>260</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

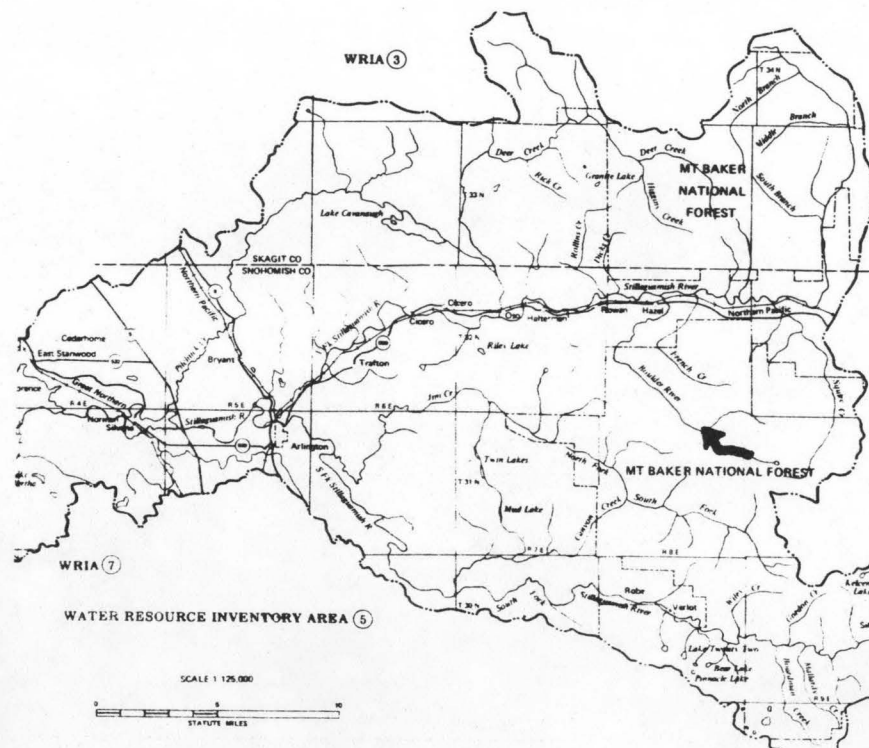
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	8.30	0.32	2.81	1.00
80	22.4	0.86	6.97	0.92
50	61.4	2.37	15.6	0.75
30	90.5	3.49	19.6	0.64
10	168	6.47	24.7	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 83 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0018

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R8E</u>
D. Latitude, Longitude	<u>48°16' 121°46'</u>
E. Stream Name	<u>French Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/2.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

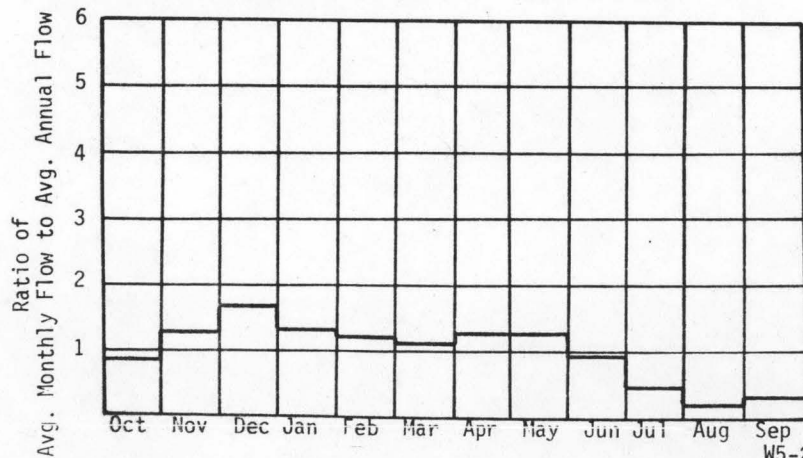
A. Upstream Elevation of Reach	<u>640</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>320</u>	Ft. MSL
C. Total Available Head in Reach	<u>320 + 66 = 386</u>	Ft.
D. Average Slope in Reach	<u>139.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

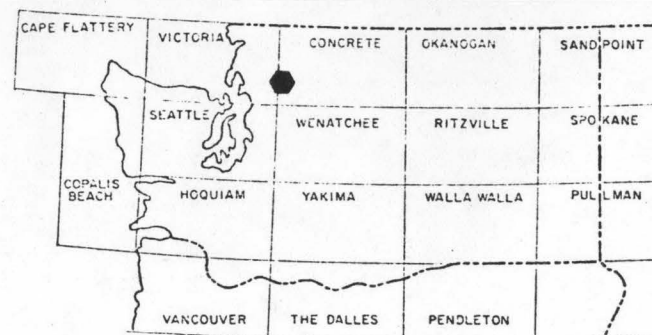
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6.00	0.20	1.72	1.00
80	16.2	0.53	4.27	0.92
50	44.4	1.45	9.53	0.75
30	65.4	2.13	12.0	0.64
10	121	3.96	14.9	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

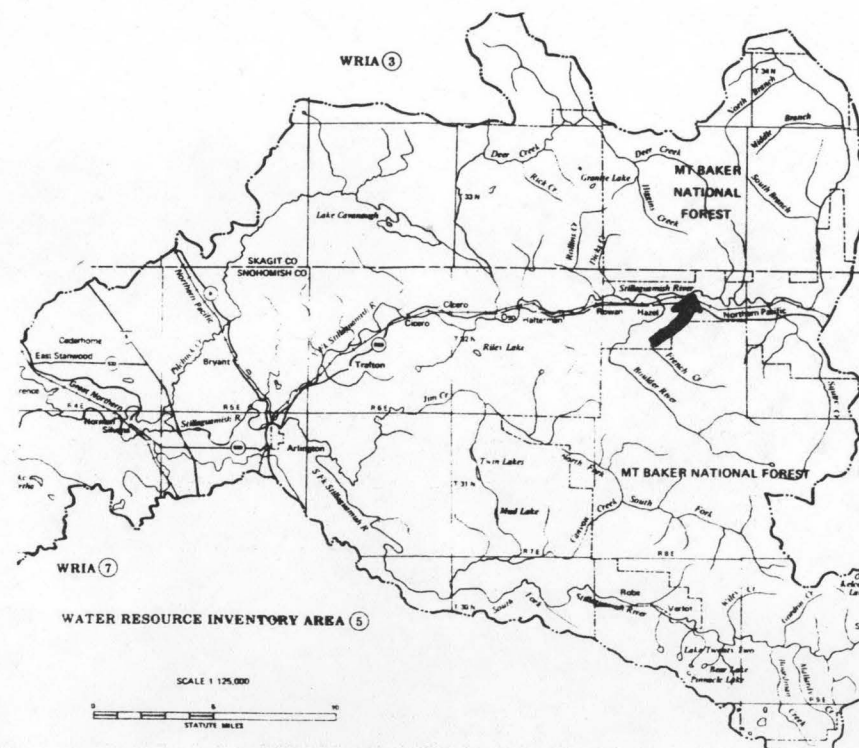
QMR = 60 cfs



W5-258



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0019

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T32N R9E</u>
D. Latitude, Longitude	<u>48°14' 121°38'</u>
E. Stream Name	<u>Squire Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/8.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

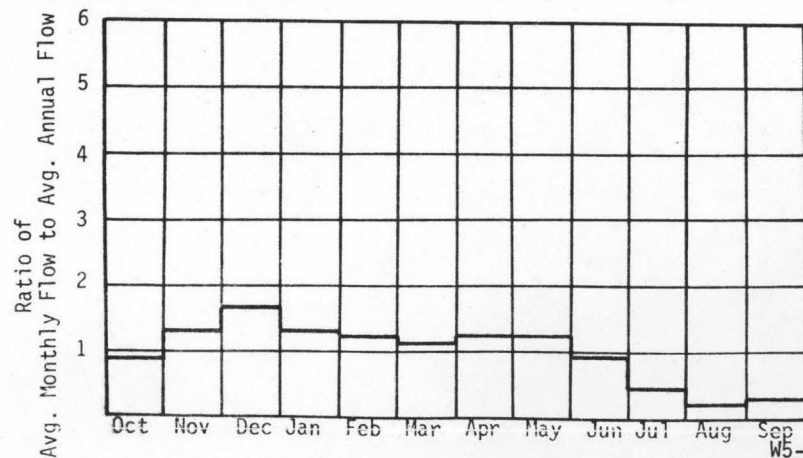
A. Upstream Elevation of Reach	<u>1680</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>422</u>	Ft. MSL
C. Total Available Head in Reach	<u>1258 + 66 = 1324</u>	Ft.
D. Average Slope in Reach	<u>151.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>27.1</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

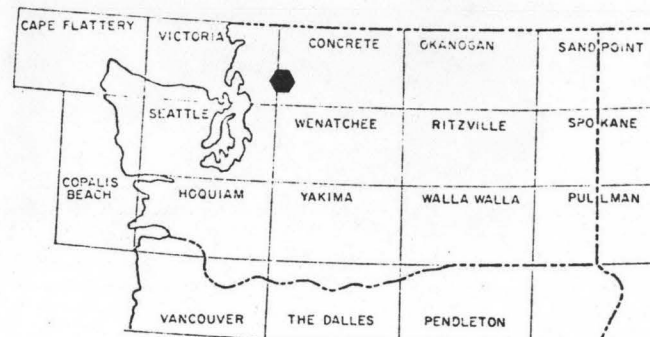
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.4	2.40	21.1	1.00
80	46.9	5.26	42.8	0.93
50	101	11.3	77.0	0.78
30	146	16.4	94.6	0.66
10	252	28.2	114	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

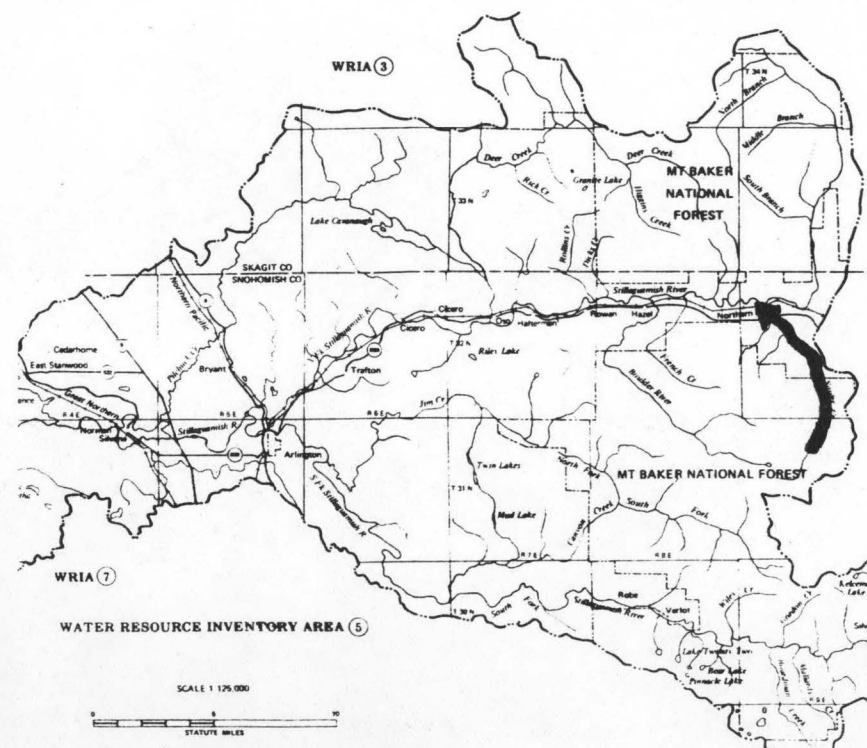
QMR = 134 cfs



W5-259



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0020

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R5E</u>
D. Latitude, Longitude	<u>48°12' 122°06'</u>
E. Stream Name	<u>S.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/3.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

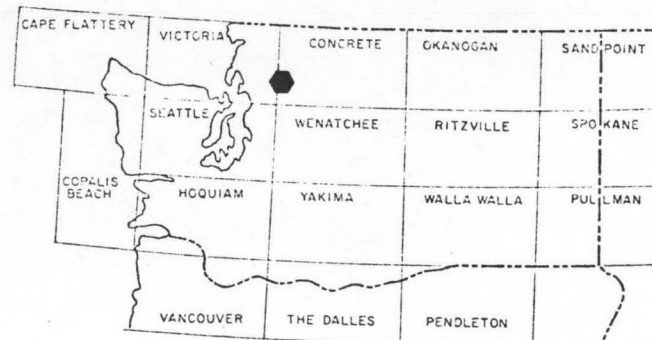
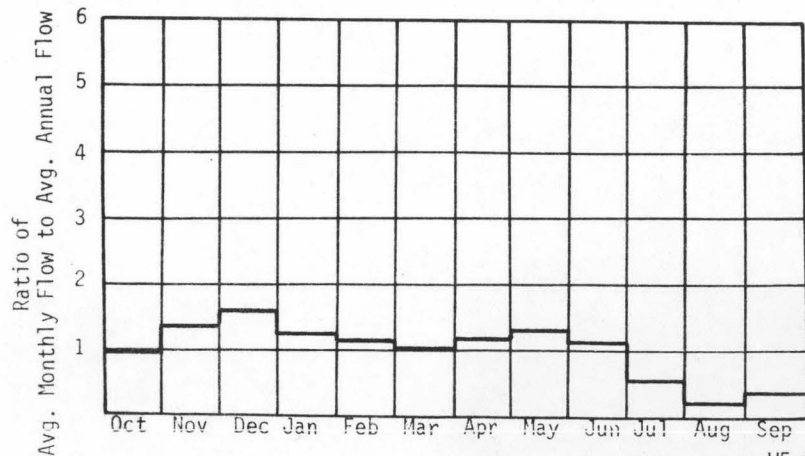
A. Upstream Elevation of Reach	<u>80</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>50</u>	Ft. MSL
C. Total Available Head in Reach	<u>30</u>	Ft.
D. Average Slope in Reach	<u>7.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>255.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

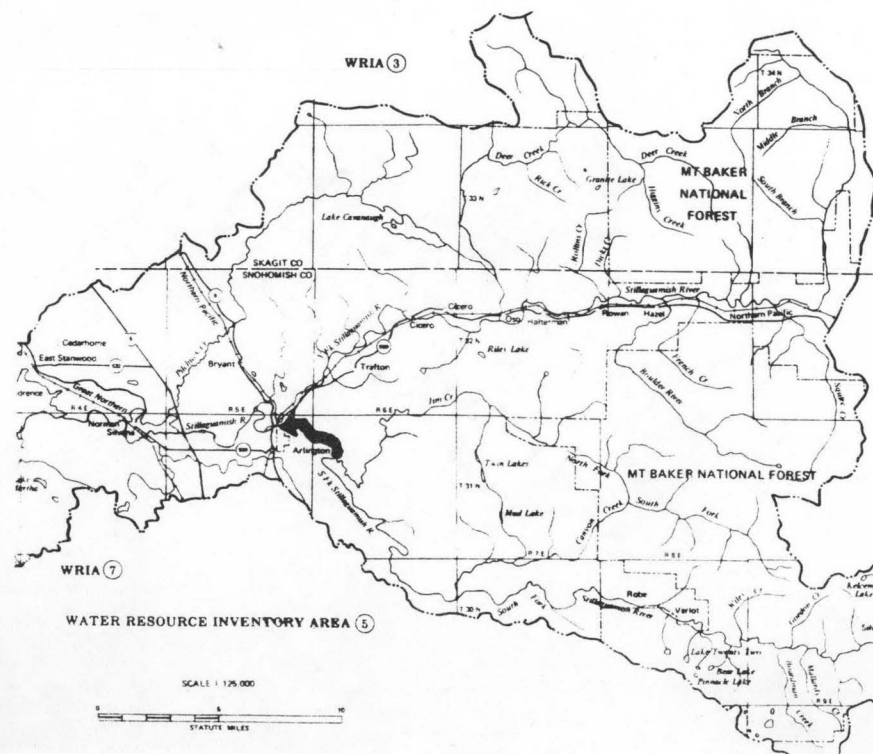
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	196	0.50	4.37	1.00
80	410	1.04	8.49	0.93
50	1300	3.31	21.4	0.74
30	2030	5.16	28.1	0.62
10	3890	9.88	35.5	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1784 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0021

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R6E</u>
D. Latitude, Longitude	<u>48°08' 122°01'</u>
E. Stream Name	<u>S.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>3.9/16.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

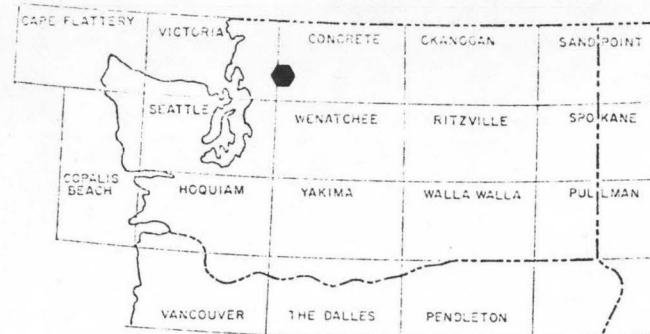
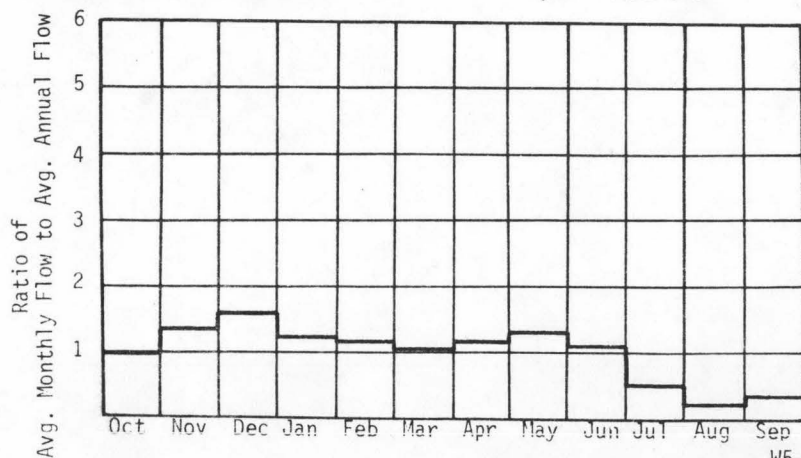
A. Upstream Elevation of Reach	<u>240</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>80</u>	Ft. MSL
C. Total Available Head in Reach	<u>160</u>	Ft.
D. Average Slope in Reach	<u>13.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>202.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

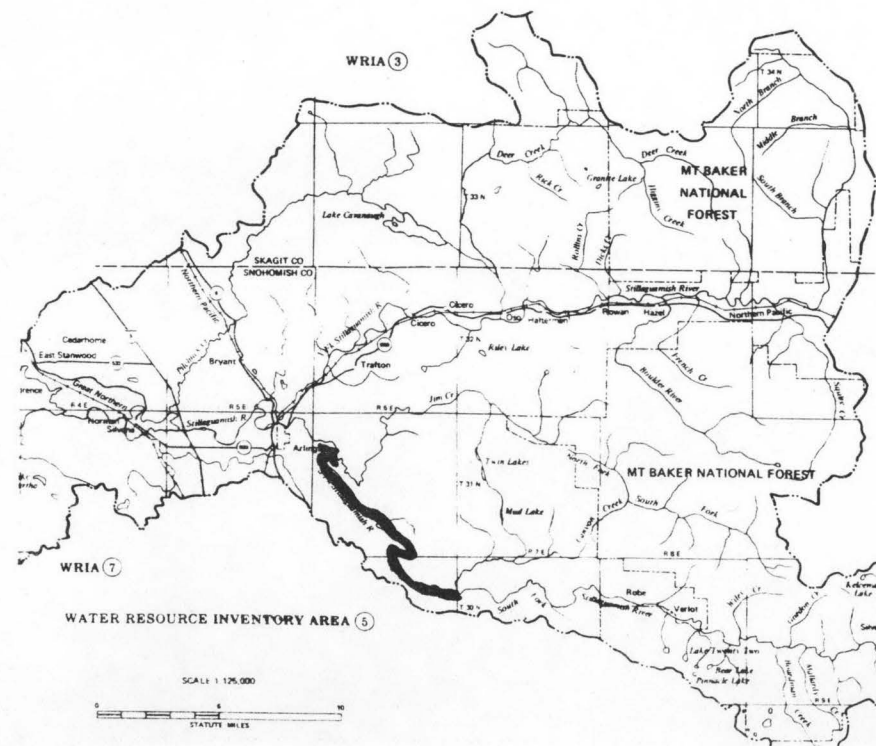
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	173	2.34	20.5	1.00
80	456	6.17	49.8	0.92
50	1180	16.0	105	0.75
30	1780	24.1	133	0.63
10	3160	42.8	165	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1572 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0022

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R7E</u>
D. Latitude, Longitude	<u>48°06' 121°54'</u>
E. Stream Name	<u>S.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>16.2/27.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

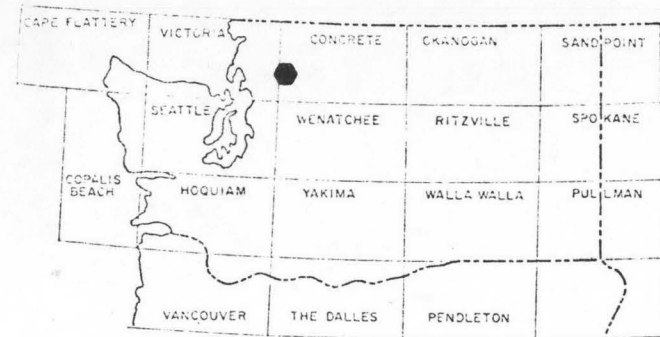
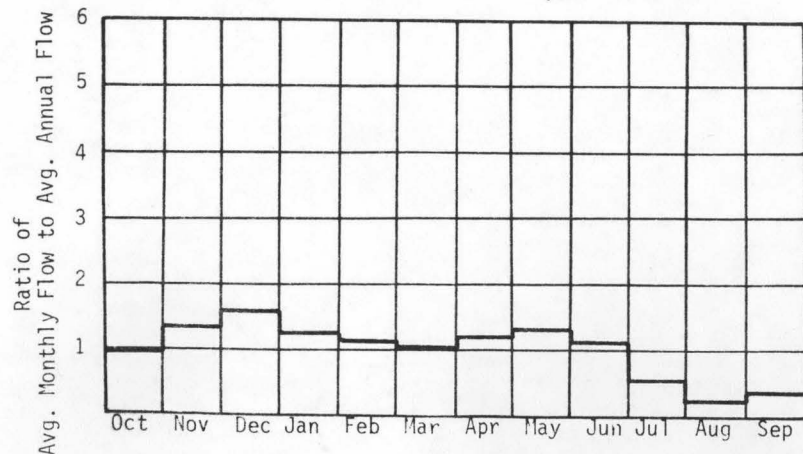
A. Upstream Elevation of Reach	<u>880</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>240</u>	Ft. MSL
C. Total Available Head in Reach	<u>640</u>	Ft.
D. Average Slope in Reach	<u>55.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>119.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

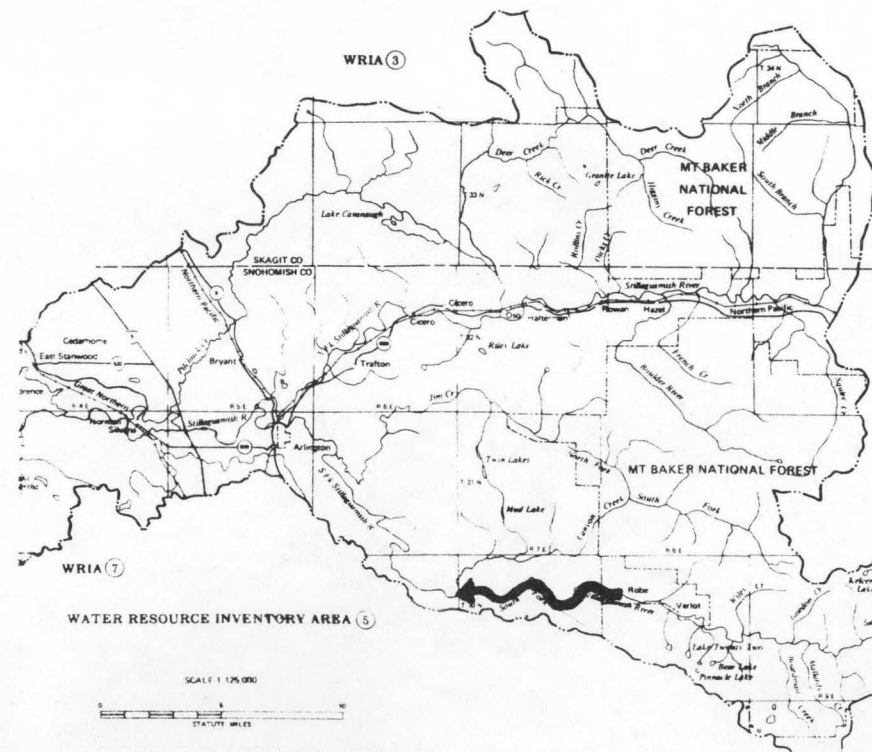
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	132	7.17	62.8	1.00
80	295	16.0	130	0.93
50	713	38.6	257	0.76
30	1110	60.1	332	0.63
10	2070	112	422	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1018 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0023

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R8E</u>
D. Latitude, Longitude	<u>48°05' 121°45'</u>
E. Stream Name	<u>S.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>27.7/37.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

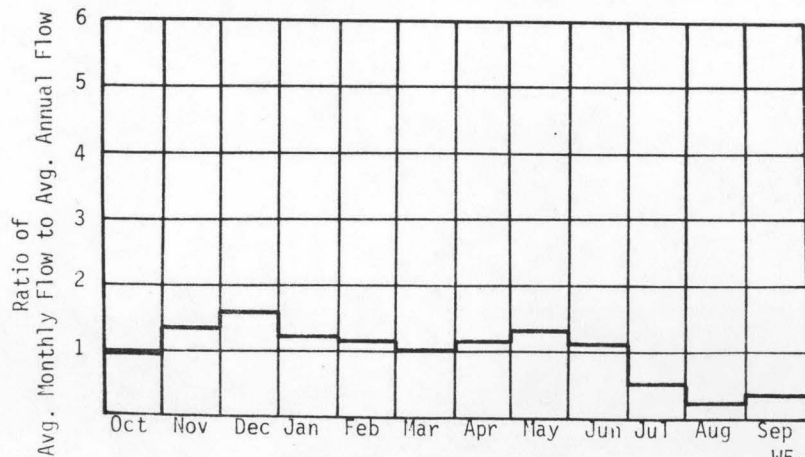
A. Upstream Elevation of Reach	<u>1215</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>880</u>	Ft. MSL
C. Total Available Head in Reach	<u>335</u>	Ft.
D. Average Slope in Reach	<u>34.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>99.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

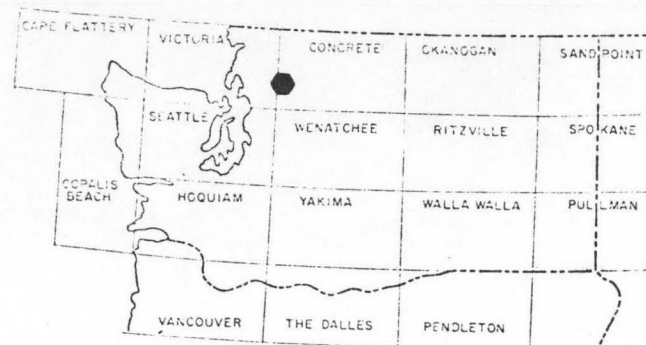
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	113	3.22	28.2	1.00
80	253	7.18	58.5	0.93
50	611	17.3	115	0.76
30	952	27.0	149	0.63
10	1770	50.3	189	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

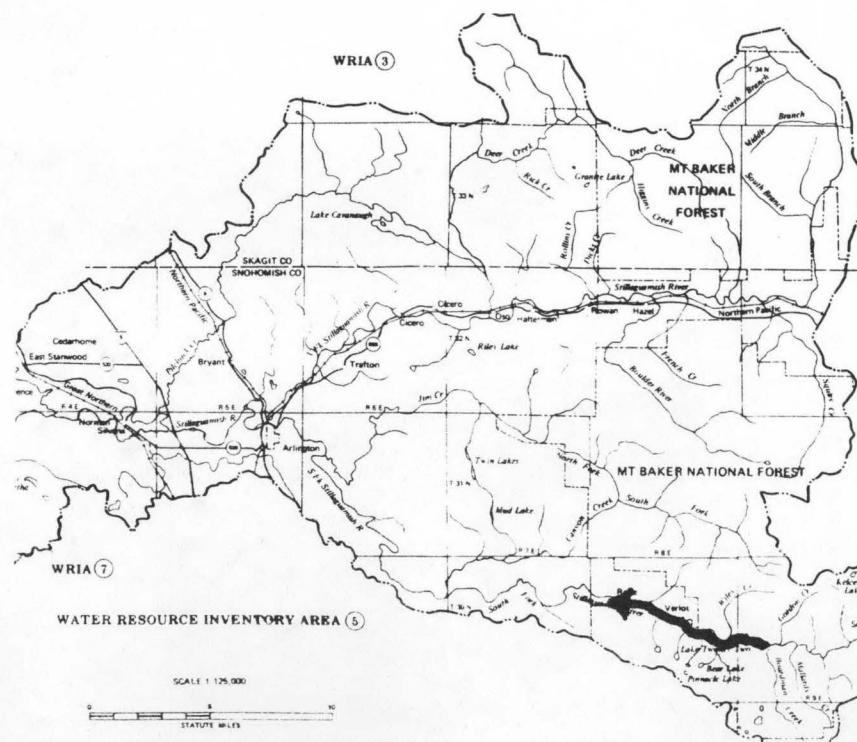
QMR = 873 cfs



W5-263



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0024

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T30N R9E  
 D. Latitude, Longitude 48°05' 121°35'  
 E. Stream Name S.F. Stillaguamish  
 F. Major Basin Name Stillaguamish  
 G. River Mile 37.3/48.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

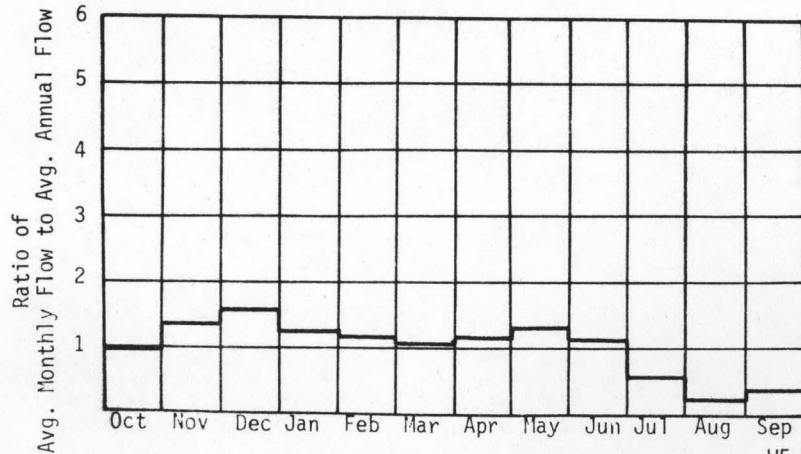
A. Upstream Elevation of Reach 1680 Ft. MSL  
 B. Downstream Elevation of Reach 1215 Ft. MSL  
 C. Total Available Head in Reach 465 Ft.  
 D. Average Slope in Reach 43.5 Ft./Mi.  
 E. Drainage Area above Reach Mouth 59.7 Sq.Mi.  
 F. Inflow Classification Natural

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

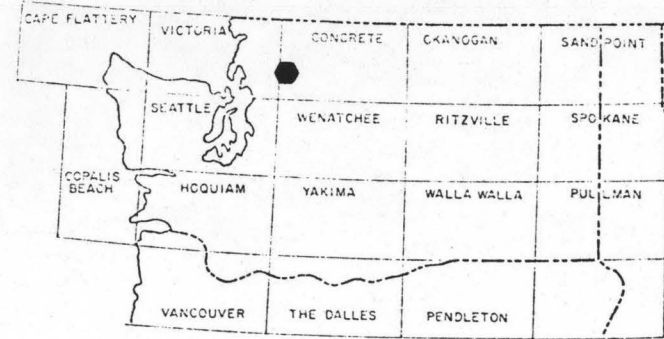
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	56.6	2.23	19.53	1.00
80	123	4.83	39.4	0.93
50	316	12.5	81.8	0.75
30	529	20.8	111	0.61
10	953	37.5	138	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

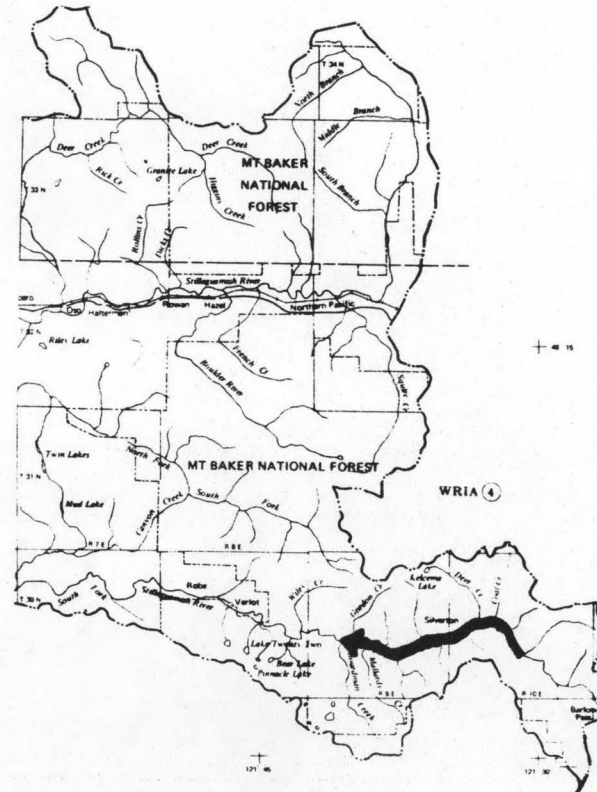
QMR = 472 cfs



W5-264



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0025

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R10E</u>
D. Latitude, Longitude	<u>48°03' 121°31'</u>
E. Stream Name	<u>S.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>48.0/50.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

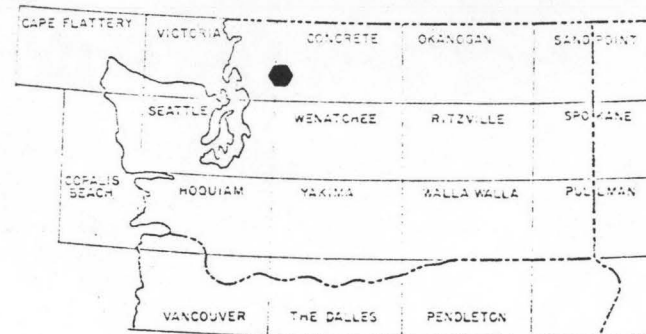
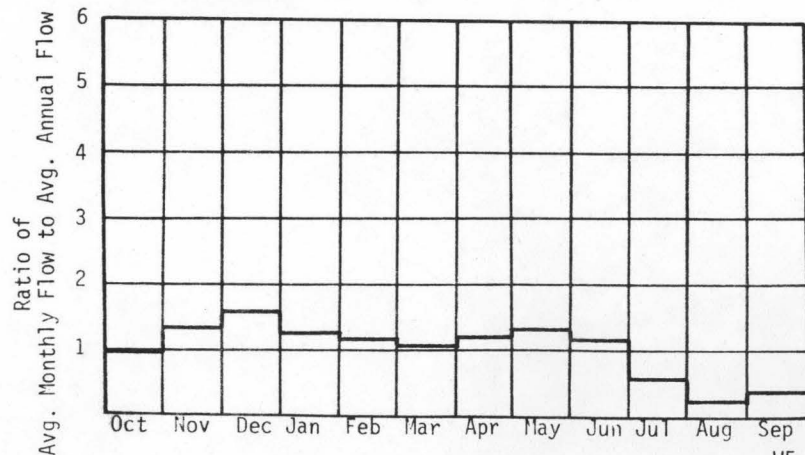
A. Upstream Elevation of Reach	<u>1830</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1680</u>	Ft. MSL
C. Total Available Head in Reach	<u>150</u>	Ft.
D. Average Slope in Reach	<u>60.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

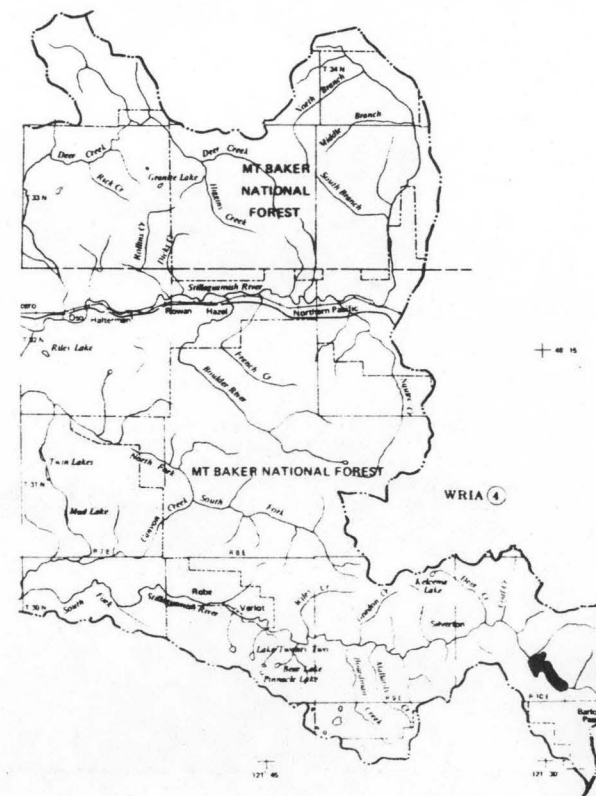
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	19.7	0.25	2.19	1.00
80	42.6	0.54	4.41	0.93
50	110	1.40	9.17	0.75
30	183.7	2.33	12.5	0.61
10	331	4.21	15.5	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 164 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0026

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R10E</u>
D. Latitude, Longitude	<u>48°02' 121°29'</u>
E. Stream Name	<u>S.F. Stillaguamish</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>50.5/52.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

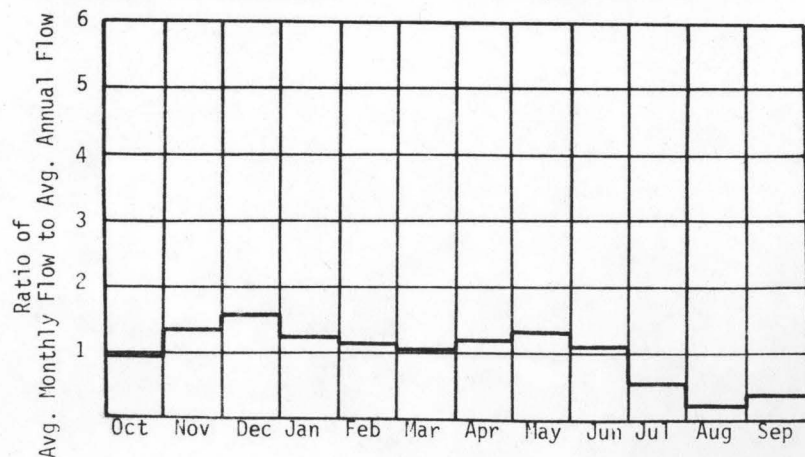
A. Upstream Elevation of Reach	<u>2120</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1830</u>	Ft. MSL
C. Total Available Head in Reach	<u>290 + 66 = 356</u>	Ft.
D. Average Slope in Reach	<u>161.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>5.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

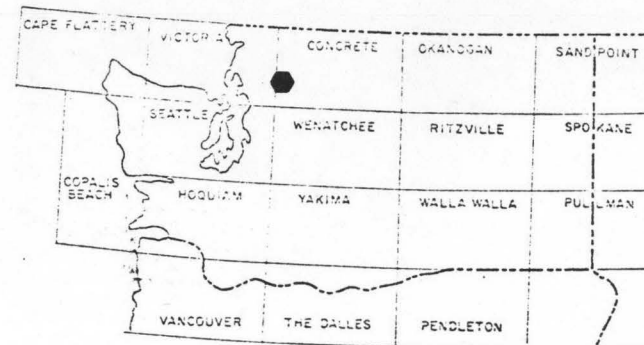
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	8.16	0.25	2.15	1.00
80	17.7	0.53	4.34	0.93
50	45.6	1.37	9.02	0.75
30	76.2	2.29	12.3	0.61
10	137.4	4.14	15.2	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

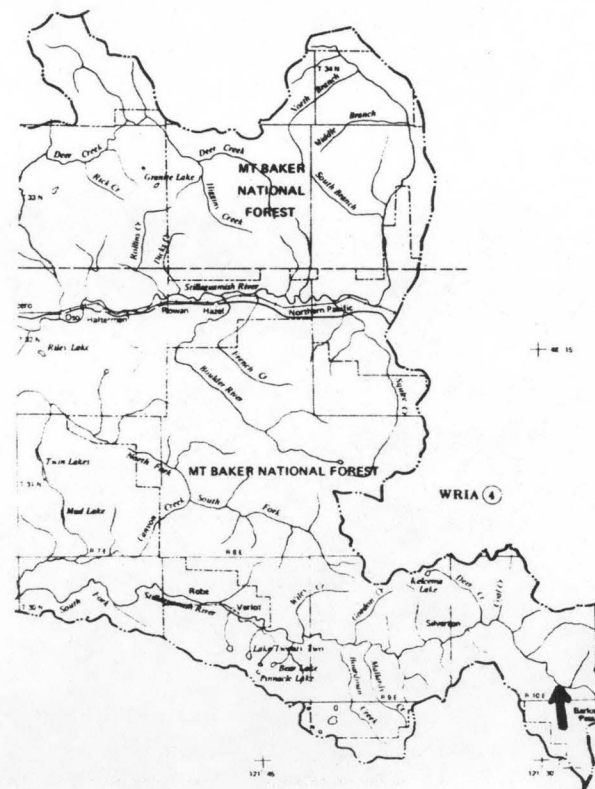
QMR = 68 cfs



W5-266



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0027

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R6E</u>
D. Latitude, Longitude	<u>48°12' 122°02'</u>
E. Stream Name	<u>Jim Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/12.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

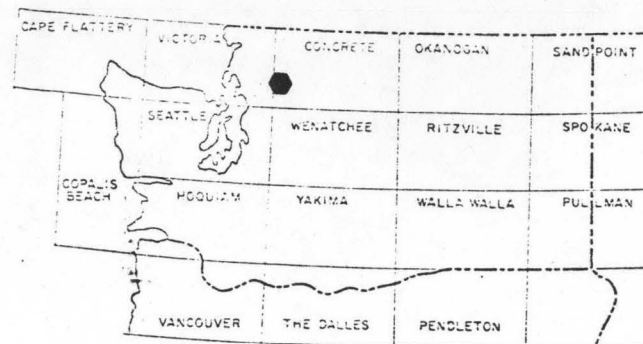
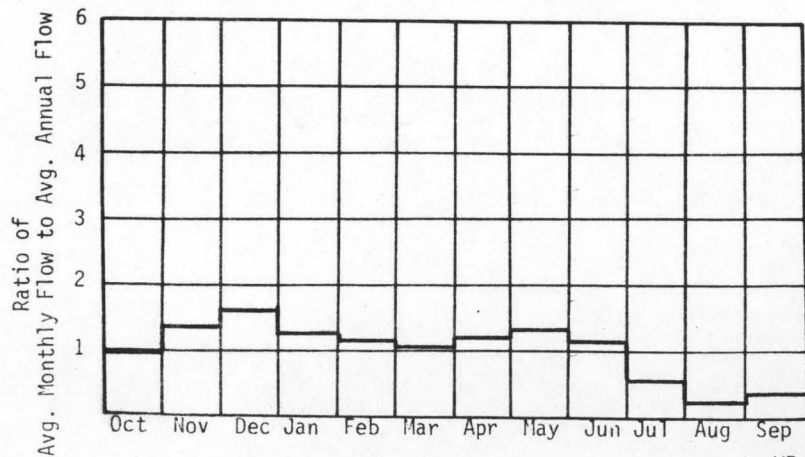
A. Upstream Elevation of Reach	<u>480</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>80</u>	Ft. MSL
C. Total Available Head in Reach	<u>400 + 66 = 466</u>	Ft.
D. Average Slope in Reach	<u>32.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>47.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

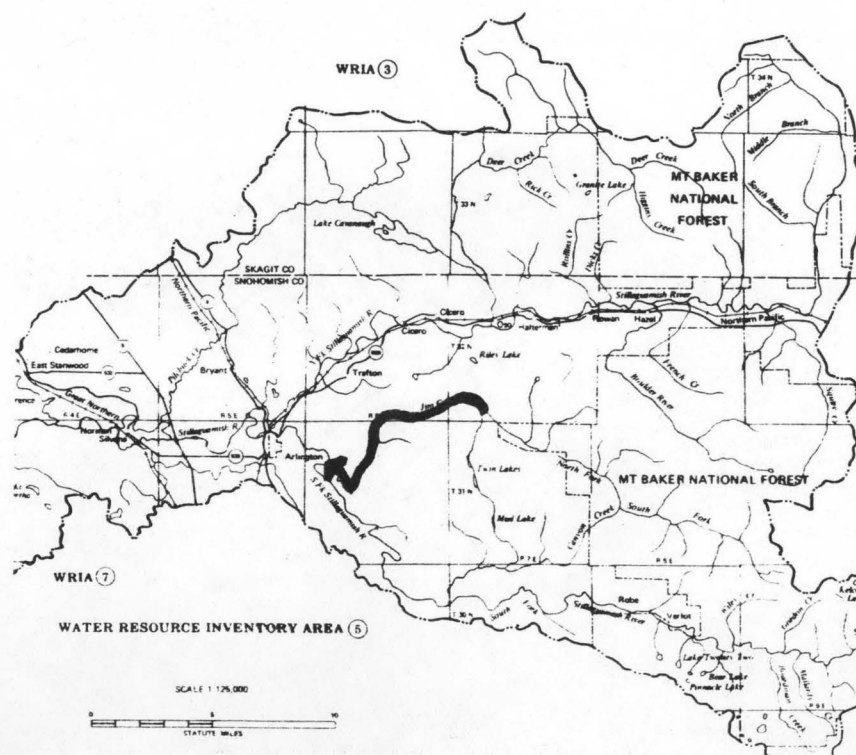
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6.96	0.27	2.40	1.00
80	22.0	0.87	6.93	0.91
50	84.7	3.34	21.1	0.72
30	131	5.17	27.6	0.61
10	259	10.2	35.8	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 116 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0028

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R7E</u>
D. Latitude, Longitude	<u>48°07' 121°54'</u>
E. Stream Name	<u>Canyon Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/11.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

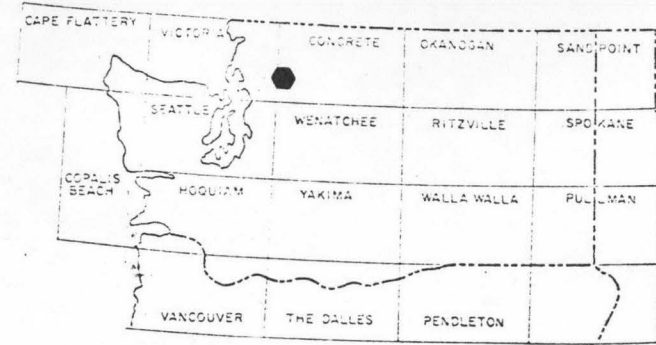
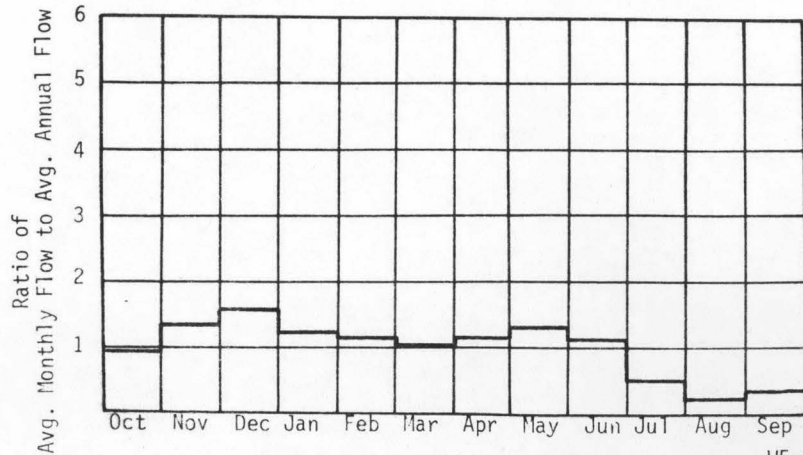
A. Upstream Elevation of Reach	<u>970</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>215</u>	Ft. MSL
C. Total Available Head in Reach	<u>755</u>	Ft.
D. Average Slope in Reach	<u>66.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>63.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

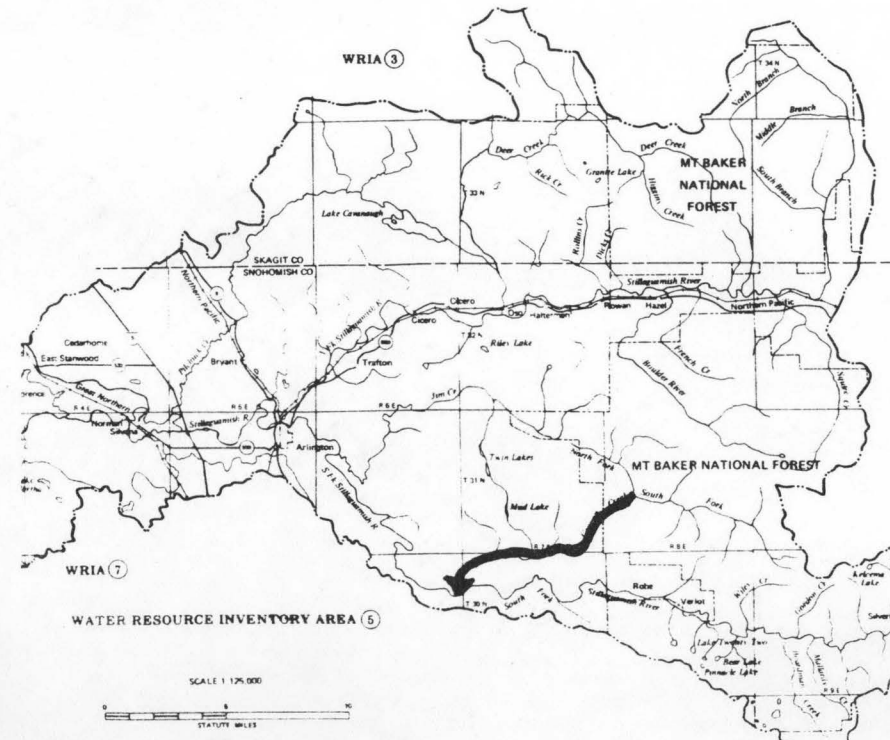
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	39.2	2.51	21.9	1.00
80	90.2	5.76	46.4	0.92
50	251	16.0	104	0.74
30	427	27.3	144	0.60
10	784	50.1	180	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 392 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0029

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T31N R8E</u>
D. Latitude, Longitude	<u>48°10' 121°49'</u>
E. Stream Name	<u>N.F. Canyon Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>11.3/13.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

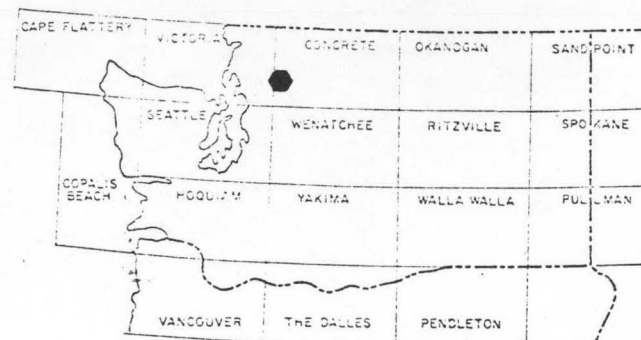
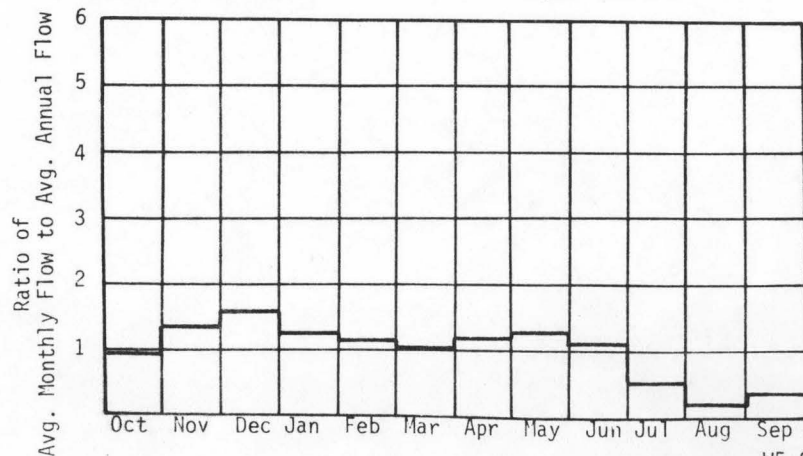
A. Upstream Elevation of Reach	<u>1400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>970</u>	Ft. MSL
C. Total Available Head in Reach	<u>430 + 66 = 496</u>	Ft.
D. Average Slope in Reach	<u>226.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

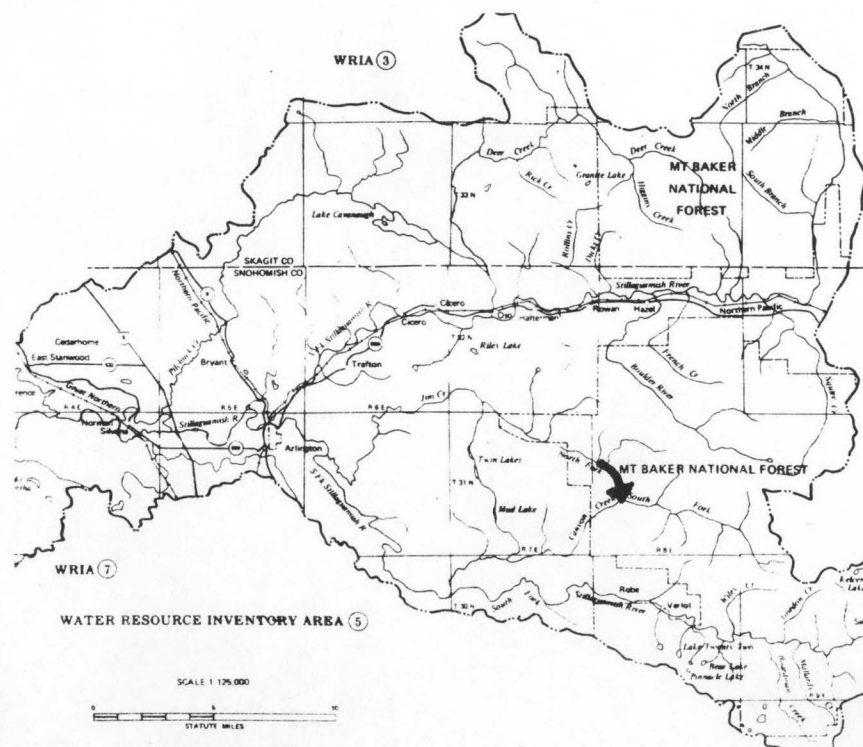
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	7.80	0.33	2.87	1.00
80	17.9	0.75	6.07	0.92
50	49.9	2.10	13.7	0.74
30	85.0	3.57	18.8	0.60
10	156	6.55	23.5	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 78 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0030

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T21N R8E</u>
D. Latitude, Longitude	<u>48°09' 121°45'</u>
E. Stream Name	<u>S.F. Canyon Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/6.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

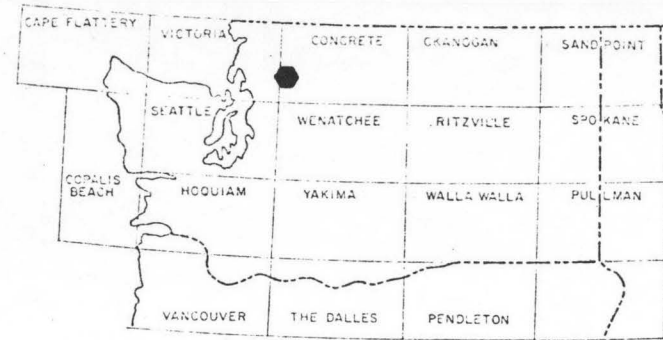
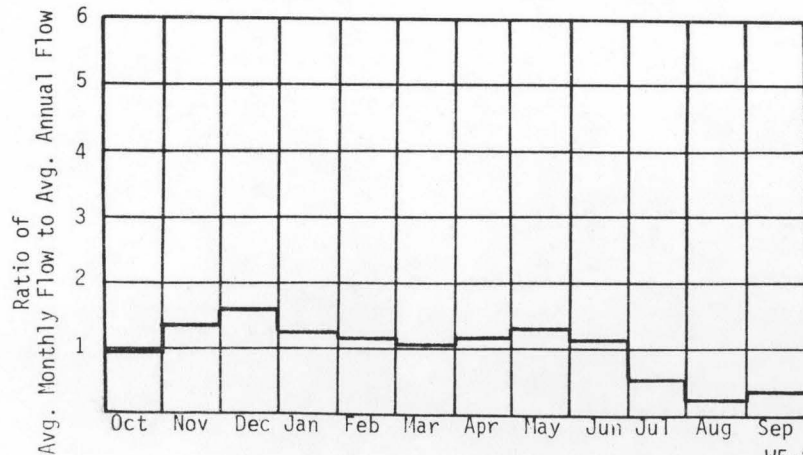
A. Upstream Elevation of Reach	<u>1840</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>970</u>	Ft. MSL
C. Total Available Head in Reach	<u>870 + 66 = 936</u>	Ft.
D. Average Slope in Reach	<u>142.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>23.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

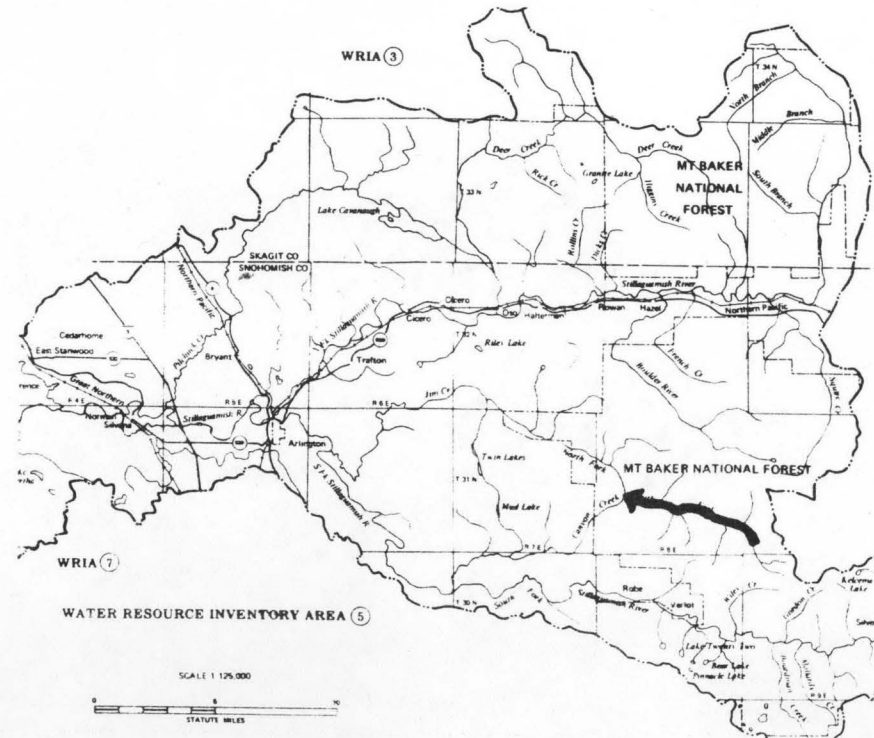
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.5	1.07	9.37	1.00
80	31.1	2.46	19.8	0.92
50	86.4	6.84	44.4	0.74
30	147	11.7	61.3	0.60
10	270	21.4	76.8	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 135 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0031

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R9E</u>
D. Latitude, Longitude	<u>48°03' 121°40'</u>
E. Stream Name	<u>Boardman Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/3.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

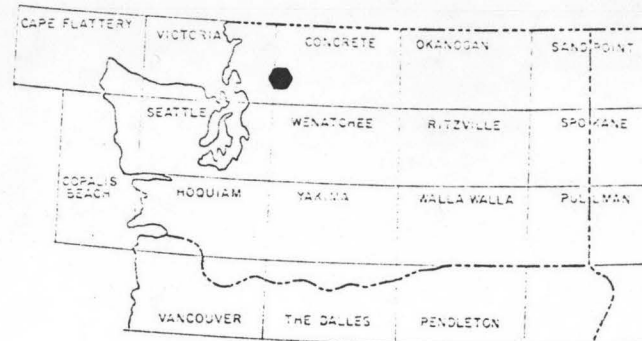
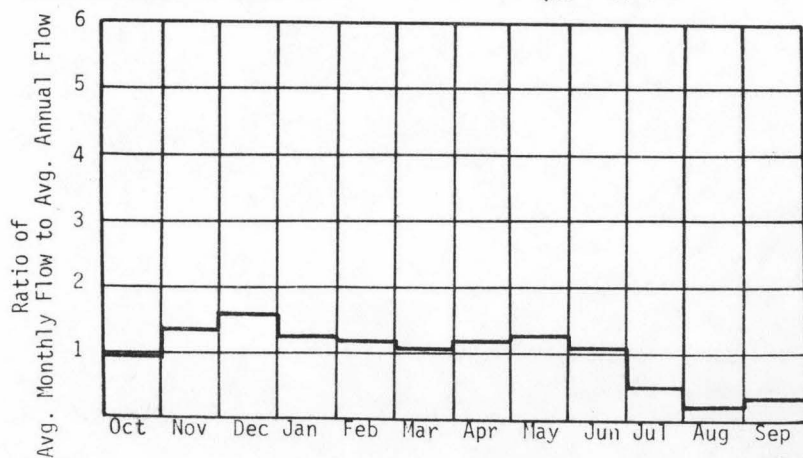
A. Upstream Elevation of Reach	<u>1720</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1215</u>	Ft. MSL
C. Total Available Head in Reach	<u>507 + 66 = 571</u>	Ft.
D. Average Slope in Reach	<u>136.5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>9.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

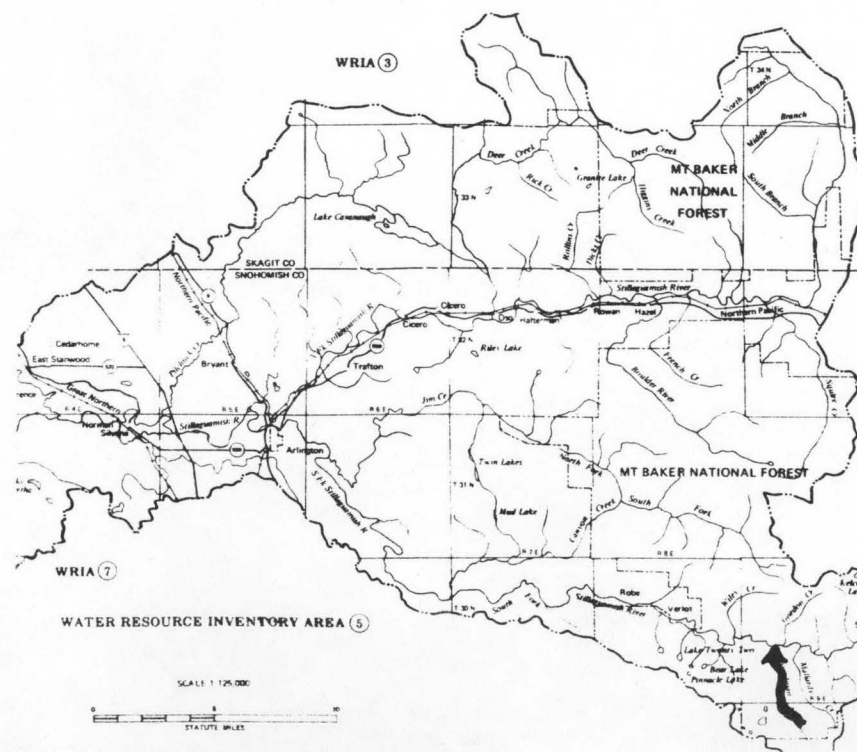
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	8.58	0.41	3.63	1.00
80	19.1	0.93	7.54	0.93
50	46.2	2.23	14.9	0.76
30	71.9	3.48	19.2	0.63
10	134	6.48	24.4	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 66 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0032

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R10E</u>
D. Latitude, Longitude	<u>48°03' 121°30'</u>
E. Stream Name	<u>Perry Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/1.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

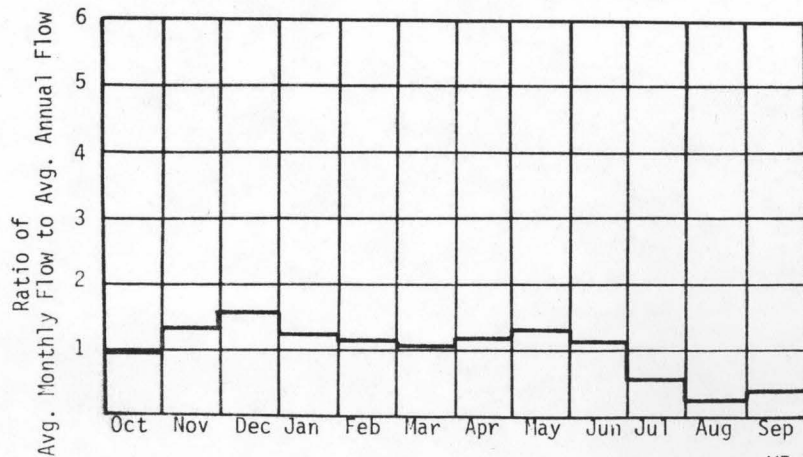
A. Upstream Elevation of Reach	<u>2000</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1680</u>	Ft. MSL
C. Total Available Head in Reach	<u>320 + 66 = 386</u>	Ft.
D. Average Slope in Reach	<u>228.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>4.3</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

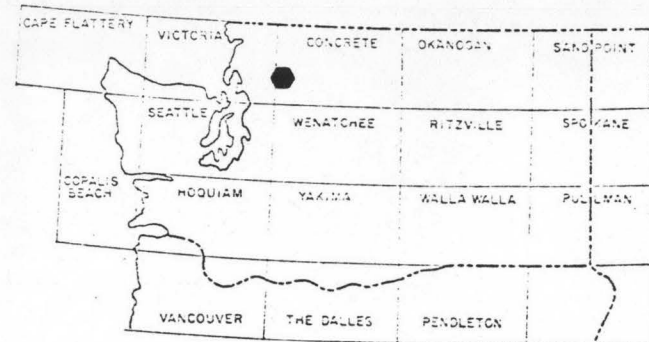
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6.84	0.22	1.96	1.00
80	14.8	0.48	3.94	0.93
50	38.2	1.25	8.20	0.75
30	63.8	2.09	11.2	0.61
10	115	3.76	13.8	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 57 cfs



W5-272



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-022-000-000-000-R0033

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T30N R10E</u>
D. Latitude, Longitude	<u>48°03' 121°28'</u>
E. Stream Name	<u>Palmer Creek</u>
F. Major Basin Name	<u>Stillaguamish</u>
G. River Mile	<u>0.0/0.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

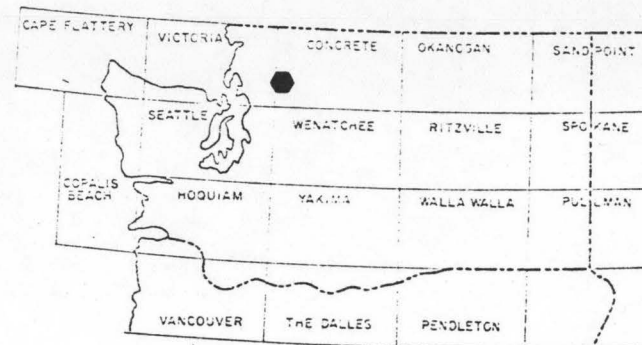
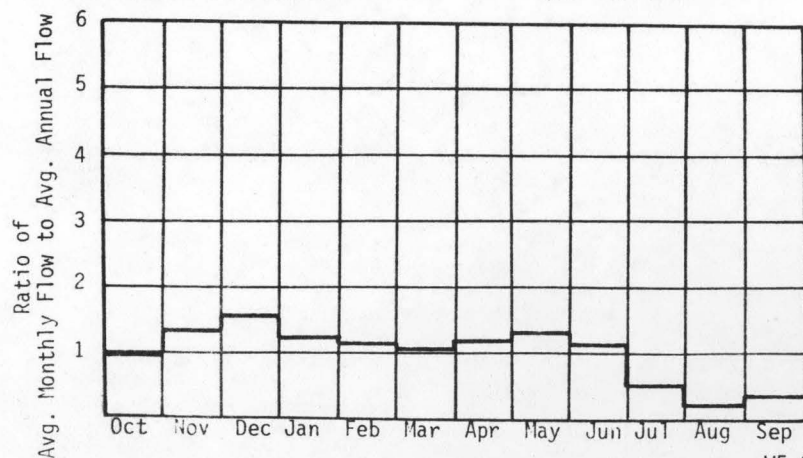
A. Upstream Elevation of Reach	<u>1830</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1820</u>	Ft. MSL
C. Total Available Head in Reach	<u>0 + 66 = 66</u>	Ft.
D. Average Slope in Reach	<u>--</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>3.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

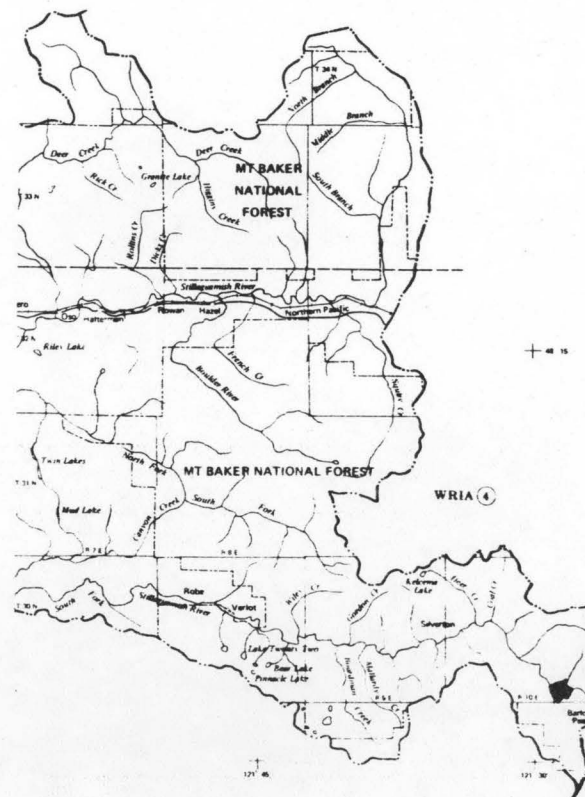
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6.24	0.03	0.31	1.00
80	13.5	0.08	0.62	0.93
50	34.8	0.19	1.28	0.75
30	58.2	0.33	1.74	0.61
10	105	0.59	2.16	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 52 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R5E</u>
D. Latitude, Longitude	<u>47°57' 122°10'</u>
E. Stream Name	<u>Snohomish River</u>
F. Major Basin Name	<u>Snohomish River</u>
G. River Mile	<u>0.0/12.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

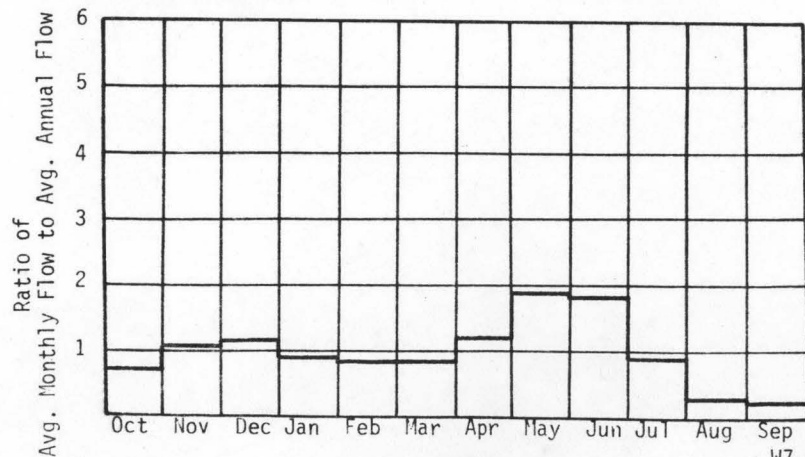
A. Upstream Elevation of Reach	<u>4</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>0</u>	Ft. MSL
C. Total Available Head in Reach	<u>4</u>	Ft.
D. Average Slope in Reach	<u>0.33</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>1786.0</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

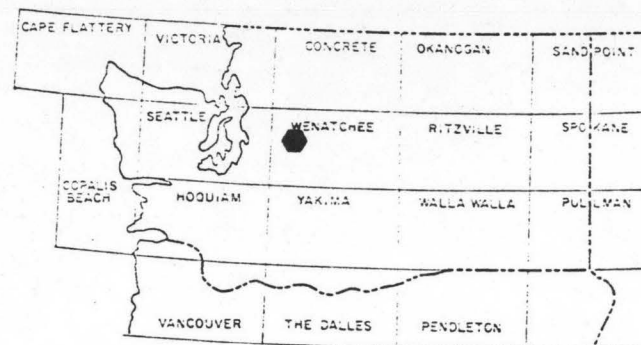
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1890	0.64	5.61	1.00
80	4090	1.38	11.3	0.93
50	7870	2.66	18.7	0.80
30	11700	3.95	23.2	0.67
10	19100	6.48	27.2	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

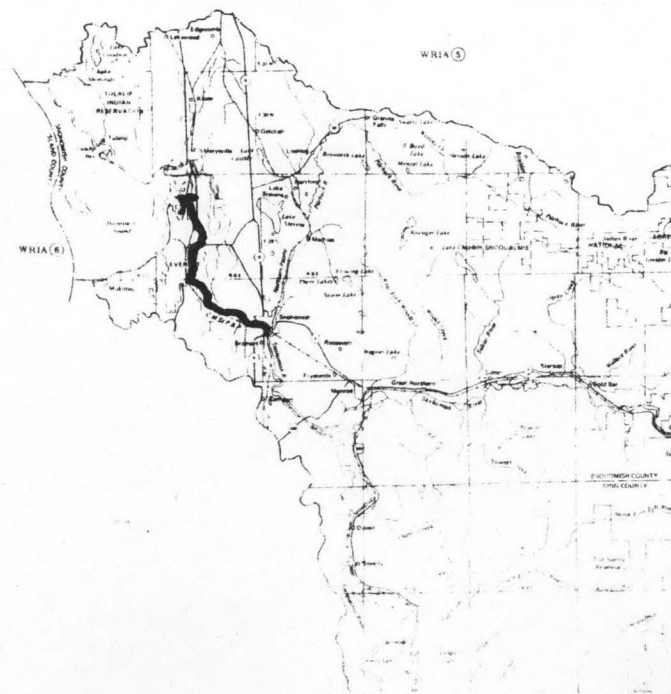
QMR = 9967 cfs



W7-274



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0002

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R6E  
 D. Latitude, Longitude 47°52' 122°05'  
 E. Stream Name Snohomish  
 F. Major Basin Name Snohomish  
 G. River Mile 12.2/18.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

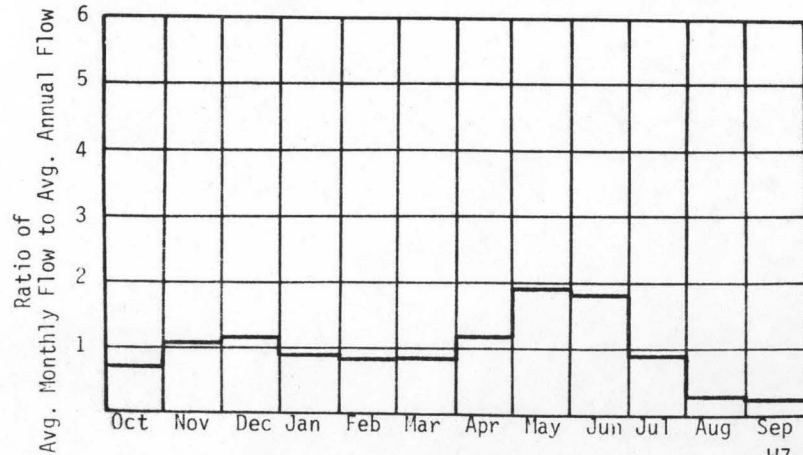
A. Upstream Elevation of Reach 14 Ft. MSL  
 B. Downstream Elevation of Reach 4 Ft. MSL  
 C. Total Available Head in Reach 10 Ft.  
 D. Average Slope in Reach 1.54 Ft./Mi.  
 E. Drainage Area above Reach Mouth 1587.2 Sq.Mi.  
 F. Inflow Classification Regulated

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

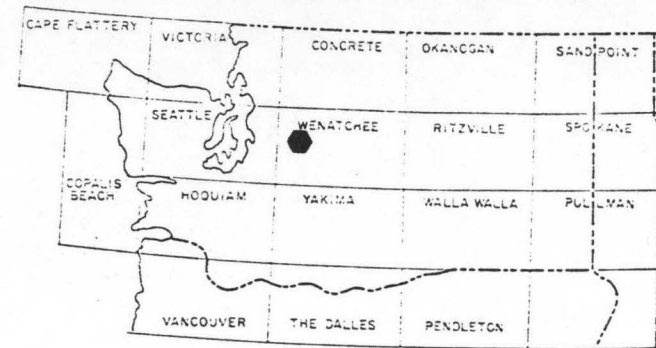
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1800	1.52	13.3	1.00
80	3880	3.29	26.8	0.93
50	7480	6.33	44.4	0.80
30	11100	9.38	55.0	0.67
10	18190	15.4	64.7	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

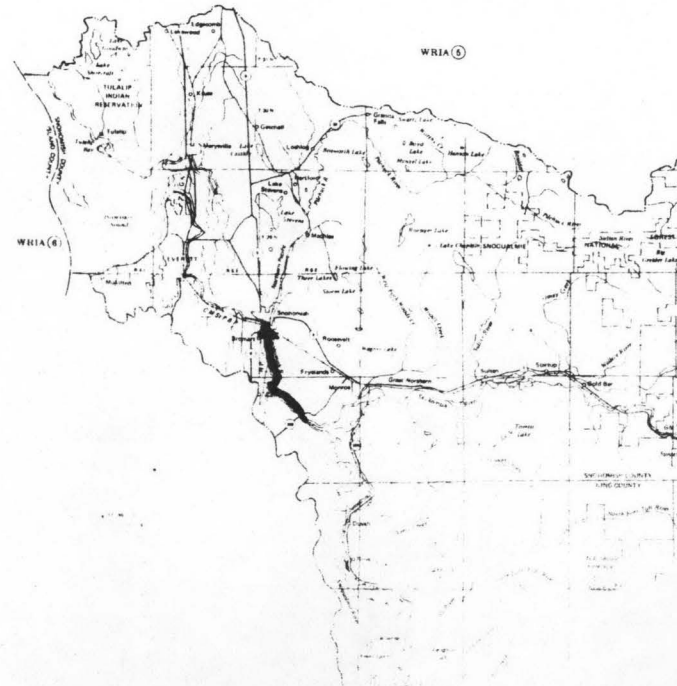
QMR = 9474 cfs



W7-275



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R6E</u>
D. Latitude, Longitude	<u>48°58' 122°04'</u>
E. Stream Name	<u>Pilchuck River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/8.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

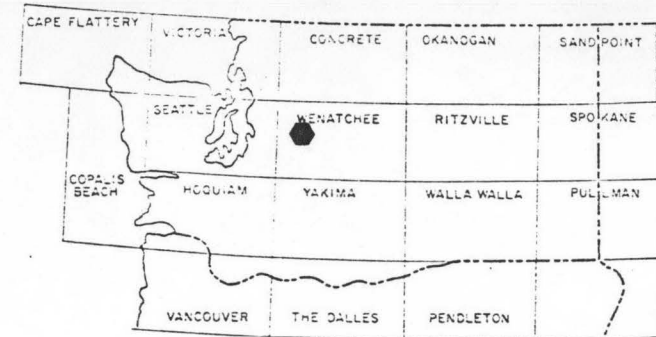
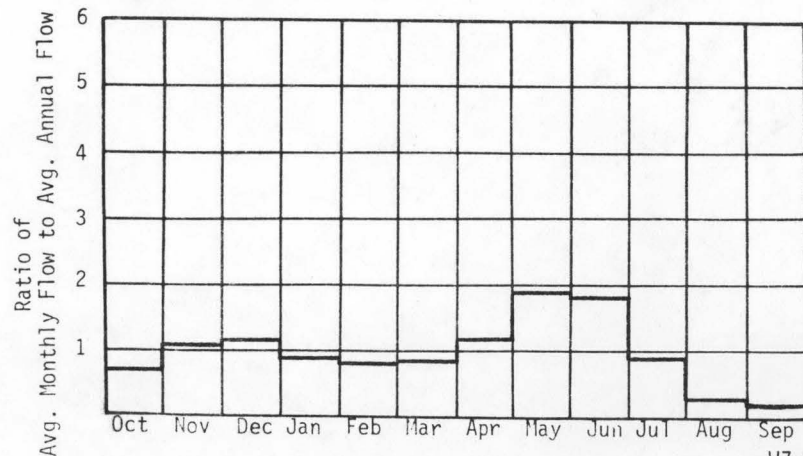
A. Upstream Elevation of Reach	<u>115</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>4</u>	Ft. MSL
C. Total Available Head in Reach	<u>111</u>	Ft.
D. Average Slope in Reach	<u>13.1</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>136.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	53.0	0.50	4.36	1.00
80	118	1.11	9.05	0.93
50	298	2.80	18.6	0.76
30	440	4.14	23.2	0.64
10	853	8.01	29.5	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 408 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0004

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T30N R7E  
 D. Latitude, Longitude 47°04' 121°56'  
 E. Stream Name Pilchuck River  
 F. Major Basin Name Snohomish  
 G. River Mile 8.5/26.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

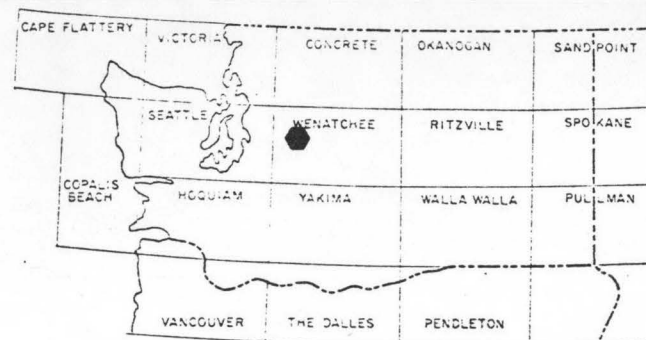
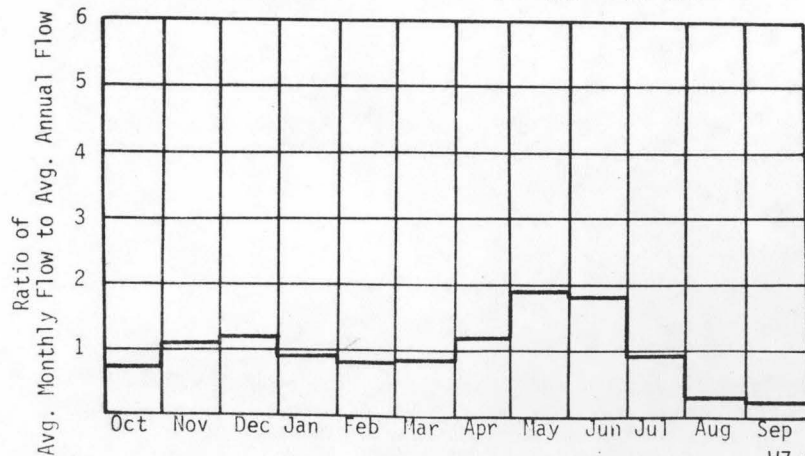
A. Upstream Elevation of Reach 555 Ft. MSL  
 B. Downstream Elevation of Reach 115 Ft. MSL  
 C. Total Available Head in Reach 440 Ft.  
 D. Average Slope in Reach 24.0 Ft./Mi.  
 E. Drainage Area above Reach Mouth 71.5 Sq.Mi.  
 F. Inflow Classification Natural

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	39.8	1.48	13.0	1.00
80	88.7	3.30	26.9	0.93
50	223	8.32	55.4	0.76
30	330	12.3	69.0	0.64
10	640	23.8	87.6	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 306 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R8E</u>
D. Latitude, Longitude	<u>48°02' 121°48'</u>
E. Stream Name	<u>Pilchuck River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>26.8/33.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

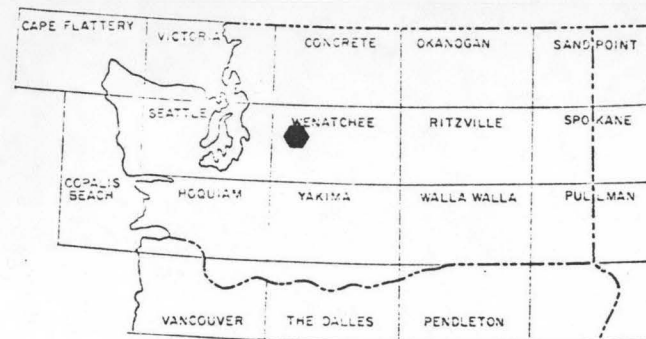
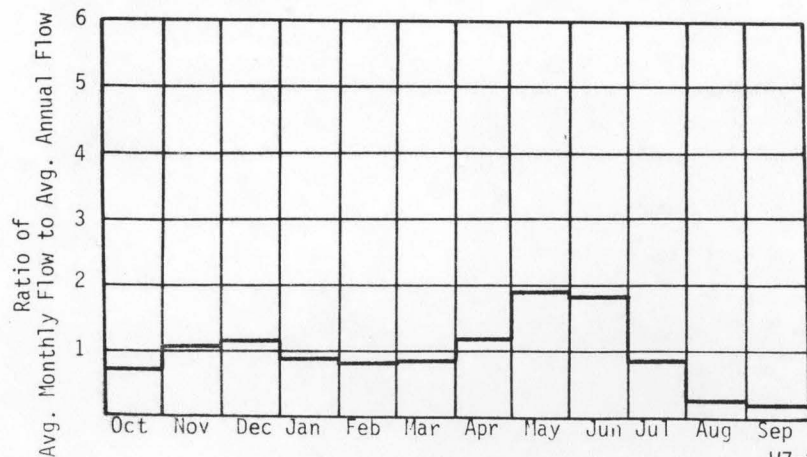
A. Upstream Elevation of Reach	<u>960</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>555</u>	Ft. MSL
C. Total Available Head in Reach	<u>405 + 66 = 471</u>	Ft.
D. Average Slope in Reach	<u>65.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>33.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

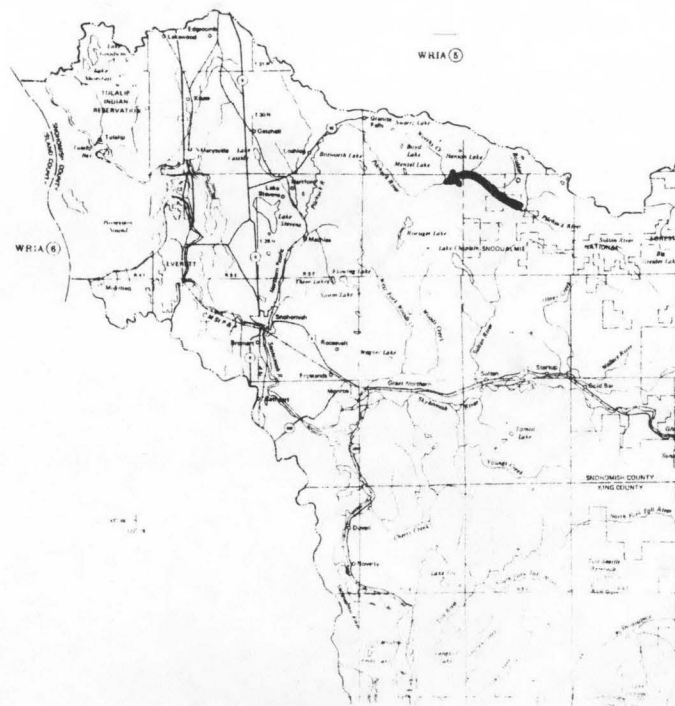
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.4	0.93	8.17	1.00
80	52.2	2.08	17.0	0.93
50	131	5.24	34.9	0.76
30	194	7.75	43.4	0.64
10	376	15.0	55.2	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 180 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0006

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T27N R6E  
 D. Latitude, Longitude 47°50' 122°00'  
 E. Stream Name Skykomish River  
 F. Major Basin Name Snohomish  
 G. River Mile 0.0/4.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

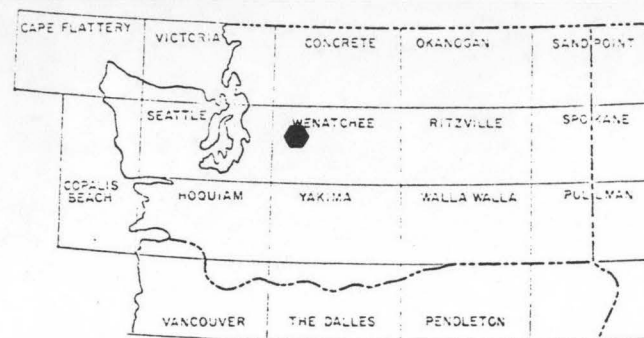
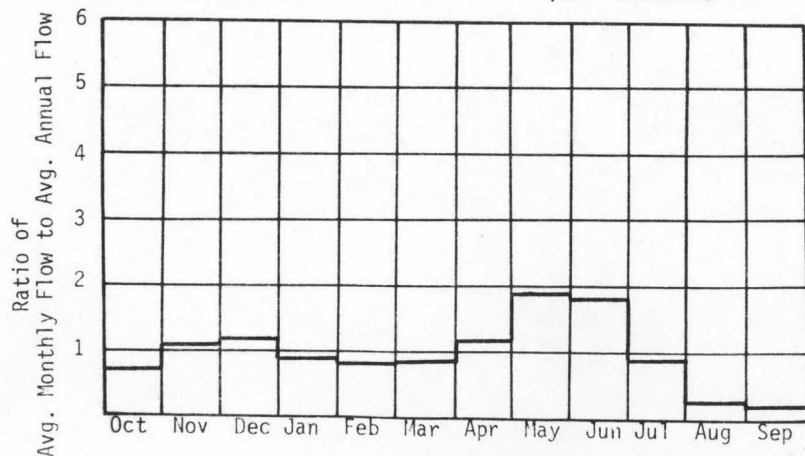
A. Upstream Elevation of Reach 39 Ft. MSL  
 B. Downstream Elevation of Reach 14 Ft. MSL  
 C. Total Available Head in Reach 25 Ft.  
 D. Average Slope in Reach 5.1 Ft./Mi.  
 E. Drainage Area above Reach Mouth 844.2 Sq.Mi.  
 F. Inflow Classification Natural

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

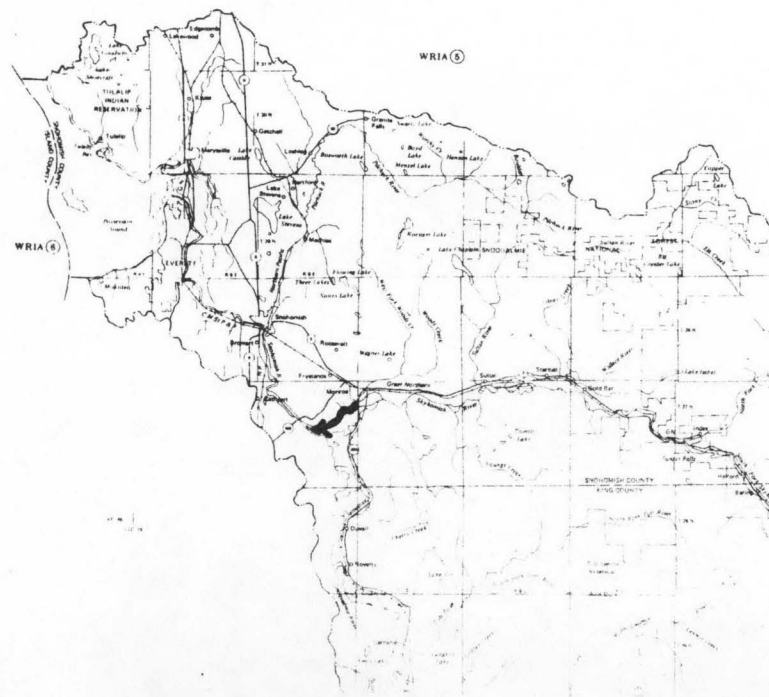
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	938	1.98	17.4	1.00
80	1770	3.74	30.8	0.94
50	3810	8.05	55.0	0.78
30	6350	13.4	74.1	0.63
10	11700	24.8	93.2	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 5520 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0007

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R7E</u>
D. Latitude, Longitude	<u>47°51' 121°52'</u>
E. Stream Name	<u>Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>4.8/14.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

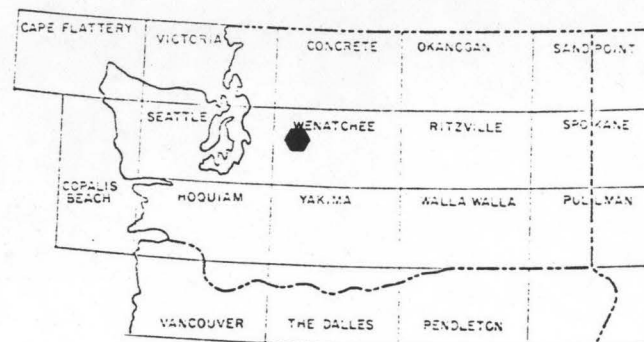
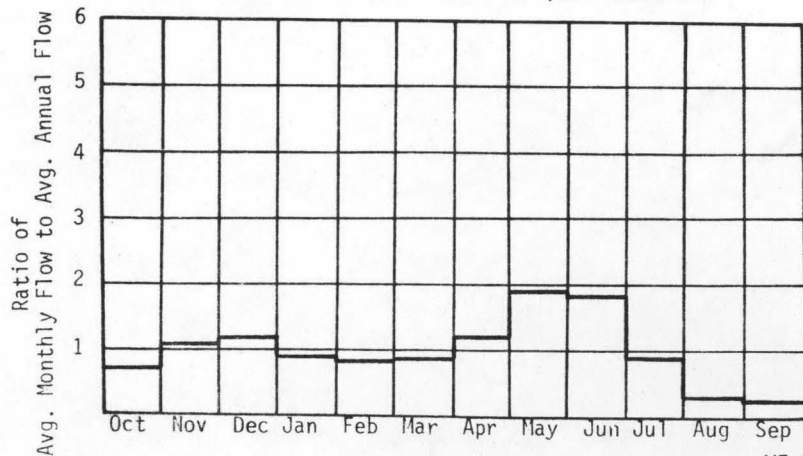
A. Upstream Elevation of Reach	<u>99</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>39</u>	Ft. MSL
C. Total Available Head in Reach	<u>60</u>	Ft.
D. Average Slope in Reach	<u>6.25</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>768.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

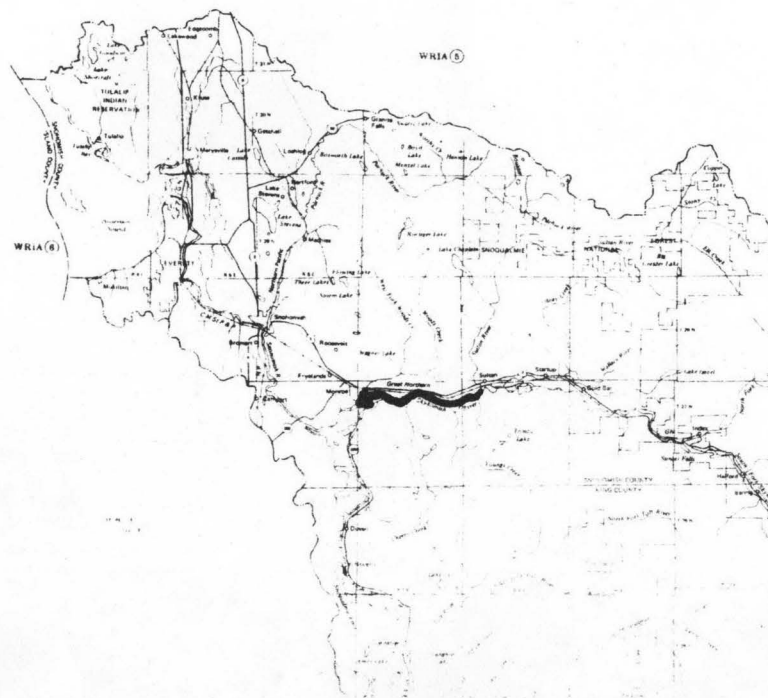
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	917	4.66	40.8	1.00
80	1730	8.76	72.2	0.94
50	3720	18.9	129	0.78
30	6310	31.5	174	0.63
10	11400	58.1	219	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 5396 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0008

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R8E</u>
D. Latitude, Longitude	<u>45°52' 121°48'</u>
E. Stream Name	<u>Skykomish</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>14.4/15.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

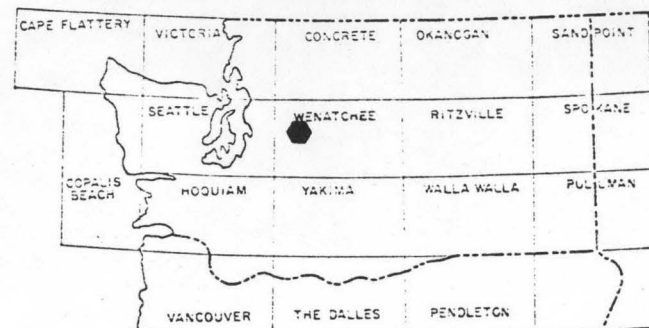
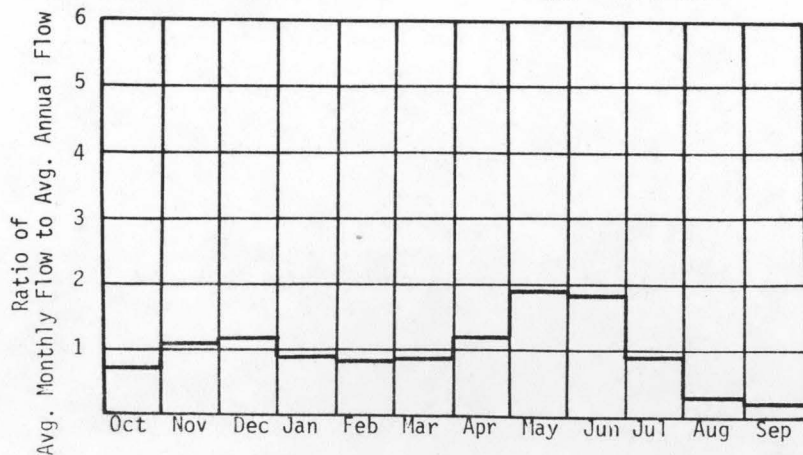
A. Upstream Elevation of Reach	<u>104</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>99</u>	Ft. MSL
C. Total Available Head in Reach	<u>5</u>	Ft.
D. Average Slope in Reach	<u>4.17</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>618</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	774	0.33	2.87	1.00
80	1460	0.62	5.08	0.94
50	3140	1.33	9.09	0.78
30	5240	2.22	12.2	0.63
10	9660	4.09	15.4	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 4556 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0009

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R8E</u>
D. Latitude, Longitude	<u>47°51' 121°44'</u>
E. Stream Name	<u>Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>15.6/24.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

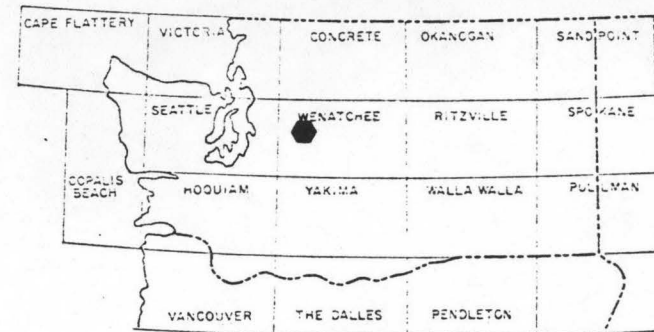
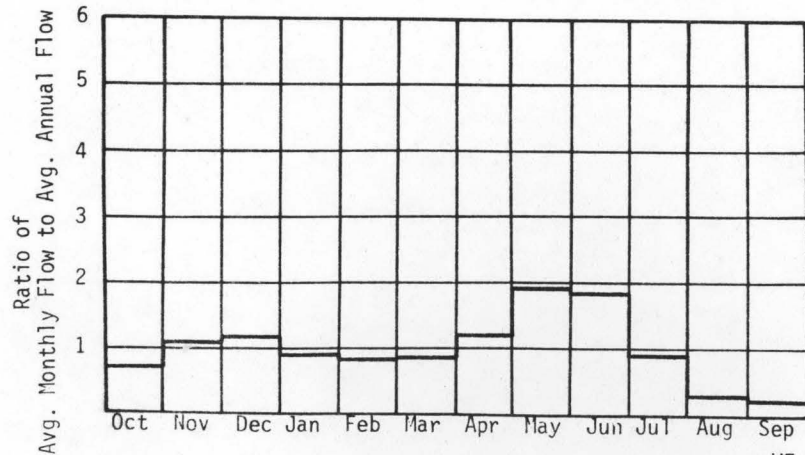
A. Upstream Elevation of Reach	<u>245</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>104</u>	Ft. MSL
C. Total Available Head in Reach	<u>141</u>	Ft.
D. Average Slope in Reach	<u>15.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>564.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

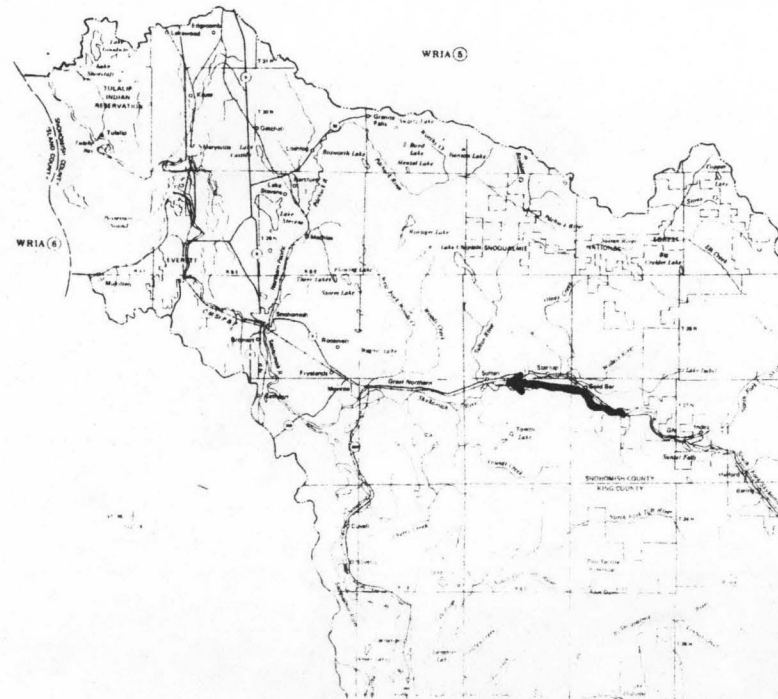
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	669	7.98	69.9	1.00
80	1260	15.0	124	0.94
50	2720	32.4	221	0.78
30	4530	54.0	298	0.63
10	8340	100	375	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3936 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0010

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R10E</u>
D. Latitude, Longitude	<u>47°50' 121°37'</u>
E. Stream Name	<u>Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>24.6/29.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

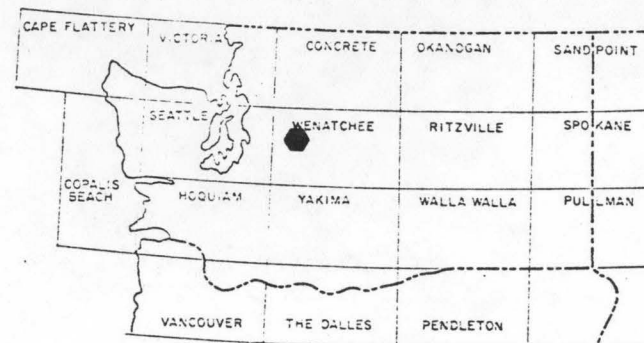
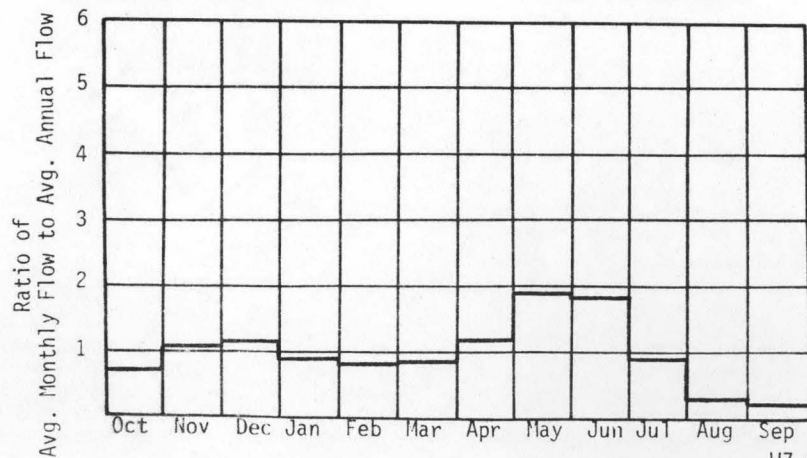
A. Upstream Elevation of Reach	<u>440</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>245</u>	Ft. MSL
C. Total Available Head in Reach	<u>195</u>	Ft.
D. Average Slope in Reach	<u>39.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>524.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

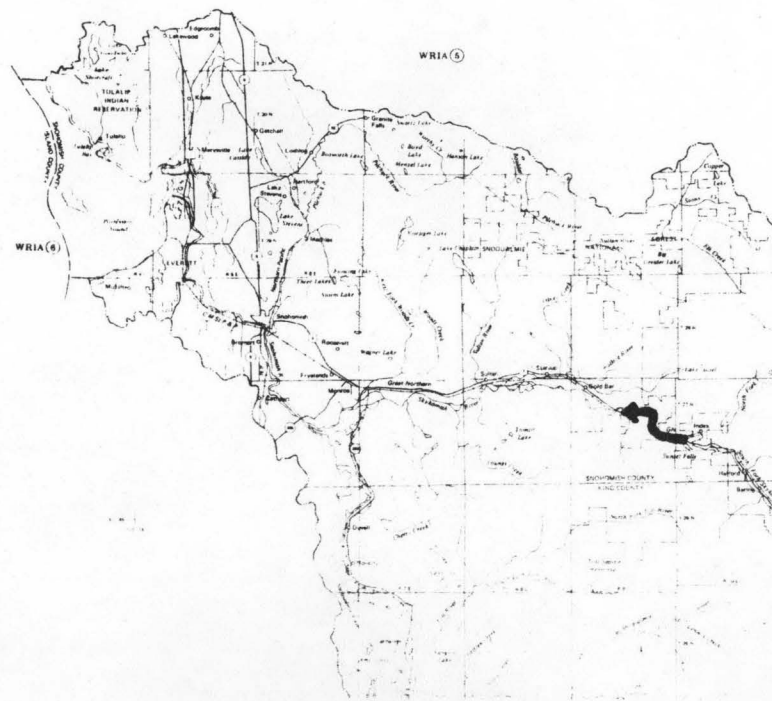
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	643	10.6	93.0	1.00
80	1210	20.0	165	0.94
50	2610	43.0	294	0.78
30	4350	71.8	396	0.63
10	8020	132	499	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3785 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0011

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R6E</u>
D. Latitude, Longitude	<u>47°52' 121°57'</u>
E. Stream Name	<u>Woods Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/3.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

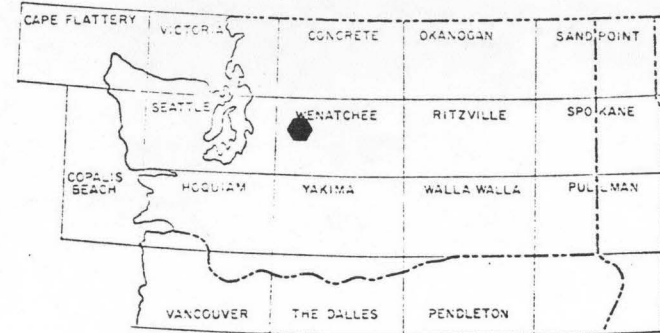
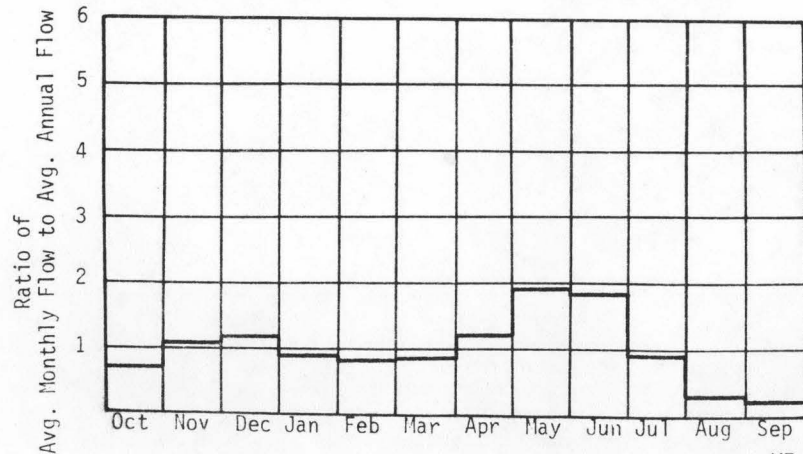
A. Upstream Elevation of Reach	<u>95</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>39</u>	Ft. MSL
C. Total Available Head in Reach	<u>56 + 66 = 122</u>	Ft.
D. Average Slope in Reach	<u>15.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>65.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

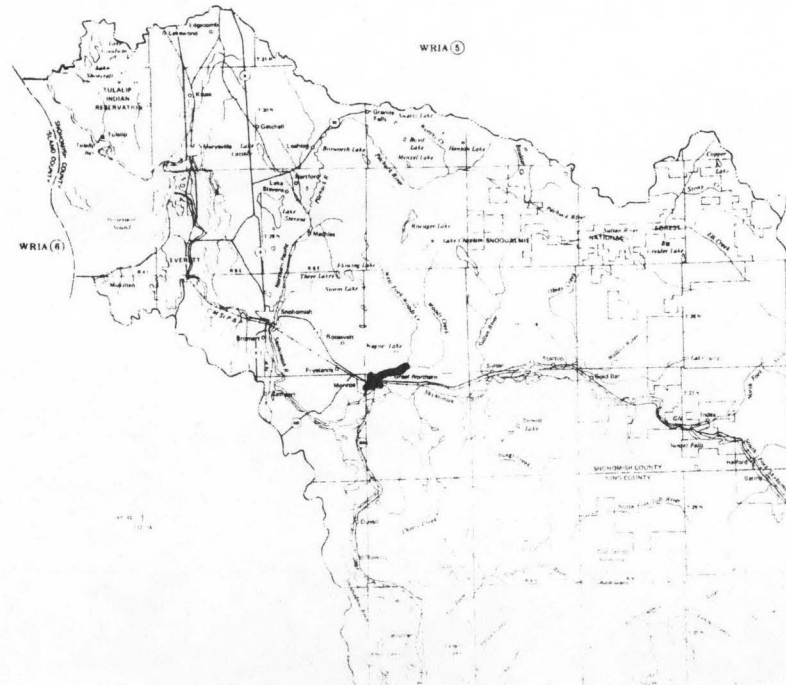
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.1	0.19	1.64	1.00
80	30.2	0.31	2.59	0.95
50	96.6	1.00	6.38	0.73
30	175	1.81	9.19	0.58
10	350	3.62	12.4	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 151 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0012

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R8E</u>
D. Latitude, Longitude	<u>47°56' 121°48'</u>
E. Stream Name	<u>Sultan River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/11.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

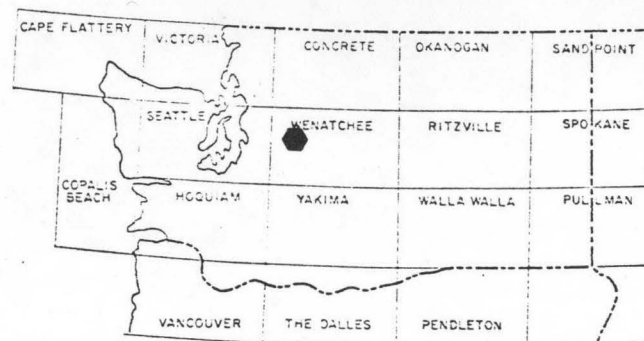
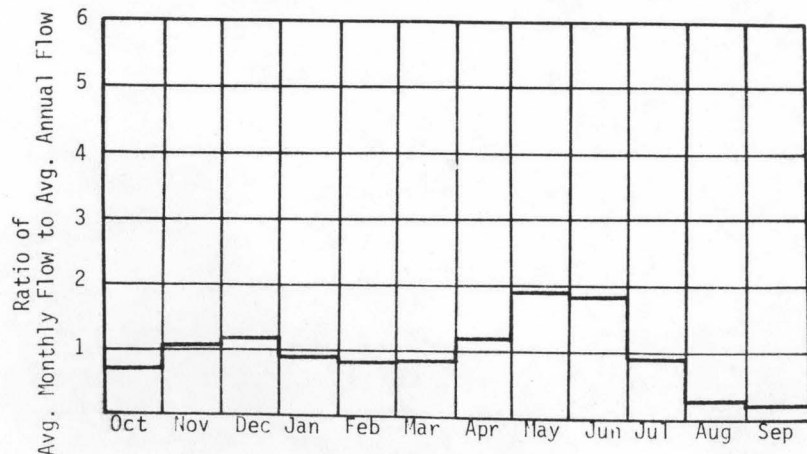
A. Upstream Elevation of Reach	<u>745</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>99</u>	Ft. MSL
C. Total Available Head in Reach	<u>646</u>	Ft.
D. Average Slope in Reach	<u>56.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>105.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

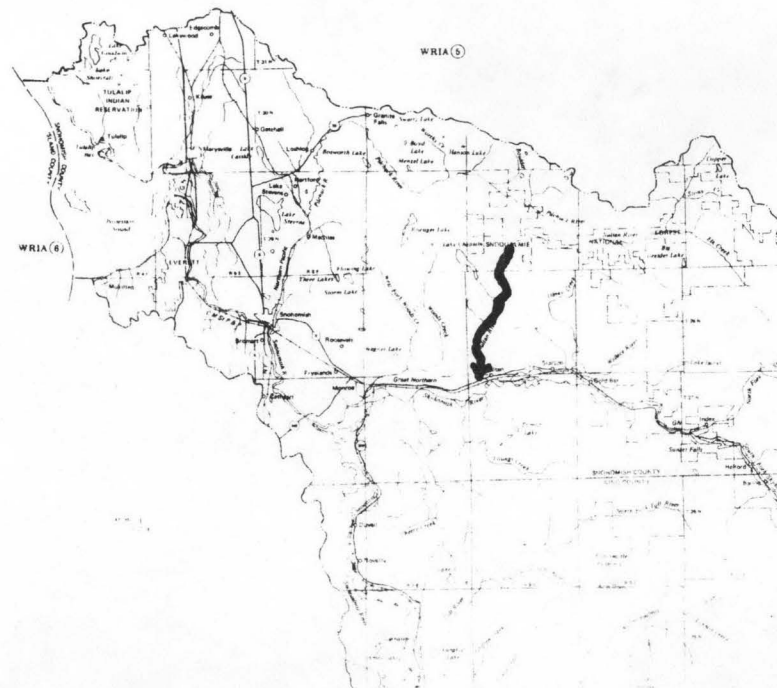
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	98.6	5.39	47.2	1.00
80	214	11.7	95.2	0.93
50	567	31.0	204	0.75
30	888	48.5	264	0.62
10	1690	92.1	339	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 822 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0013

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R8E</u>
D. Latitude, Longitude	<u>47°58' 121°45'</u>
E. Stream Name	<u>Sultan River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>16.9/18.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

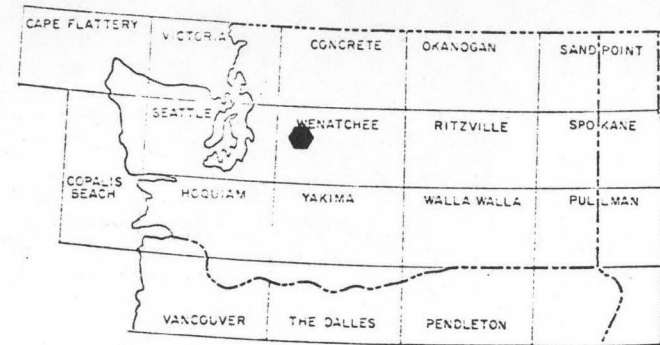
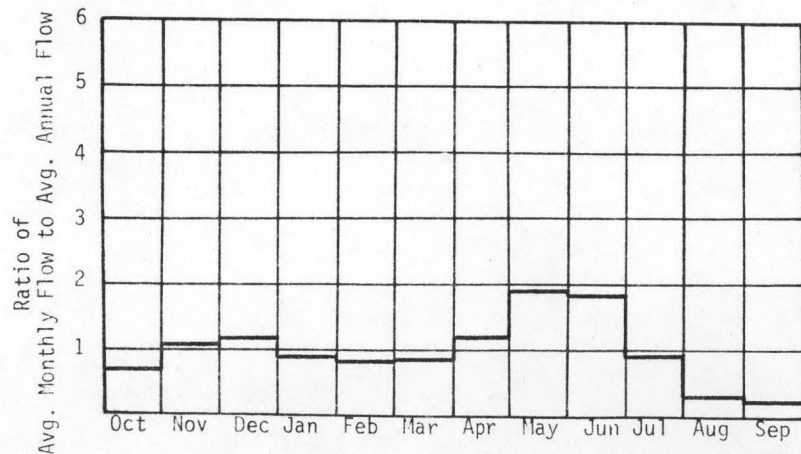
A. Upstream Elevation of Reach	<u>1200</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>745</u>	Ft. MSL
C. Total Available Head in Reach	<u>455</u>	Ft.
D. Average Slope in Reach	<u>239</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>73.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

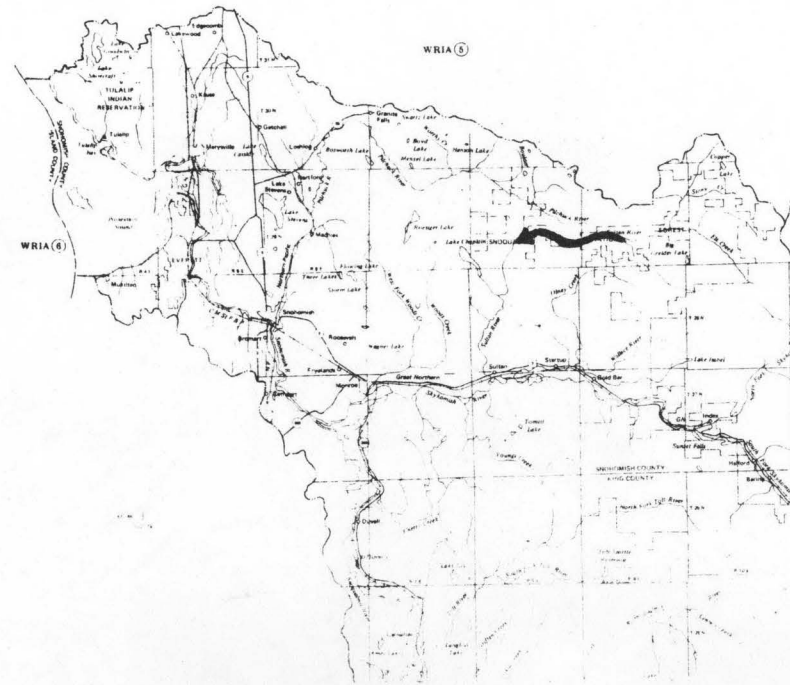
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	97.5	3.75	32.9	1.00
80	233	8.95	72.9	0.93
50	518	19.9	134	0.77
30	833	32.1	177	0.63
10	1510	58.0	219	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 750 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0014

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T29N R9E  
 D. Latitude, Longitude 47°58' 121°39'  
 E. Stream Name Sultan River  
 F. Major Basin Name Snohomish  
 G. River Mile 21.0/22.0

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

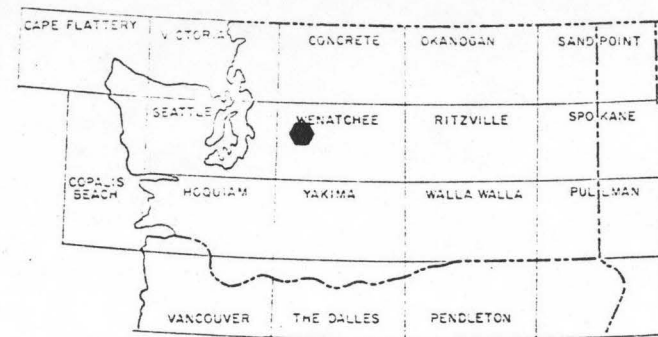
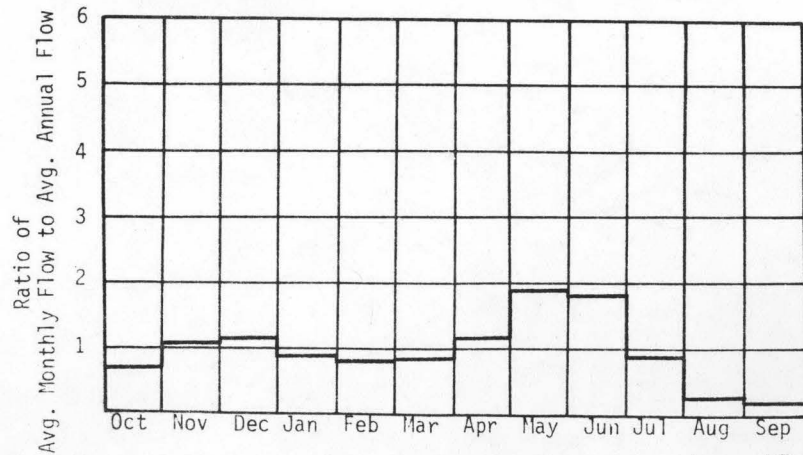
A. Upstream Elevation of Reach 1400 Ft. MSL  
 B. Downstream Elevation of Reach 1380 Ft. MSL  
 C. Total Available Head in Reach 20 Ft.  
 D. Average Slope in Reach 20 Ft./Mi.  
 E. Drainage Area above Reach Mouth 47.4 Sq.Mi.  
 F. Inflow Classification Natural

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

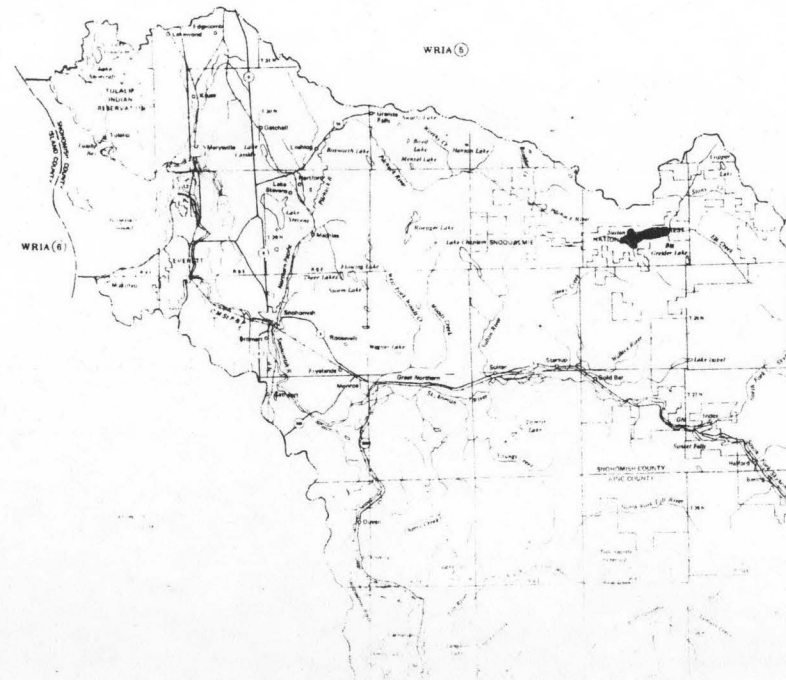
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	69.9	0.12	1.04	1.00
80	167	0.28	2.30	0.93
50	371	0.63	4.24	0.77
30	597	1.01	5.58	0.63
10	1081	1.83	6.89	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 538 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0015

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T29N R10E  
 D. Latitude, Longitude 47°57' 121°35'  
 E. Stream Name Sultan River  
 F. Major Basin Name Snohomish  
 G. River Mile 22.0/23.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

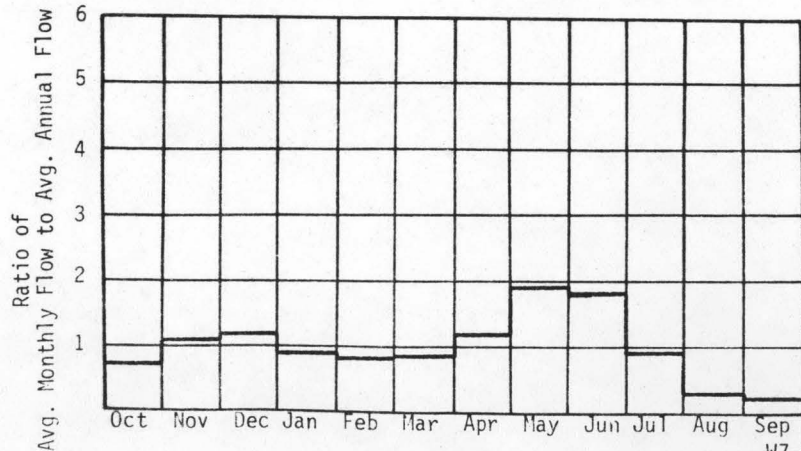
A. Upstream Elevation of Reach 1500 Ft. MSL  
 B. Downstream Elevation of Reach 1400 Ft. MSL  
 C. Total Available Head in Reach 100 Ft.  
 D. Average Slope in Reach 55.6 Ft./Mi.  
 E. Drainage Area above Reach Mouth 28.7 Sq.Mi.  
 F. Inflow Classification Natural

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

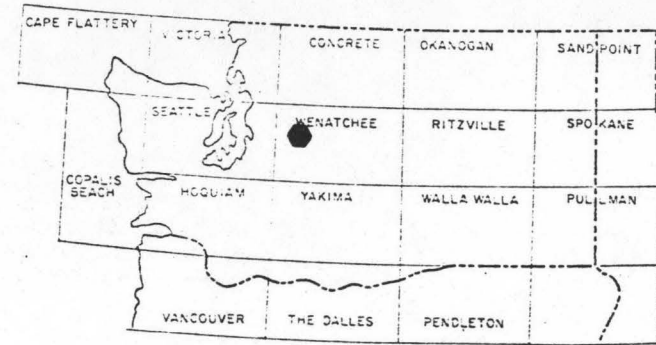
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	42.0	0.36	3.11	1.00
80	100	0.85	6.90	0.93
50	223	1.89	12.7	0.77
30	359	3.03	16.7	0.63
10	649	5.49	20.7	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

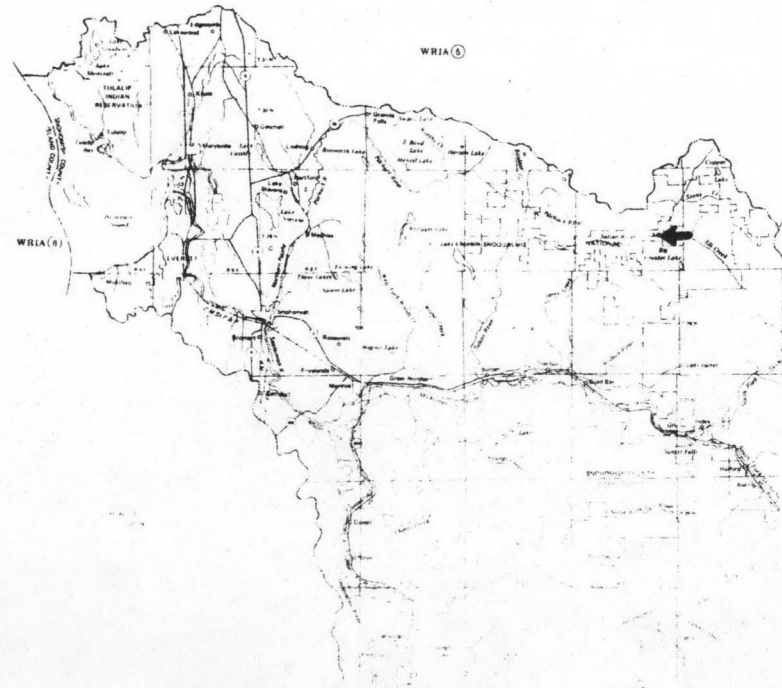
QMR = 323 cfs



W7-288



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0016

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T29N R10E  
 D. Latitude, Longitude 48°00' 121°31'  
 E. Stream Name Sultan River  
 F. Major Basin Name Snohomish  
 G. River Mile 23.8/28.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

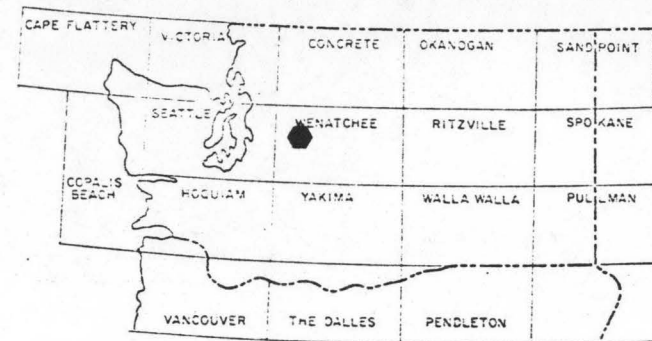
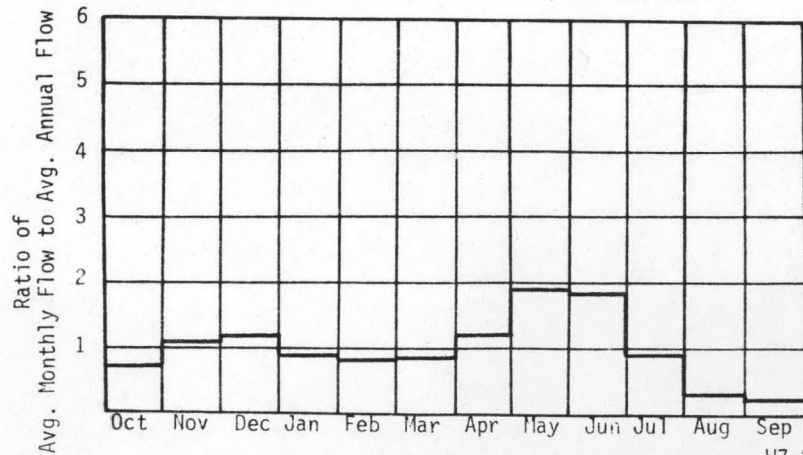
A. Upstream Elevation of Reach 2000 Ft. MSL  
 B. Downstream Elevation of Reach 1500 Ft. MSL  
 C. Total Available Head in Reach 500 + 66 = 566 Ft.  
 D. Average Slope in Reach 106 Ft./Mi.  
 E. Drainage Area above Reach Mouth 13.1 Sq.Mi.  
 F. Inflow Classification Natural

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

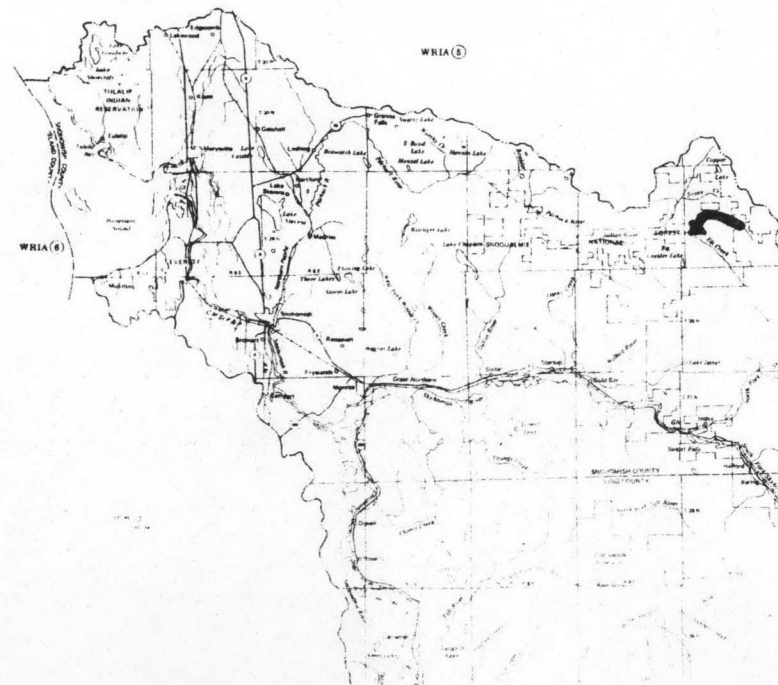
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.4	0.69	6.05	1.00
80	34.4	1.65	13.4	0.93
50	76.6	3.67	24.7	0.77
30	123	5.90	32.6	0.63
10	223	10.7	40.2	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 111 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0017

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R9E</u>
D. Latitude, Longitude	<u>47°57' 121°36'</u>
E. Stream Name	<u>S.F. Sultan River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>1.1/5.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

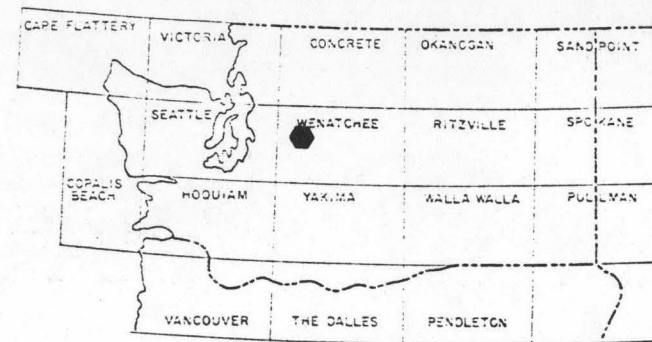
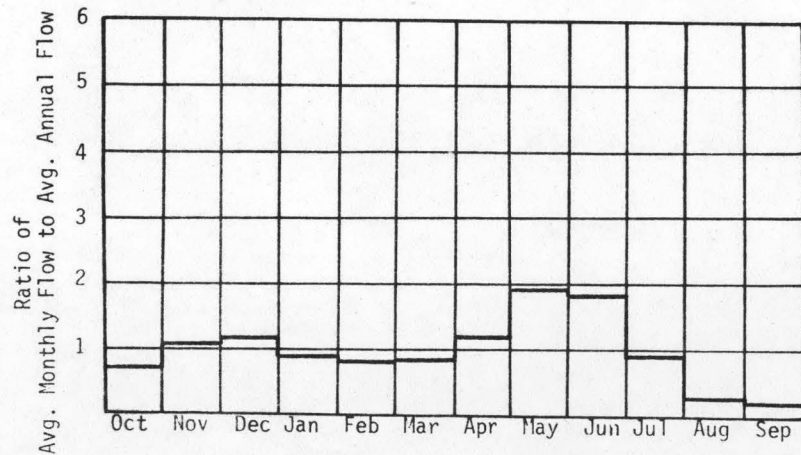
A. Upstream Elevation of Reach	<u>2150</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1380</u>	Ft. MSL
C. Total Available Head in Reach	<u>770 + 66 = 836</u>	Ft.
D. Average Slope in Reach	<u>197</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

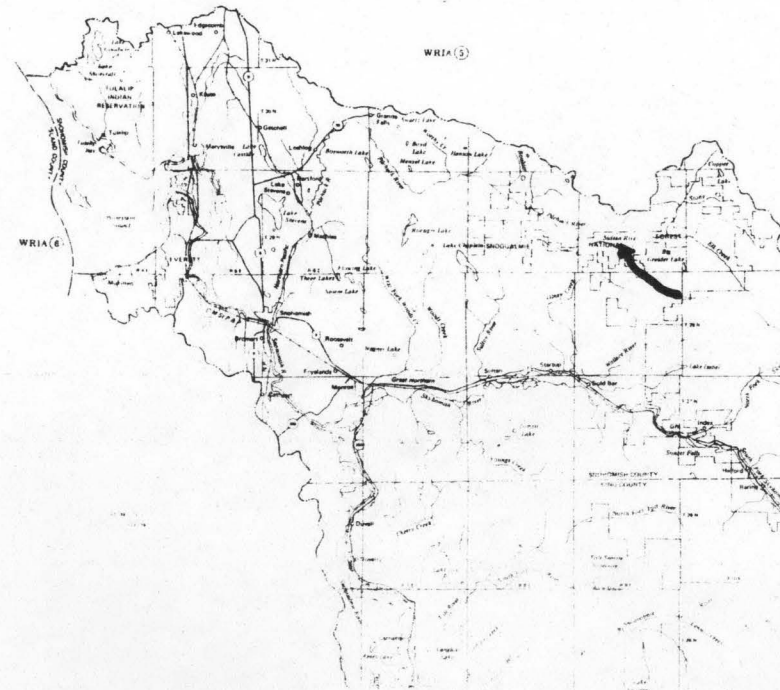
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.4	0.74	6.44	1.00
80	24.8	1.75	14.3	0.93
50	55.2	3.90	26.3	0.77
30	88.8	6.28	34.7	0.63
10	161	11.4	42.8	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 80 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0018

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T29N R9E</u>
D. Latitude, Longitude	<u>48°01' 121°35'</u>
E. Stream Name	<u>Williamson Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/4.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

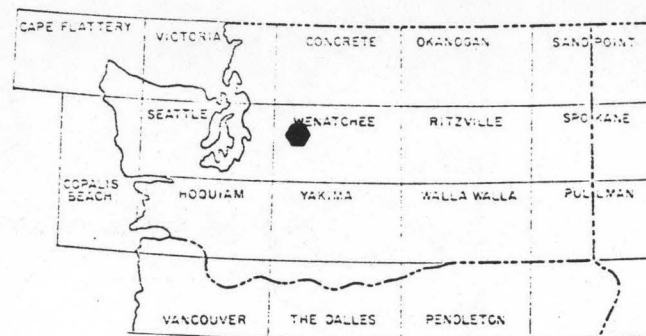
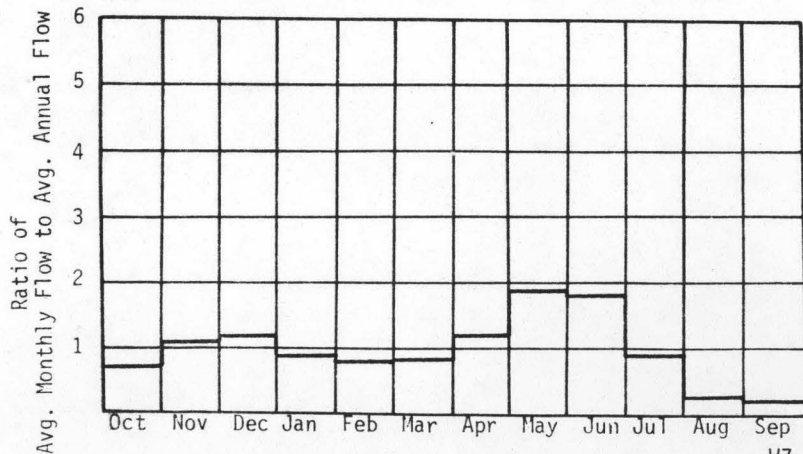
A. Upstream Elevation of Reach	<u>1800</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1400</u>	Ft. MSL
C. Total Available Head in Reach	<u>400 + 66 = 466</u>	Ft.
D. Average Slope in Reach	<u>95.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

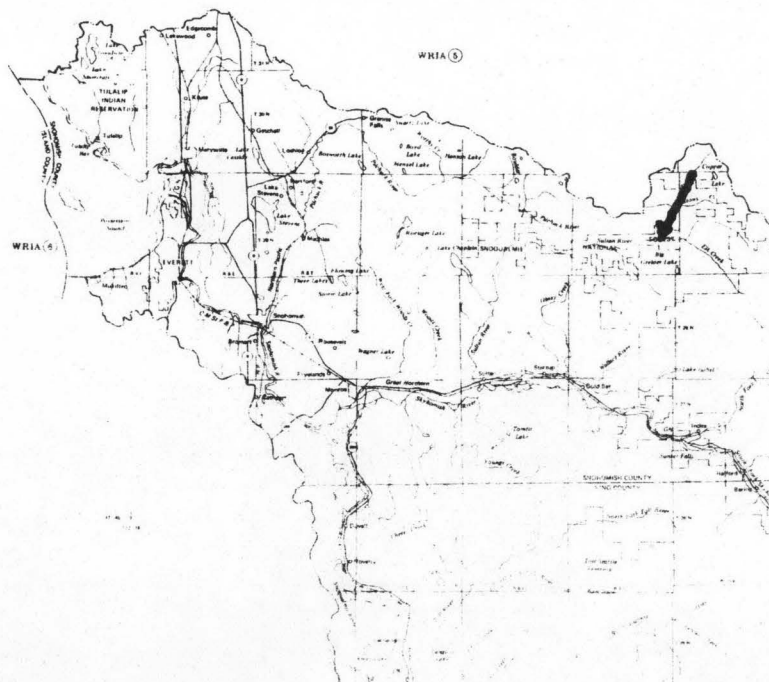
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.3	0.60	5.30	1.00
80	36.6	1.44	11.8	0.93
50	81.4	3.21	21.7	0.77
30	131	5.16	28.5	0.63
10	237	9.35	35.2	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 118 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0019

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R10E  
 D. Latitude, Longitude 47°58' 121°33'  
 E. Stream Name Elk Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0.0/3.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

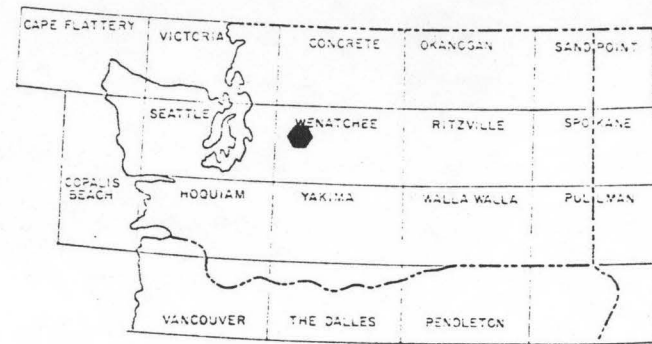
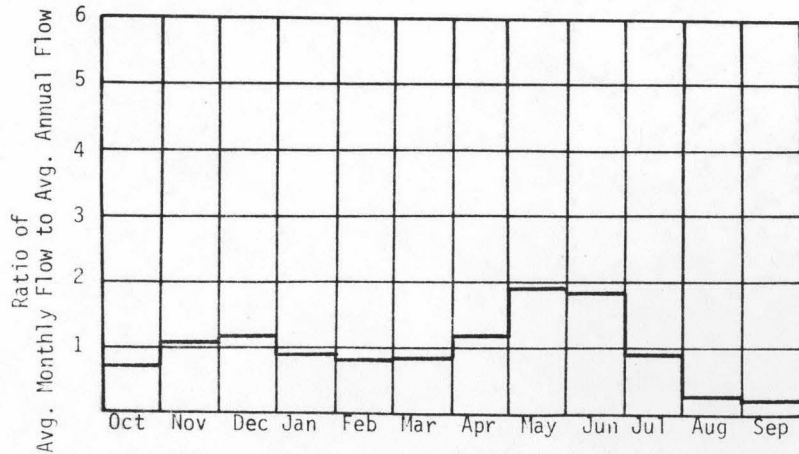
A. Upstream Elevation of Reach 2070 Ft. MSL  
 B. Downstream Elevation of Reach 1500 Ft. MSL  
 C. Total Available Head in Reach 570 + 66 = 636 Ft.  
 D. Average Slope in Reach 168 Ft./Mi.  
 E. Drainage Area above Reach Mouth 12.2 Sq.Mi.  
 F. Inflow Classification Natural

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.6	0.68	5.94	1.00
80	30.1	1.62	13.2	0.93
50	66.9	3.60	24.3	0.77
30	108	5.79	32.0	0.63
10	195	10.5	39.5	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 97 cfs





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0020

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R8E</u>
D. Latitude, Longitude	<u>47°53' 121°45'</u>
E. Stream Name	<u>Wallace River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/4.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

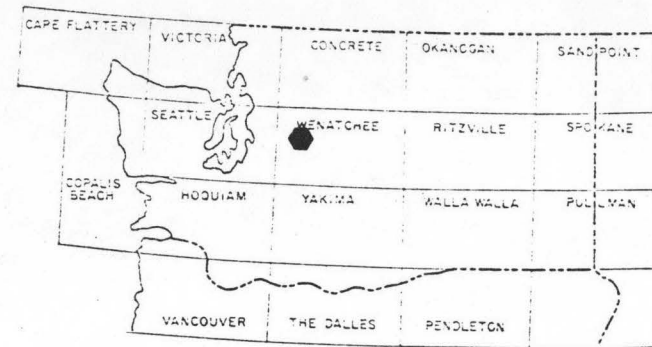
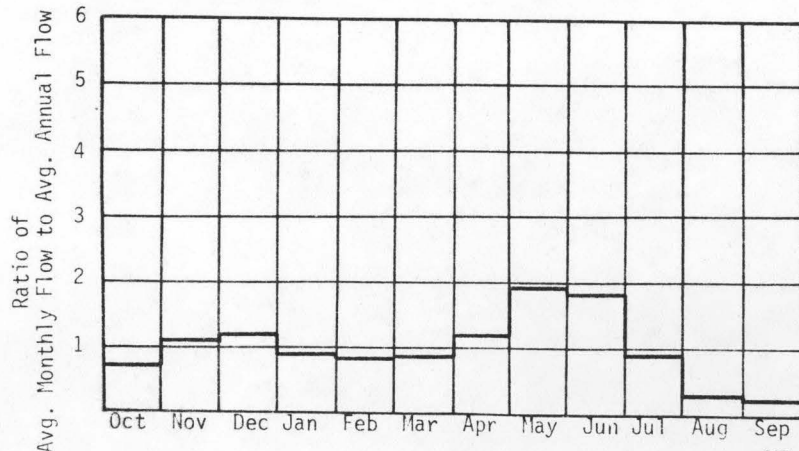
A. Upstream Elevation of Reach	<u>155</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>104</u>	Ft. MSL
C. Total Available Head in Reach	<u>51</u>	Ft.
D. Average Slope in Reach	<u>10.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>49.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

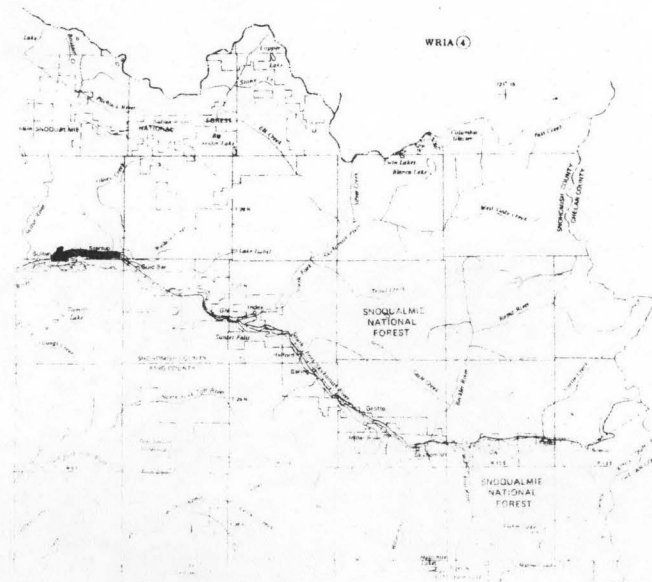
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	96.4	0.42	3.64	1.00
80	176	0.76	6.24	0.94
50	380	1.64	11.2	0.78
30	646	2.79	15.2	0.62
10	1240	5.36	19.7	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 567 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0021

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R9E</u>
D. Latitude, Longitude	<u>47°52' 121°43'</u>
E. Stream Name	<u>Wallace River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>4.7/13.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

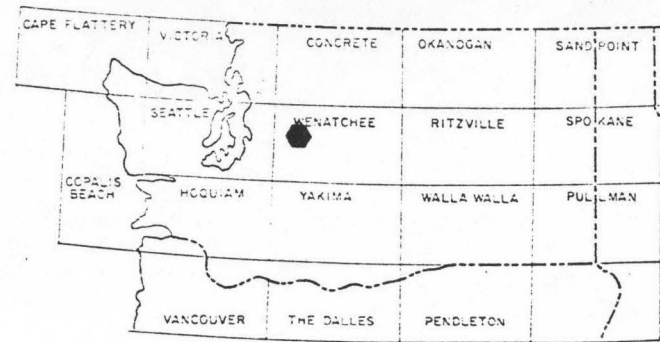
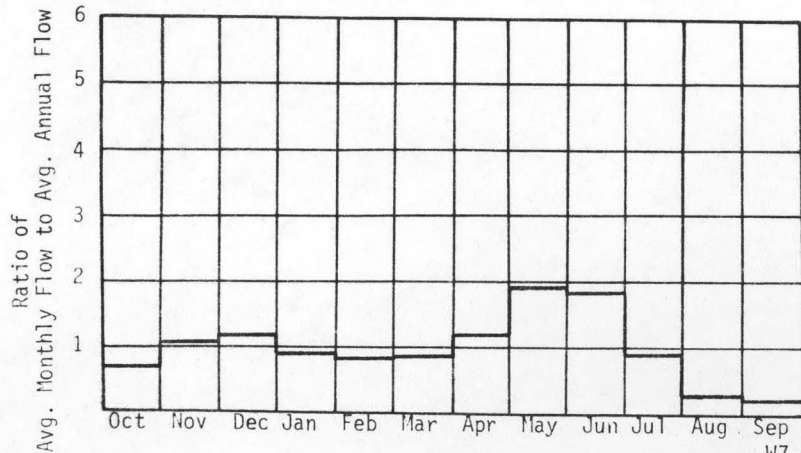
A. Upstream Elevation of Reach	<u>2080</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>155</u>	Ft. MSL
C. Total Available Head in Reach	<u>1925 + 66 = 1991</u>	Ft.
D. Average Slope in Reach	<u>219</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>20.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

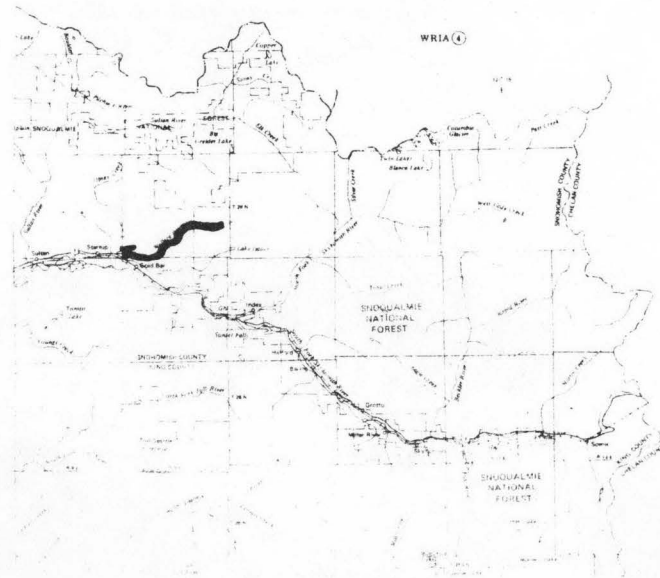
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	29.0	3.52	30.9	1.00
80	38.1	6.42	52.9	0.94
50	82.4	13.9	94.9	0.78
30	140	23.6	128	0.62
10	269	45.4	167	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 123 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0022

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R8E  
 D. Latitude, Longitude 47°55' 121°45'  
 E. Stream Name Olney Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0.0/9.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

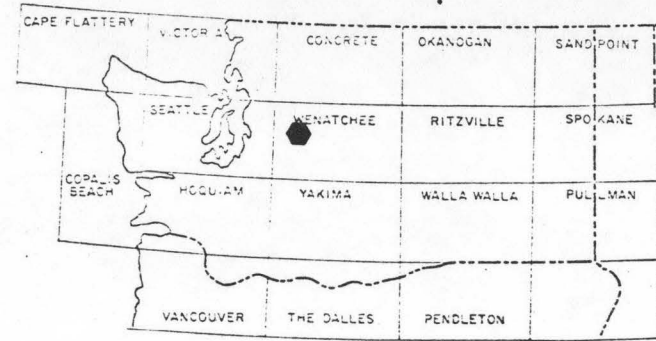
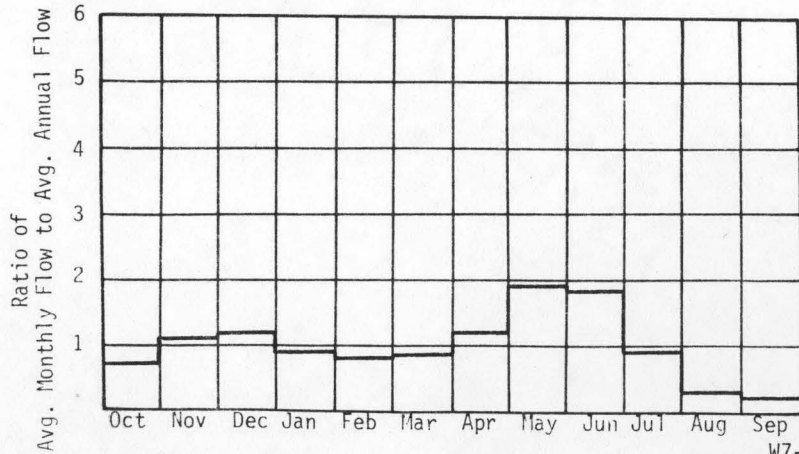
A. Upstream Elevation of Reach 1360 Ft. MSL  
 B. Downstream Elevation of Reach 155 Ft. MSL  
 C. Total Available Head in Reach 1205 + 66 = 1271 Ft.  
 D. Average Slope in Reach 131 Ft./Mi.  
 E. Drainage Area above Reach Mouth 20.1 Sq.Mi.  
 F. Inflow Classification Natural

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

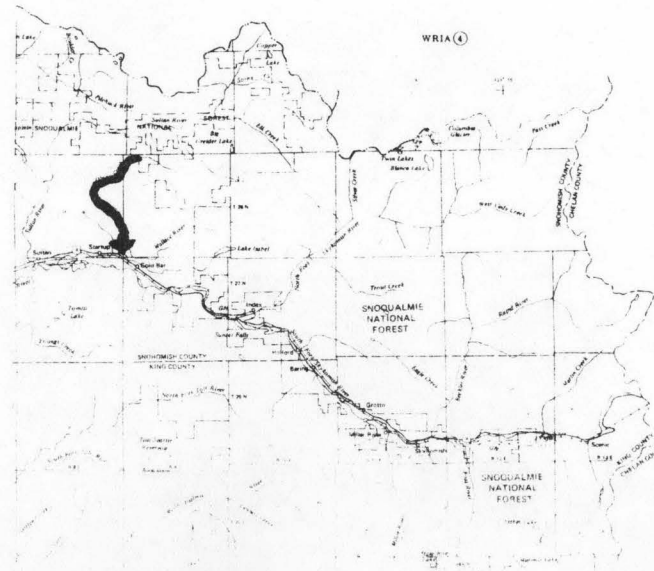
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	27.6	2.96	26.0	1.00
80	67.8	7.29	58.8	0.92
50	155	16.6	112	0.77
30	242	26.0	146	0.64
10	437	47.0	181	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 212 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0023

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T27N R10E  
 D. Latitude, Longitude 47°50' 121°30'  
 E. Stream Name N.F. Skykomish River  
 F. Major Basin Name Snohomish  
 G. River Mile 0.0/6.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

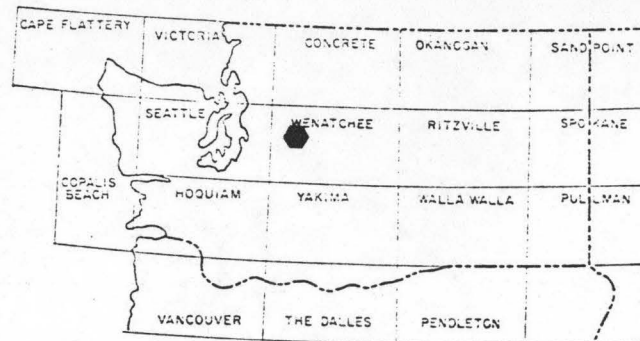
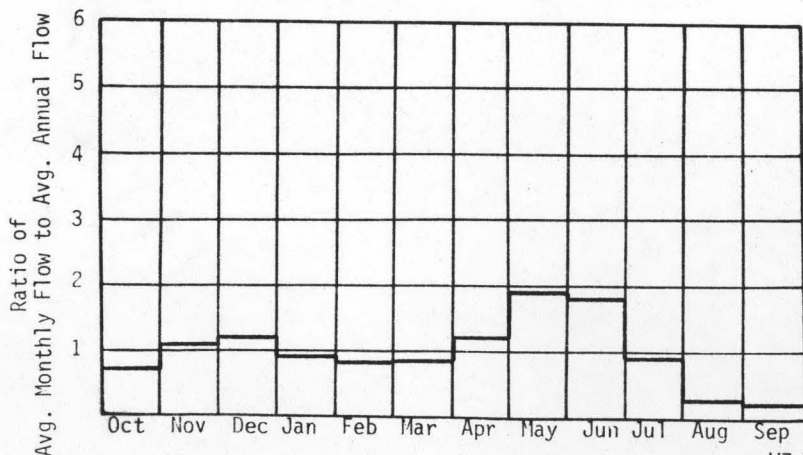
A. Upstream Elevation of Reach 790 Ft. MSL  
 B. Downstream Elevation of Reach 440 Ft. MSL  
 C. Total Available Head in Reach 350 Ft.  
 D. Average Slope in Reach 53.9 Ft./Mi.  
 E. Drainage Area above Reach Mouth 145.5 Sq.Mi.  
 F. Inflow Classification Natural

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

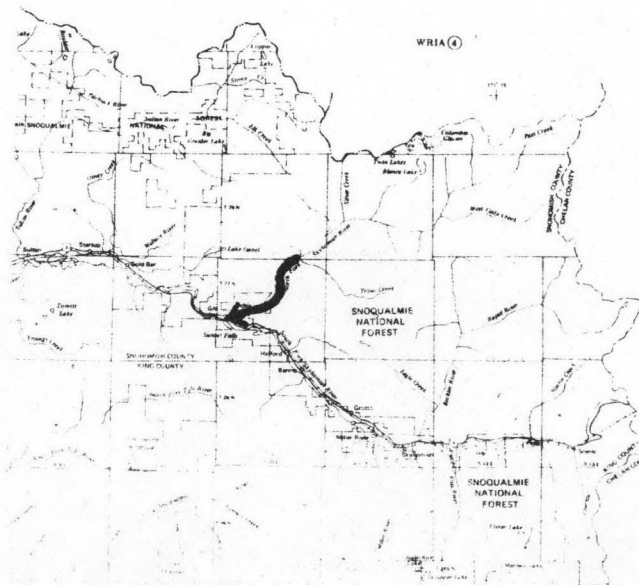
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	169	4.99	43.7	1.00
80	325	9.63	79.3	0.94
50	807	23.9	159	0.76
30	1410	41.7	223	0.61
10	2590	76.7	282	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1204 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0024

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R10E</u>
D. Latitude, Longitude	<u>47°53' 121°27'</u>
E. Stream Name	<u>N.F. Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>6.5/10.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

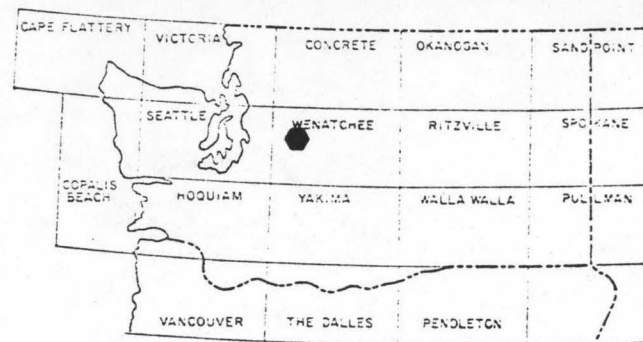
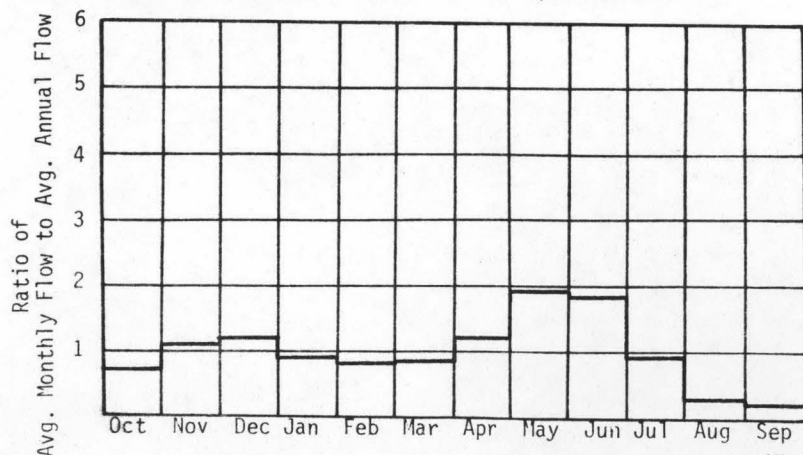
A. Upstream Elevation of Reach	<u>1075</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>790</u>	Ft. MSL
C. Total Available Head in Reach	<u>285</u>	Ft.
D. Average Slope in Reach	<u>77</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>112.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

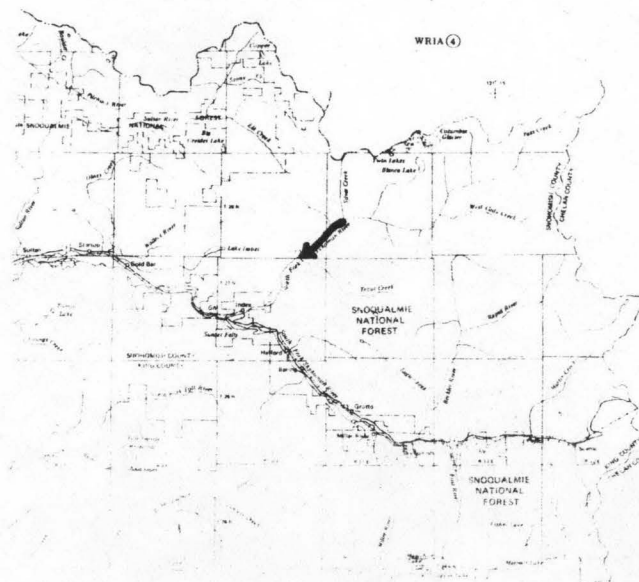
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	136	3.27	28.6	1.00
80	261	6.30	51.9	0.94
50	649	15.6	104	0.76
30	1130	27.3	146	0.61
10	2080	50.2	185	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 968 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0025

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R11E</u>
D. Latitude, Longitude	<u>47°54' 121°25'</u>
E. Stream Name	<u>N.F. Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>10.2/12.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

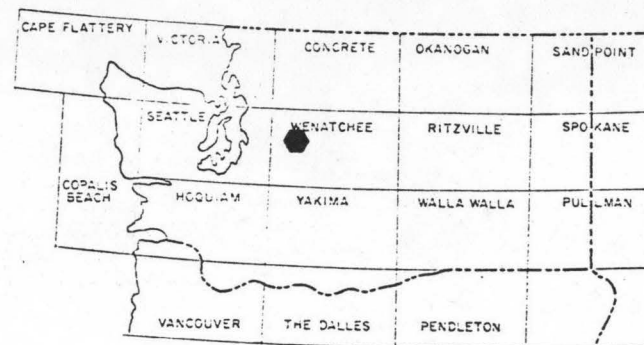
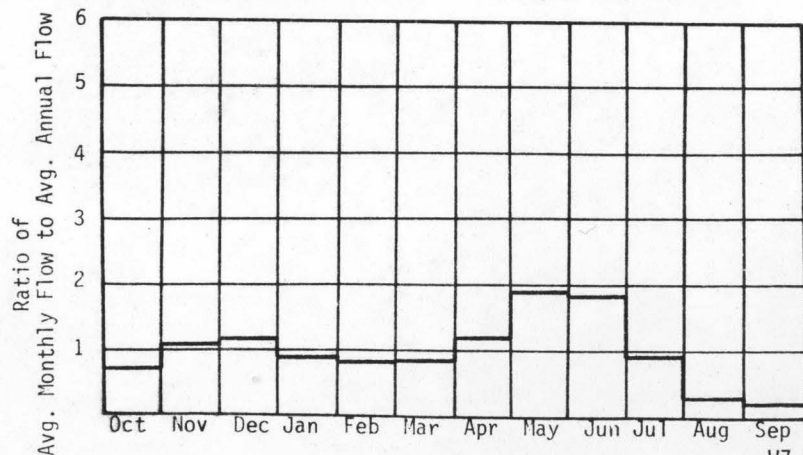
A. Upstream Elevation of Reach	<u>1225</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1075</u>	Ft. MSL
C. Total Available Head in Reach	<u>150</u>	Ft.
D. Average Slope in Reach	<u>83</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>82.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

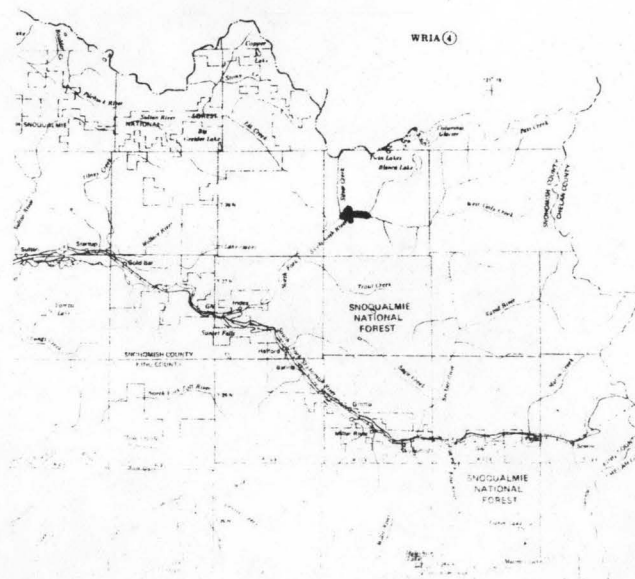
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	133	1.69	14.8	1.00
80	243	3.09	25.4	0.94
50	526	6.67	45.6	0.78
30	895	11.4	61.7	0.62
10	1720	21.8	80.3	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 785 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0026

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R11E  
 D. Latitude, Longitude 47°53' 121°20'  
 E. Stream Name N.E. Skykomish River  
 F. Major Basin Name Snohomish  
 G. River Mile 12.0/17.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

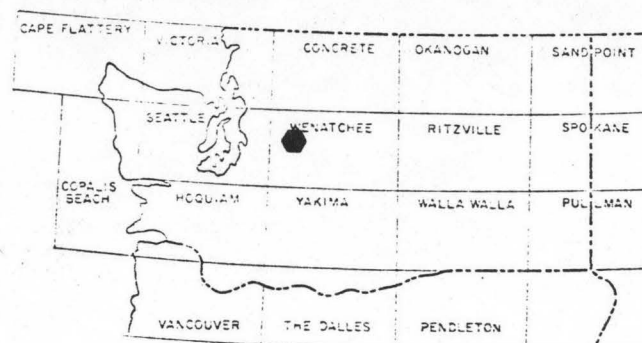
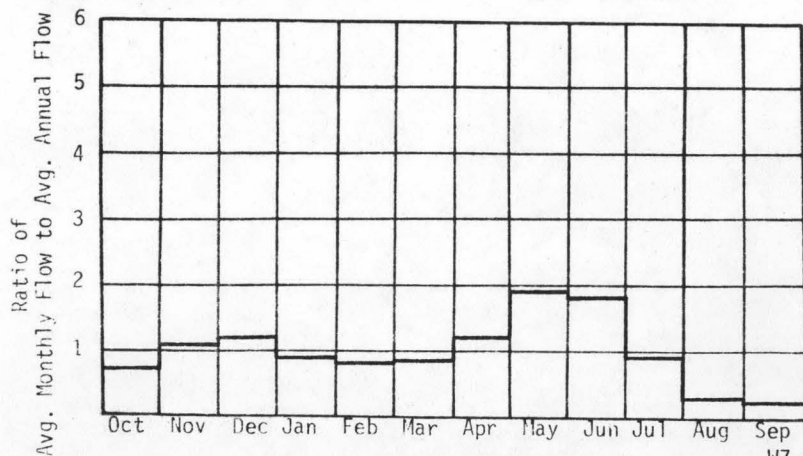
A. Upstream Elevation of Reach 1670 Ft. MSL  
 B. Downstream Elevation of Reach 1225 Ft. MSL  
 C. Total Available Head in Reach 445 Ft.  
 D. Average Slope in Reach 87 Ft./Mi.  
 E. Drainage Area above Reach Mouth 66.5 Sq.Mi.  
 F. Inflow Classification Natural

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

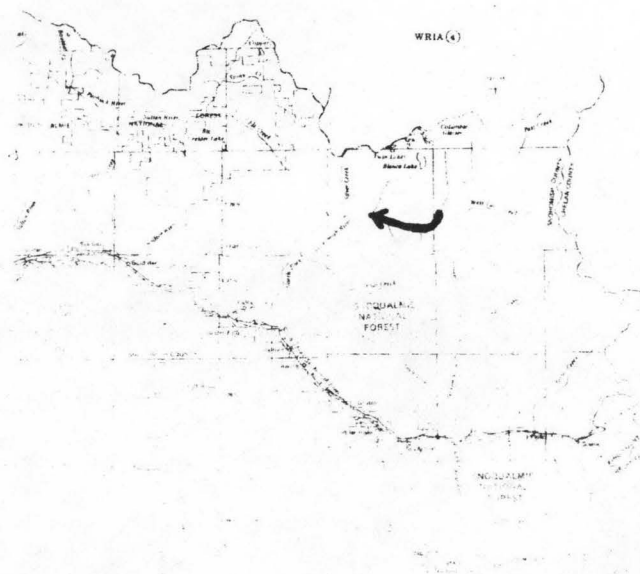
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	100	3.78	33.1	1.00
80	183	6.89	56.7	0.94
50	395	14.9	102	0.78
30	673	25.3	138	0.62
10	1290	48.6	179	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 590 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0027

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T28N R12E
D. Latitude, Longitude	47°55' 121°18'
E. Stream Name	N.F. Skykomish River
F. Major Basin Name	Snohomish
G. River Mile	17.1/20.6

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

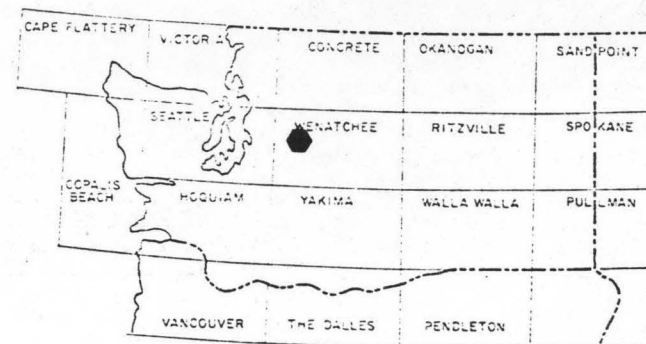
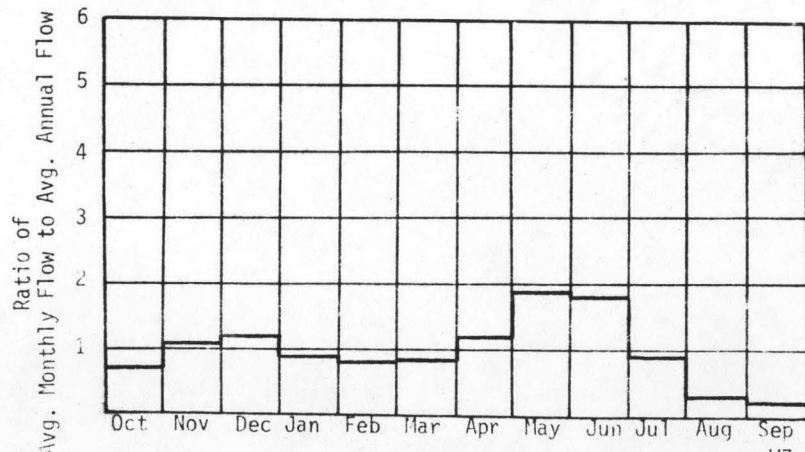
A. Upstream Elevation of Reach	2440	Ft. MSL
B. Downstream Elevation of Reach	1670	Ft. MSL
C. Total Available Head in Reach	770	Ft.
D. Average Slope in Reach	241	Ft./Mi.
E. Drainage Area above Reach Mouth	33.9	Sq.Mi.
F. Inflow Classification	Natural	

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

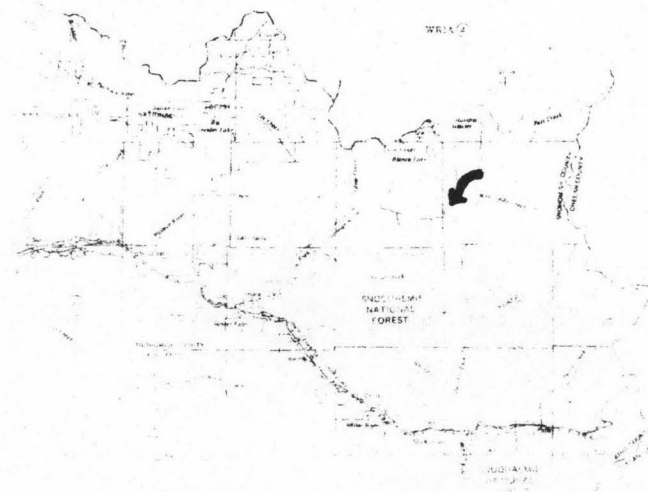
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	51.5	3.36	29.4	1.00
80	93.9	6.12	50.4	0.94
50	203	13.2	90.4	0.78
30	345	22.5	122	0.62
10	664	43.2	159	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 303 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0028

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R13E</u>
D. Latitude, Longitude	<u>47°56' 121°14'</u>
E. Stream Name	<u>N.F. Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>20.6/24.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

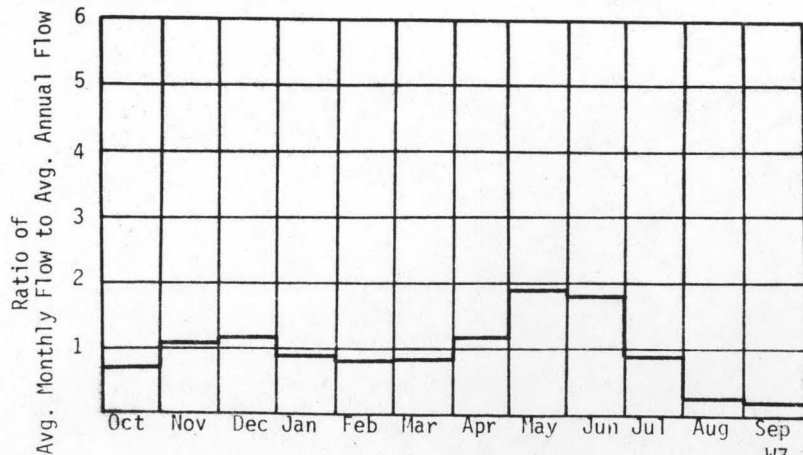
A. Upstream Elevation of Reach	<u>3105</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2440</u>	Ft. MSL
C. Total Available Head in Reach	<u>665 + 66 = 7.31</u>	Ft.
D. Average Slope in Reach	<u>180</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>19.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

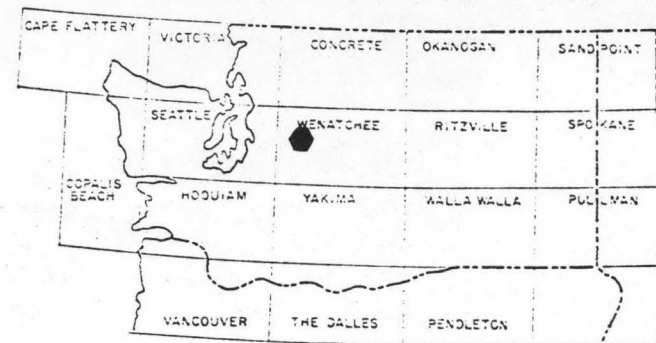
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	25.8	1.60	14.0	1.00
80	47.1	2.91	24.0	0.94
50	102	6.30	43.0	0.78
30	173	10.7	58.2	0.62
10	333	20.6	75.7	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

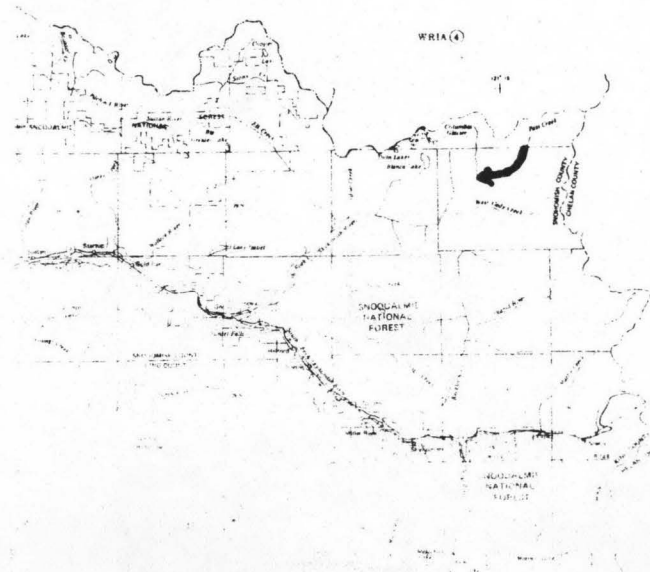
QMR = 152 cfs



W7-301



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0029

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T27N R11E  
 D. Latitude, Longitude 47°51' 121°27'  
 E. Stream Name Trout Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0/3.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

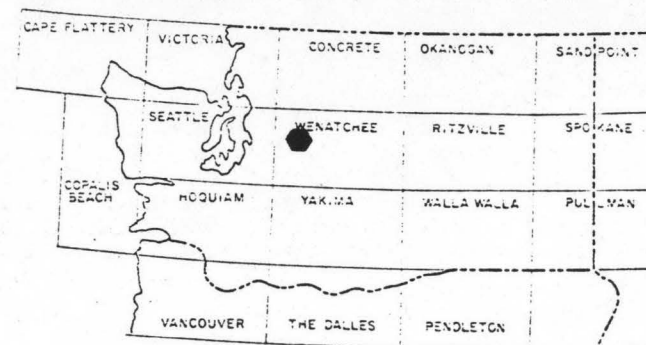
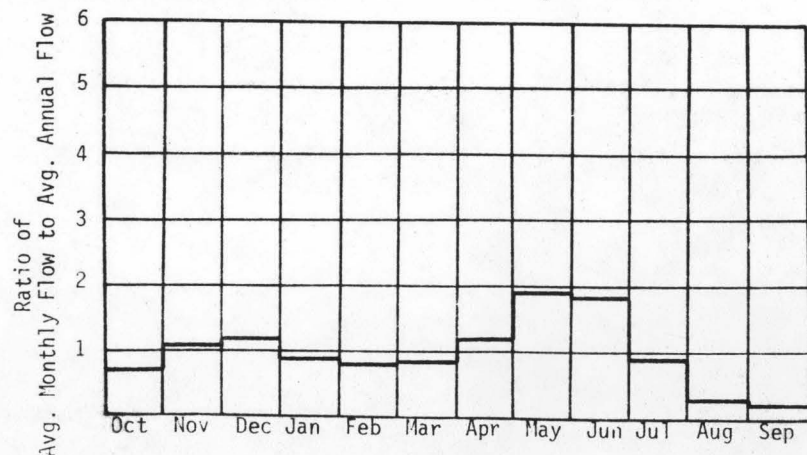
A. Upstream Elevation of Reach 1850 Ft. MSL  
 B. Downstream Elevation of Reach 800 Ft. MSL  
 C. Total Available Head in Reach 1050 + 66 = 1116 Ft.  
 D. Average Slope in Reach 284 Ft./Mi.  
 E. Drainage Area above Reach Mouth 15.2 Sq.Mi.  
 F. Inflow Classification Natural

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

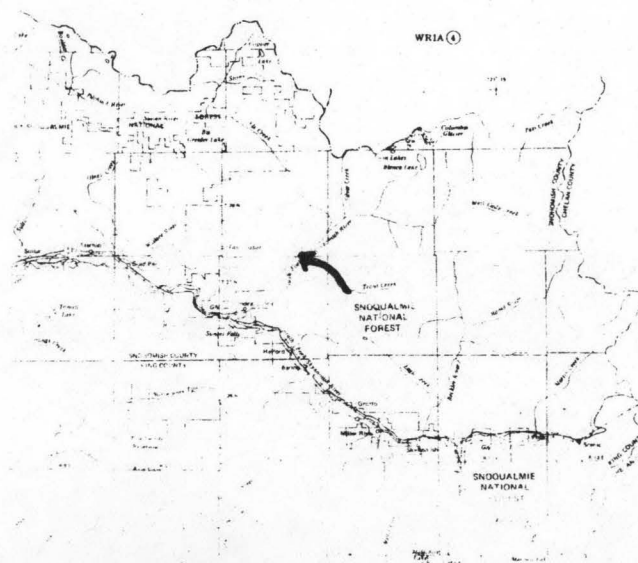
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.6	1.19	10.4	1.00
80	24.3	2.29	18.9	0.94
50	60.3	5.69	37.9	0.76
30	105	9.94	53.1	0.61
10	194	18.3	67.2	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0030

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R11E  
 D. Latitude, Longitude 47°55' 121°26'  
 E. Stream Name Silver Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0/3.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

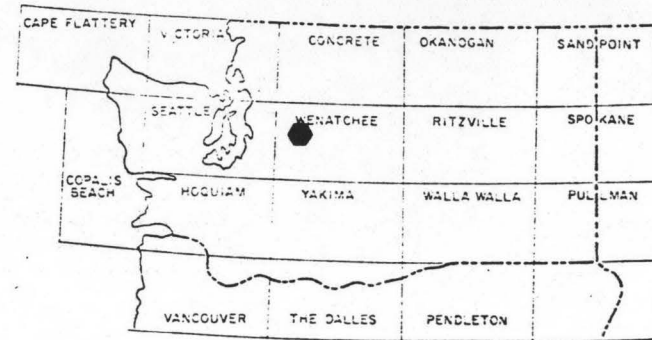
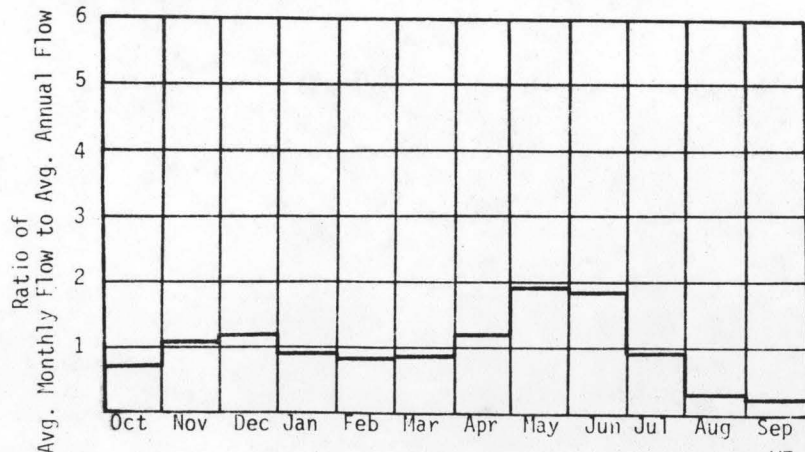
A. Upstream Elevation of Reach 2000 Ft. MSL  
 B. Downstream Elevation of Reach 1070 Ft. MSL  
 C. Total Available Head in Reach 930 + 66 = 996 Ft.  
 D. Average Slope in Reach 266 Ft./Mi.  
 E. Drainage Area above Reach Mouth 12.5 Sq.Mi.  
 F. Inflow Classification Natural

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

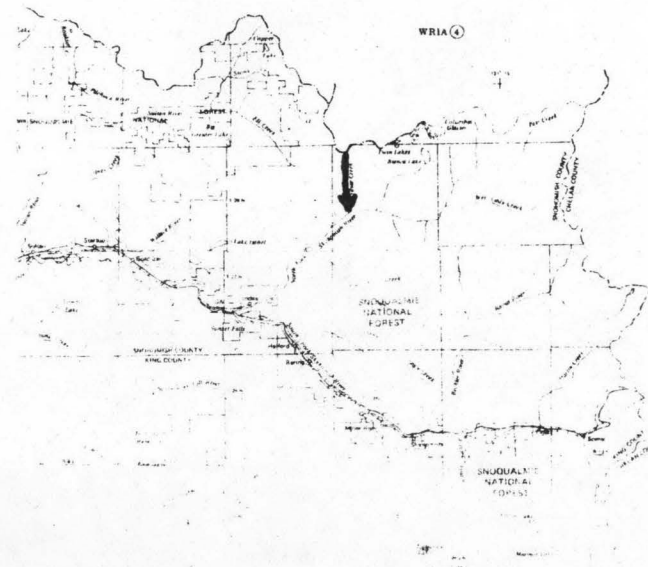
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.8	0.99	8.68	1.00
80	22.7	1.91	15.7	0.94
50	56.3	4.74	31.6	0.76
30	98.3	8.28	44.3	0.61
10	181	15.2	56.0	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 84 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0031

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R11E  
 D. Latitude, Longitude 47°55' 121°26'  
 E. Stream Name Silver Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0/2.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

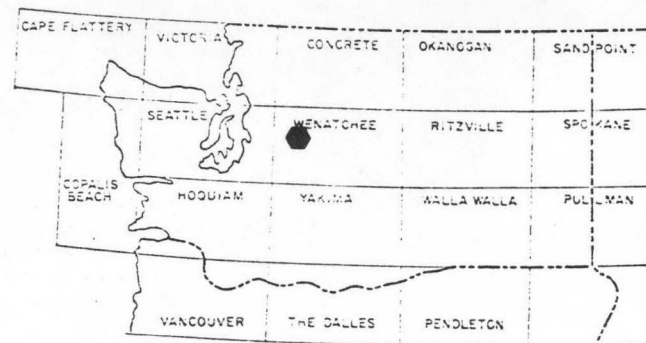
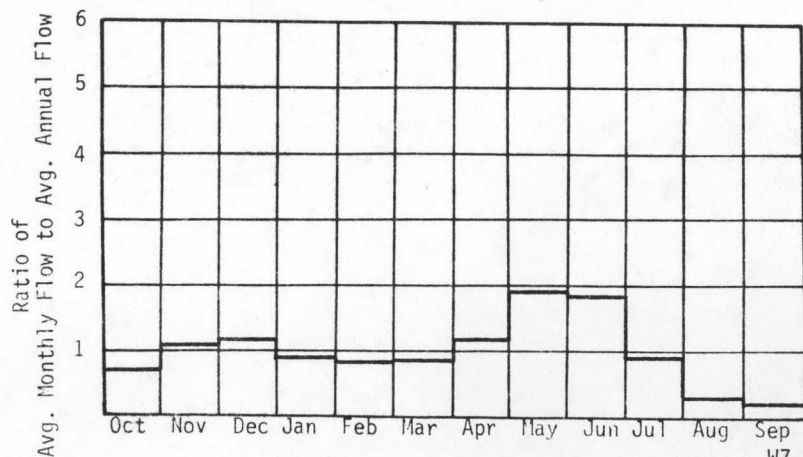
A. Upstream Elevation of Reach 1730 Ft. MSL  
 B. Downstream Elevation of Reach 1240 Ft. MSL  
 C. Total Available Head in Reach 490 + 66 = 556 Ft.  
 D. Average Slope in Reach 213 Ft./Mi.  
 E. Drainage Area above Reach Mouth 13.1 Sq.Mi.  
 F. Inflow Classification Natural

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

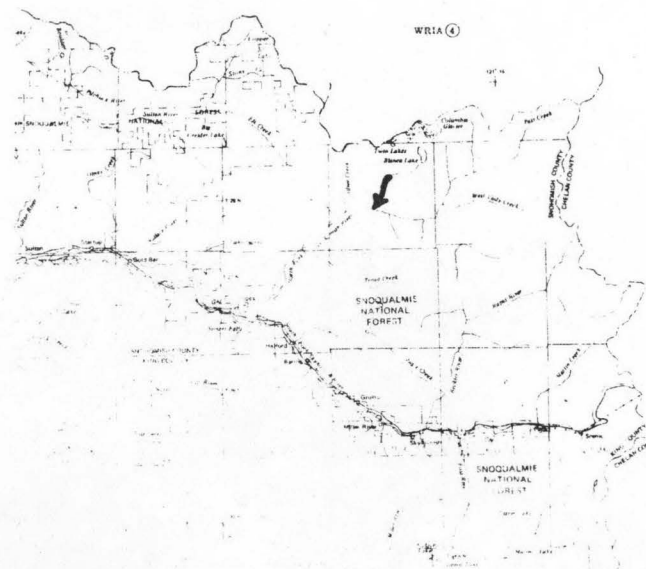
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.2	0.86	7.50	1.00
80	33.2	1.56	12.9	0.94
50	71.7	3.37	23.0	0.78
30	122	5.74	31.2	0.62
10	234	11.0	40.6	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 107 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-R0032

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T28N R12E  
 D. Latitude, Longitude 47°54' 121°16'  
 E. Stream Name West Cady Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0/4.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

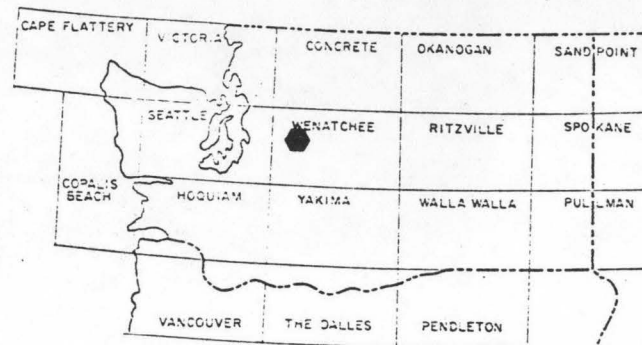
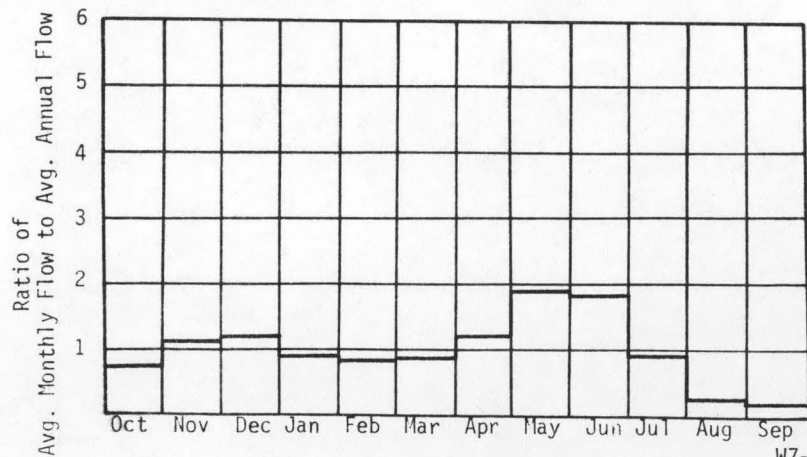
A. Upstream Elevation of Reach 2920 Ft. MSL  
 B. Downstream Elevation of Reach 1670 Ft. MSL  
 C. Total Available Head in Reach 1280 + 66 = 1346 Ft.  
 D. Average Slope in Reach 272 Ft./Mi.  
 E. Drainage Area above Reach Mouth 17.8 Sq.Mi.  
 F. Inflow Classification Natural

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

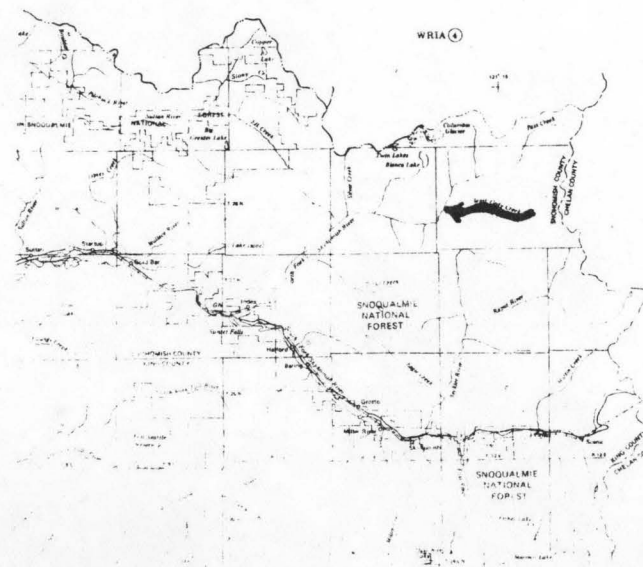
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.0	2.61	22.9	1.00
80	41.9	4.77	39.2	0.94
50	90.5	10.3	70.4	0.78
30	154	17.5	95.2	0.62
10	296	33.7	124	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 135 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0033

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T28N R12E</u>
D. Latitude, Longitude	<u>47°56' 121°17'</u>
E. Stream Name	<u>Quartz Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/0.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

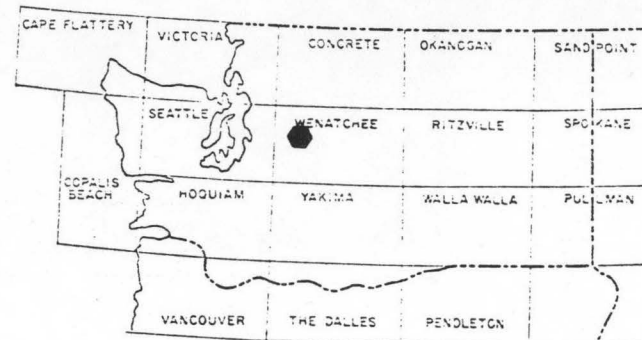
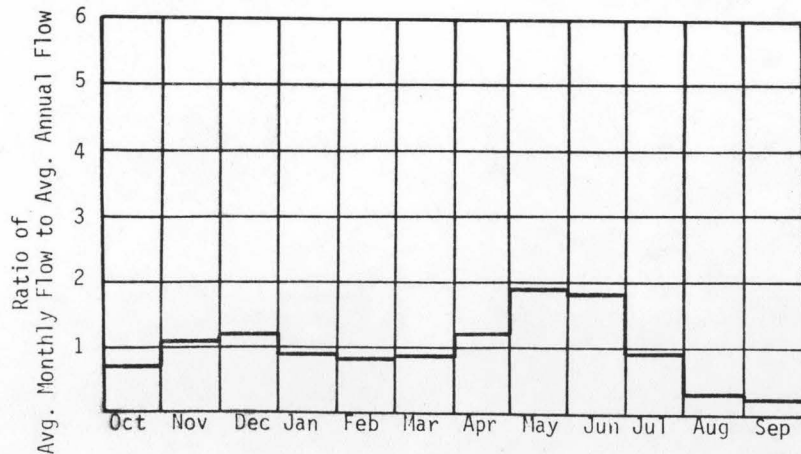
A. Upstream Elevation of Reach	<u>2840</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2640</u>	Ft. MSL
C. Total Available Head in Reach	<u>200 + 66 = 266</u>	Ft.
D. Average Slope in Reach	<u>222</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

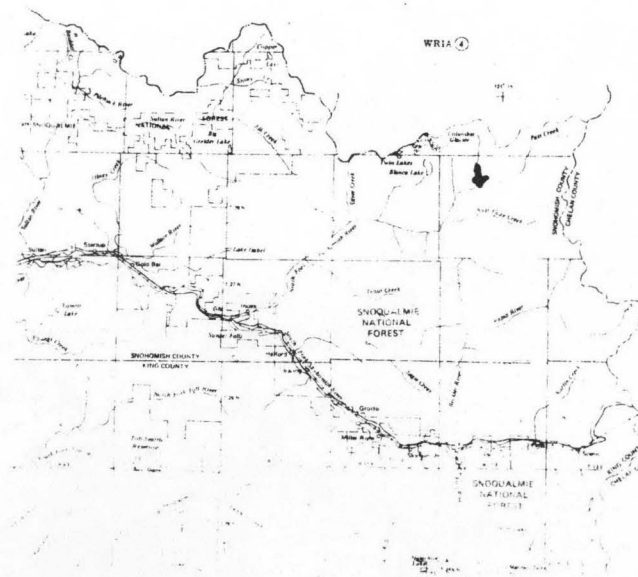
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.2	0.23	2.01	1.00
80	18.6	0.42	3.45	0.94
50	40.2	0.90	6.18	0.78
30	68.4	1.54	8.36	0.62
10	131	2.96	10.9	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 60 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0034

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R10E</u>
D. Latitude, Longitude	<u>47°48' 121°31'</u>
E. Stream Name	<u>S.E. Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/4.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

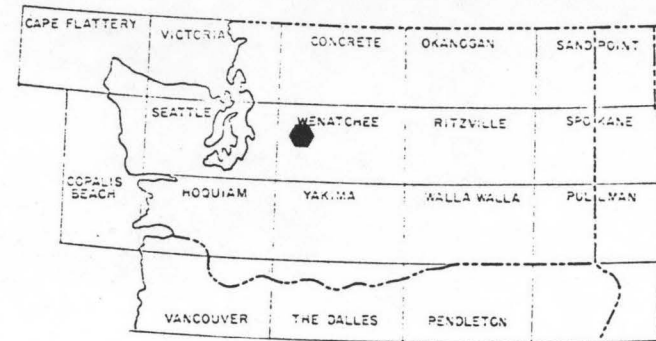
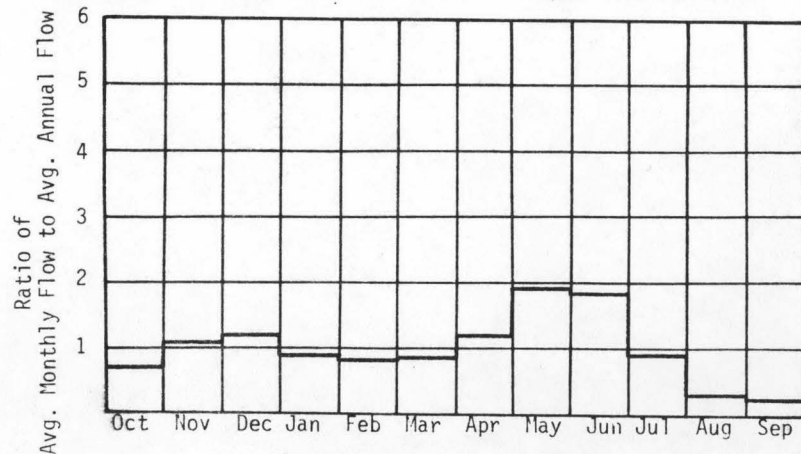
A. Upstream Elevation of Reach	<u>745</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>480</u>	Ft. MSL
C. Total Available Head in Reach	<u>265</u>	Ft.
D. Average Slope in Reach	<u>34.42</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>363</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

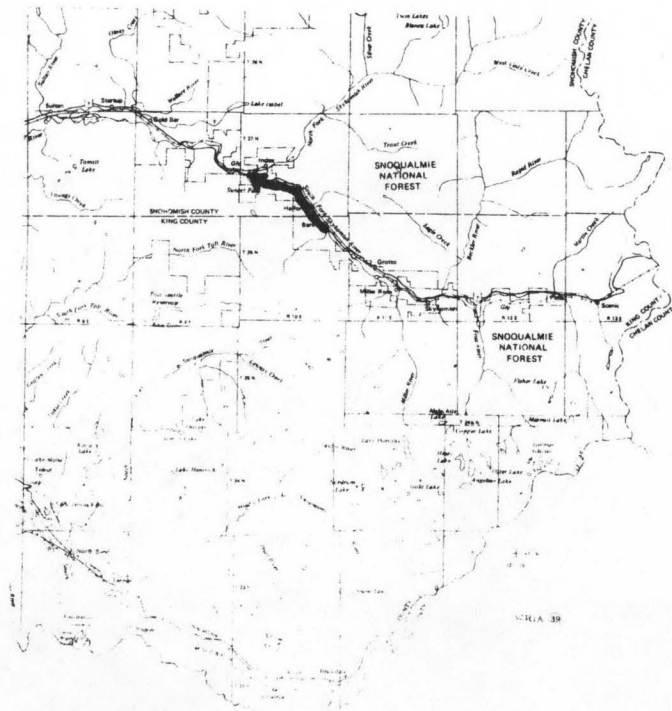
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	411	9.21	80.7	1.00
80	773	17.3	143	0.94
50	1670	37.4	255	0.78
30	2780	62.3	344	0.63
10	5120	115	433	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2416 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0035

### I. LOCATION

A. State Washington  
 B. County Snohomish  
 C. Township, Range T26N R10E  
 D. Latitude, Longitude 47°45' 121°27'  
 E. Stream Name S.F. Skykomish River  
 F. Major Basin Name Snohomish  
 G. River Mile 7.7/11.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

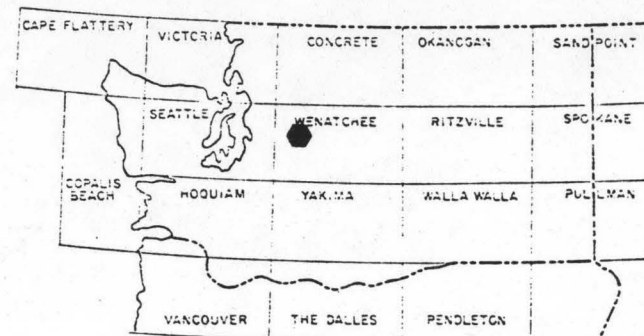
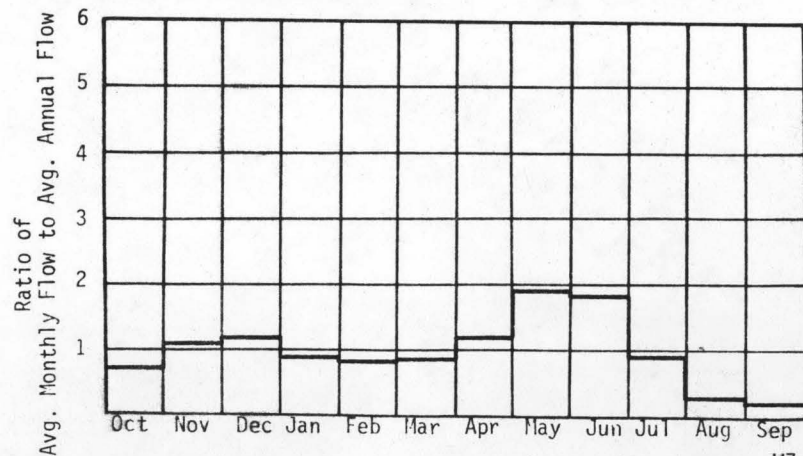
A. Upstream Elevation of Reach 830 Ft. MSL  
 B. Downstream Elevation of Reach 745 Ft. MSL  
 C. Total Available Head in Reach 85 Ft.  
 D. Average Slope in Reach 20.7 Ft./Mi.  
 E. Drainage Area above Reach Mouth 327.7 Sq.Mi.  
 F. Inflow Classification Natural

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

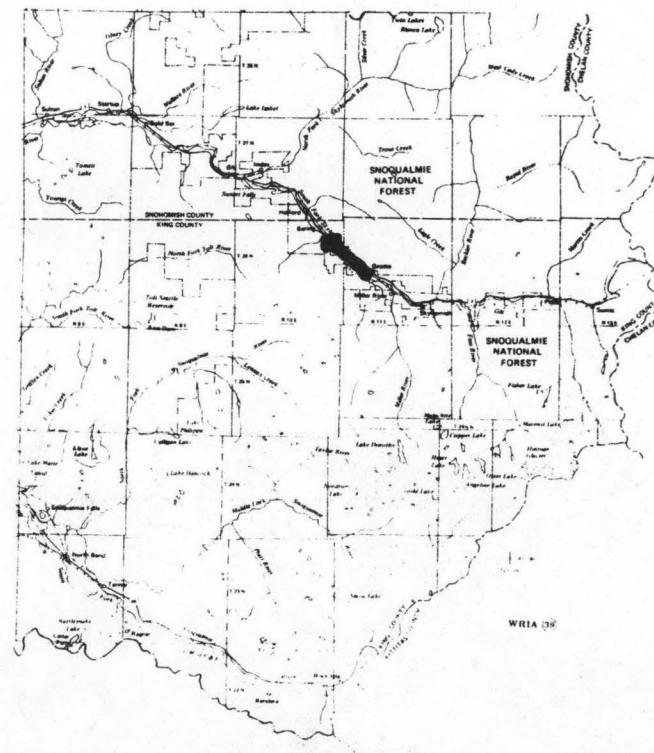
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	385	2.77	24.2	1.00
80	724	5.21	42.9	0.94
50	1560	11.2	76.7	0.78
30	2600	18.7	103	0.63
10	4800	34.5	130	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2263 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0036

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T26N R10E</u>
D. Latitude, Longitude	<u>47°43' 121°31'</u>
E. Stream Name	<u>S.F. Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>11.8/14.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

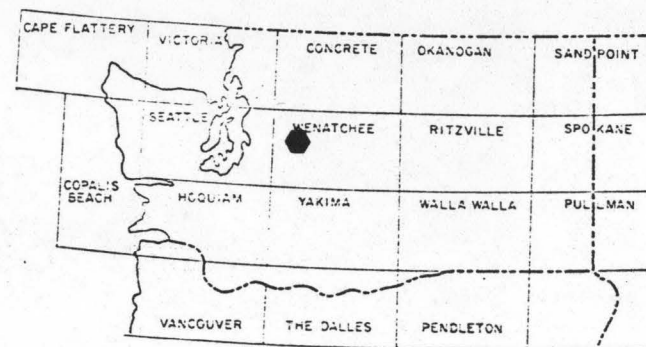
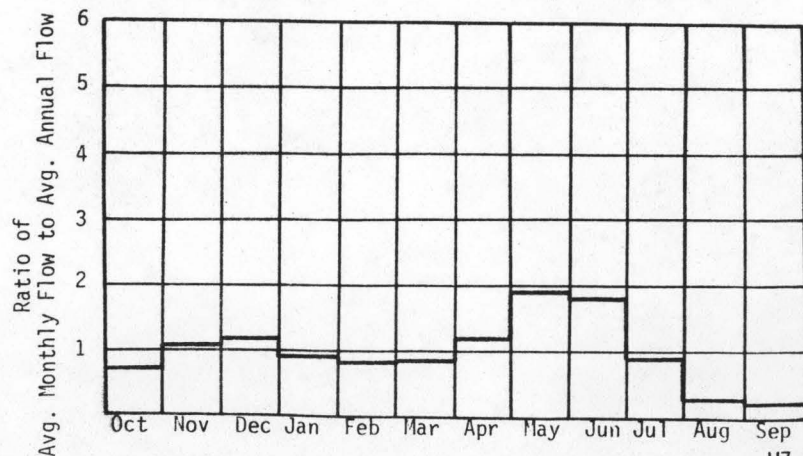
A. Upstream Elevation of Reach	<u>870</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>830</u>	Ft. MSL
C. Total Available Head in Reach	<u>40</u>	Ft.
D. Average Slope in Reach	<u>18.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>299.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

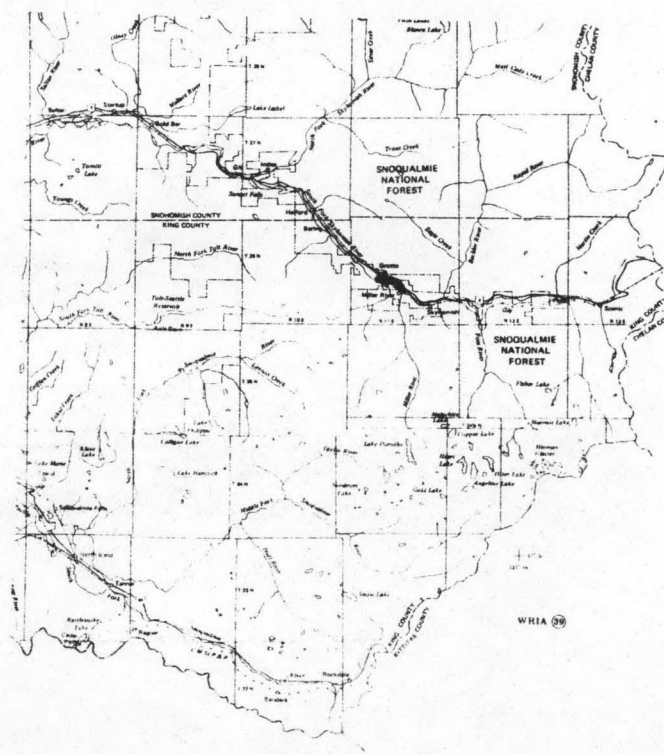
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	363	1.23	10.8	1.00
80	684	2.31	19.1	0.94
50	1470	4.99	34.1	0.78
30	2460	8.31	45.9	0.63
10	4530	15.3	57.7	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2136 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0037

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T26N R11E</u>
D. Latitude, Longitude	<u>47°43' 121°22'</u>
E. Stream Name	<u>S.F. Skykomish River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>14.0/17.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

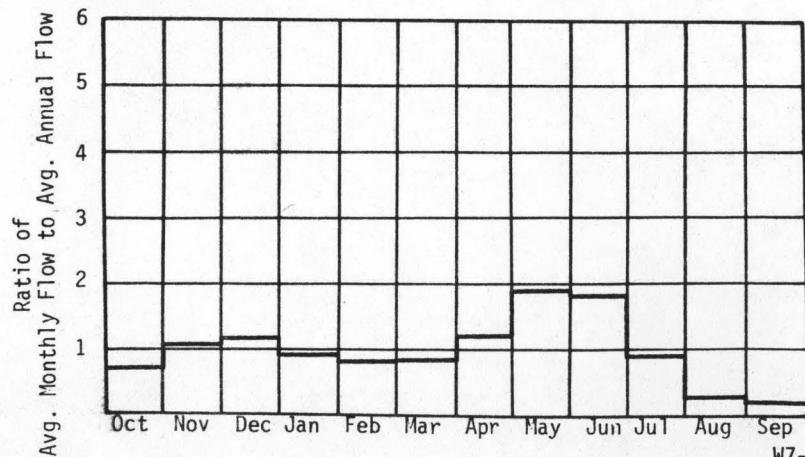
A. Upstream Elevation of Reach	<u>930</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>870</u>	Ft. MSL
C. Total Available Head in Reach	<u>60</u>	Ft.
D. Average Slope in Reach	<u>18.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>249.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

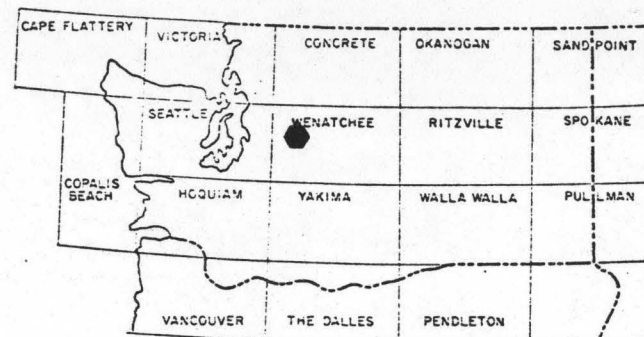
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	338	1.72	15.1	1.00
80	637	3.23	26.6	0.94
50	1370	6.97	47.7	0.78
30	2290	11.6	64.1	0.63
10	4220	21.4	80.7	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

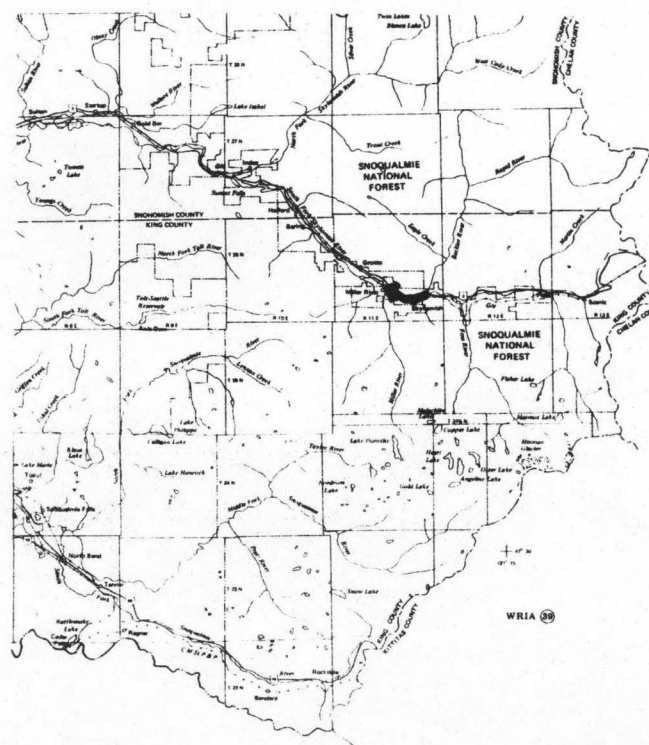
QMR = 1991 cfs



W7-310



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0038

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T26N R12E</u>
D. Latitude, Longitude	<u>47°43' 121°19'</u>
E. Stream Name	<u>S.F. Skykomish</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>17.2/19.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

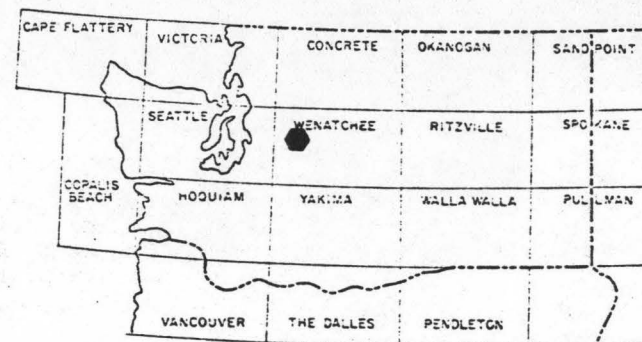
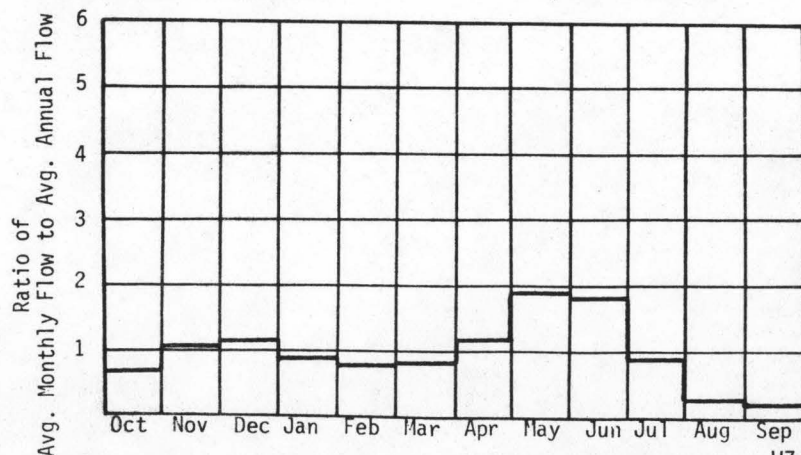
A. Upstream Elevation of Reach	<u>1010</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>930</u>	Ft. MSL
C. Total Available Head in Reach	<u>80</u>	Ft.
D. Average Slope in Reach	<u>32.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>141.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

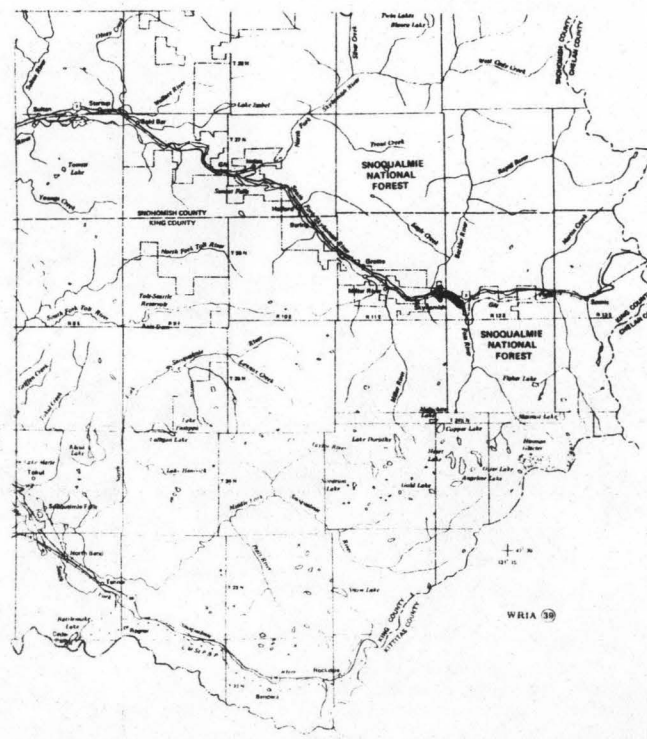
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	221	1.50	13.1	1.00
80	389	2.63	21.9	0.95
50	736	4.98	34.9	0.80
30	1180	7.97	45.4	0.65
10	2240	15.2	57.1	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1052 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0039

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R10E</u>
D. Latitude, Longitude	<u>47°46' 121°30'</u>
E. Stream Name	<u>Index Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/1.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

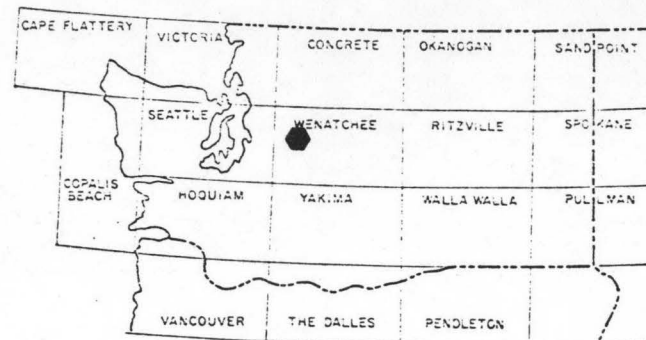
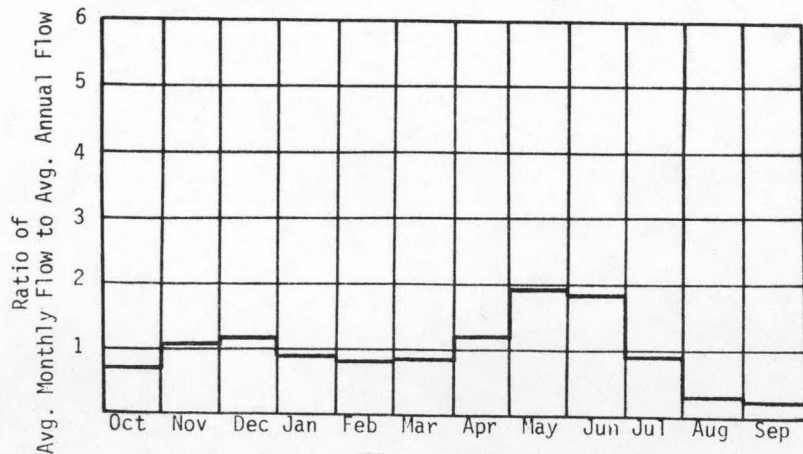
A. Upstream Elevation of Reach	<u>1020</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>745</u>	Ft. MSL
C. Total Available Head in Reach	<u>275 + 66 = 341</u>	Ft.
D. Average Slope in Reach	<u>196</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>12.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

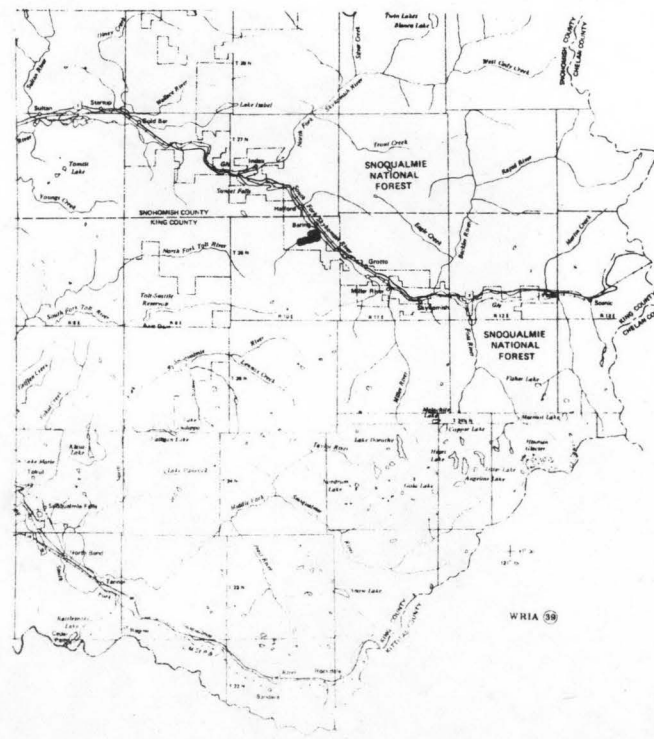
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	12.2	0.35	3.09	1.00
80	23.0	0.66	5.47	0.94
50	49.7	1.43	9.79	0.78
30	32.8	2.39	13.2	0.63
10	153	4.40	16.6	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 72 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0040

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R11E</u>
D. Latitude, Longitude	<u>47°43' 121°25'</u>
E. Stream Name	<u>Money Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/2.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

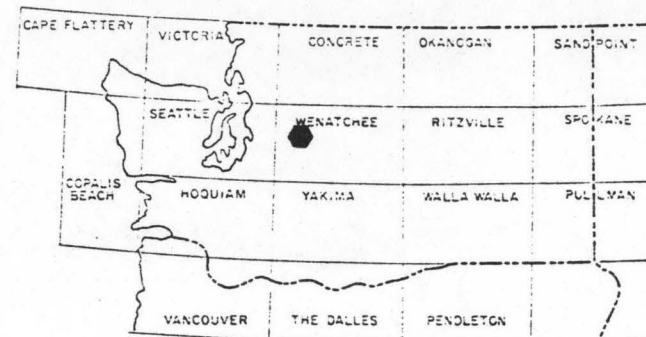
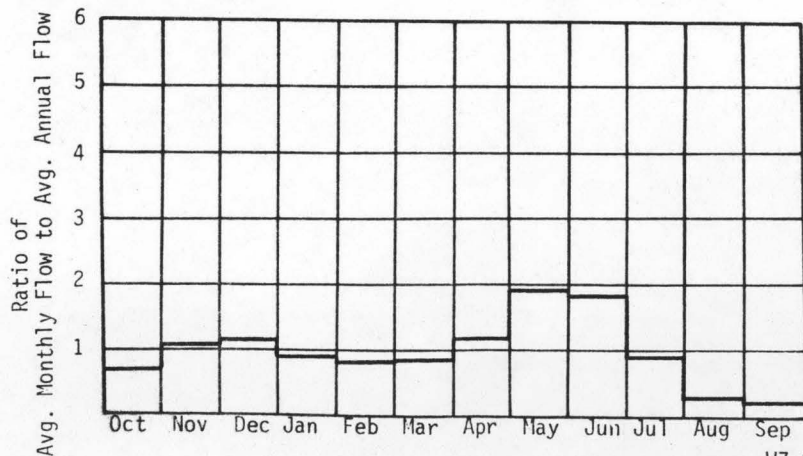
A. Upstream Elevation of Reach	<u>1260</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>830</u>	Ft. MSL
C. Total Available Head in Reach	<u>430 + 66 = 496</u>	Ft.
D. Average Slope in Reach	<u>159</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

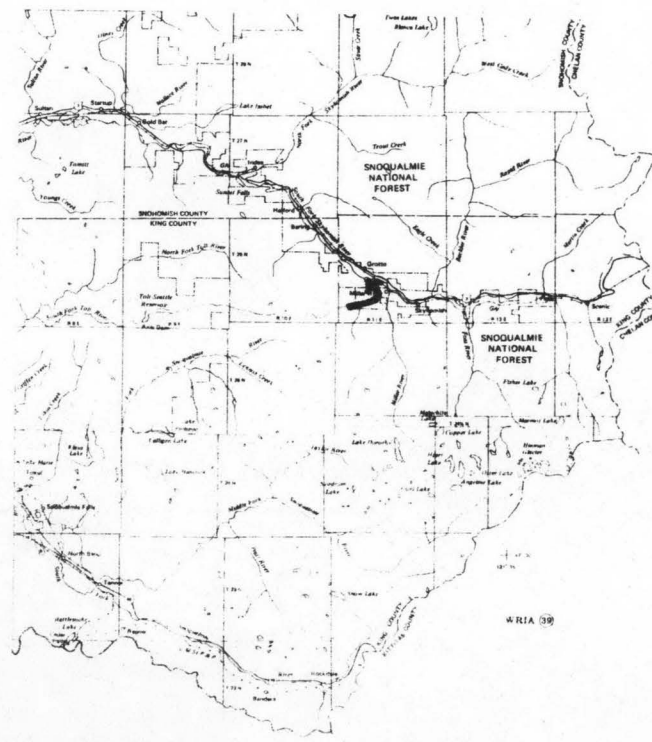
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.5	0.61	5.31	1.00
80	27.2	1.14	9.40	0.93
50	58.7	2.46	16.8	0.75
30	97.8	4.10	22.6	0.60
10	180	7.56	28.5	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 85 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0041

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R10E</u>
D. Latitude, Longitude	<u>47°42' 121°23'</u>
E. Stream Name	<u>Miller River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/3.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

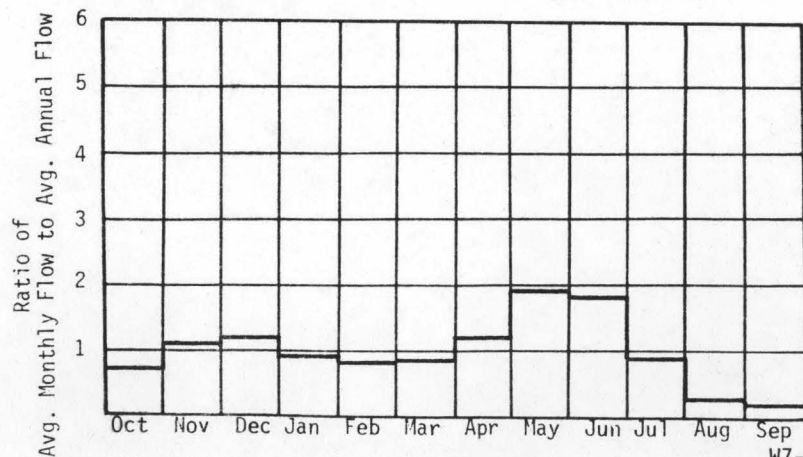
A. Upstream Elevation of Reach	<u>1170</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>870</u>	Ft. MSL
C. Total Available Head in Reach	<u>300</u>	Ft.
D. Average Slope in Reach	<u>81</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>46.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

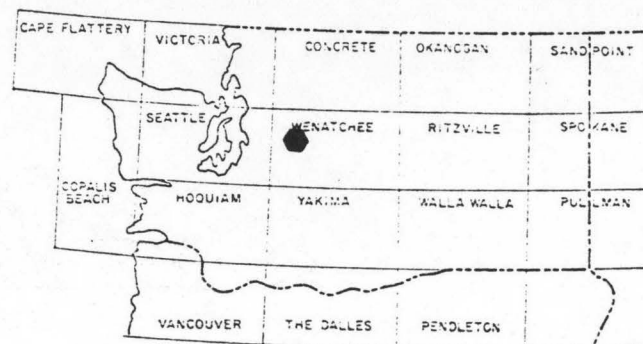
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	66.8	1.70	14.9	1.00
80	126	3.19	26.3	0.93
50	271	6.88	47.0	0.75
30	452	11.5	63.3	0.60
10	833	21.2	79.7	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

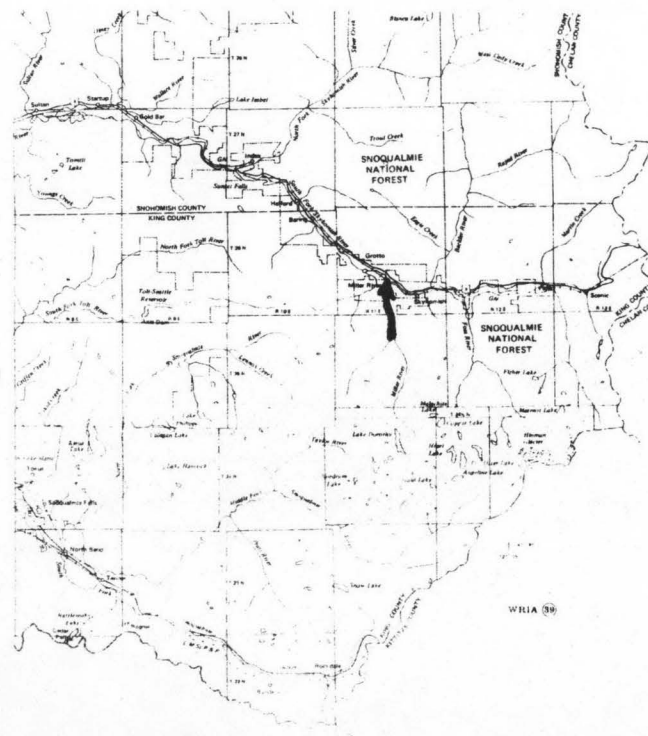
QMR = 393 cfs



W7-314



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0042

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T25N R11E  
 D. Latitude, Longitude 47°39' 121°22'  
 E. Stream Name Miller River  
 F. Major Basin Name Snohomish  
 G. River Mile 3.7/9.1

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

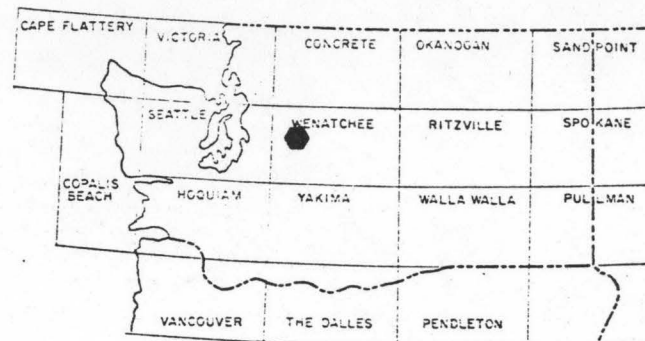
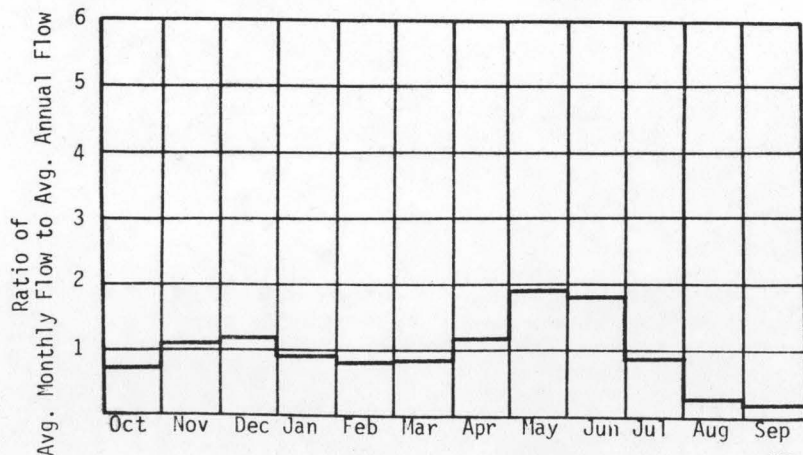
A. Upstream Elevation of Reach 2050 Ft. MSL  
 B. Downstream Elevation of Reach 1170 Ft. MSL  
 C. Total Available Head in Reach 880 Ft.  
 D. Average Slope in Reach 163 Ft./Mi.  
 E. Drainage Area above Reach Mouth 26.9 Sq.Mi.  
 F. Inflow Classification Natural

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

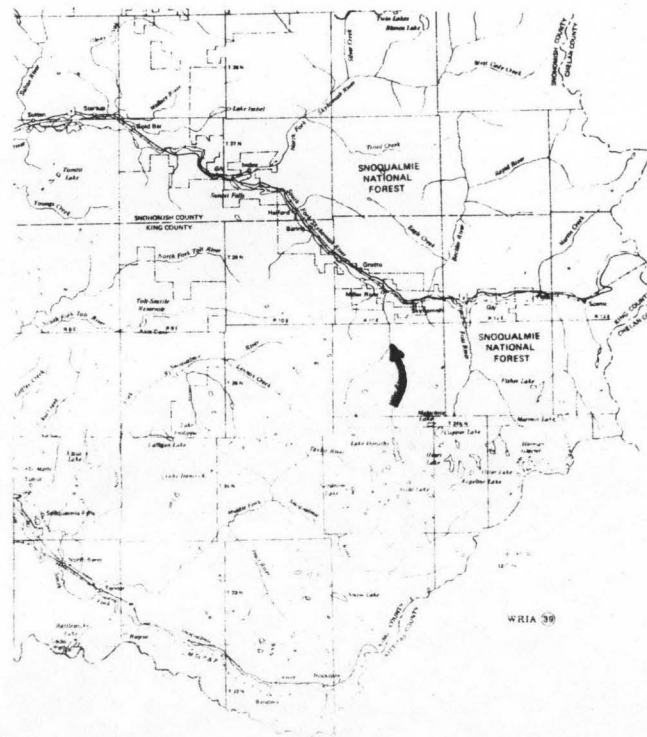
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	33.2	2.47	21.6	1.00
80	62.4	4.65	38.3	0.93
50	135	10.0	68.4	0.75
30	224	16.7	92.1	0.60
10	413	30.8	116	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 195 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0043

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R11E</u>
D. Latitude, Longitude	<u>47°36' 121°23'</u>
E. Stream Name	<u>Miller River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>9.1/10.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

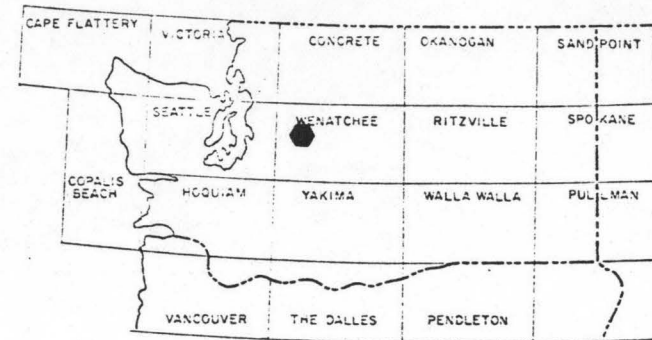
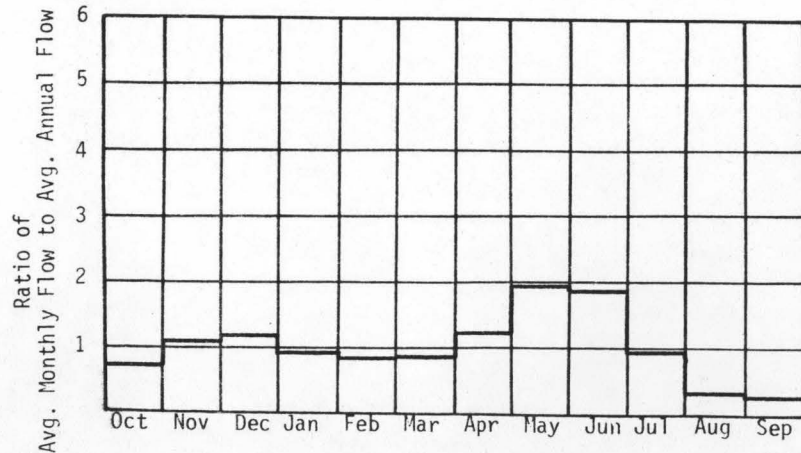
A. Upstream Elevation of Reach	<u>2360</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2050</u>	Ft. MSL
C. Total Available Head in Reach	<u>310 + 66 = 376</u>	Ft.
D. Average Slope in Reach	<u>344</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

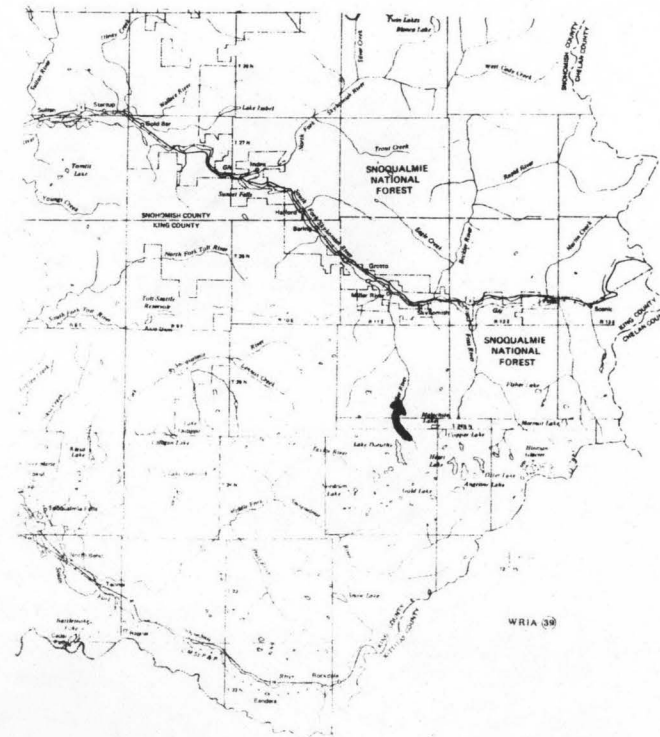
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.3	0.68	5.92	1.00
80	40.0	1.27	10.5	0.93
50	86.3	2.74	18.8	0.75
30	144	4.57	25.2	0.60
10	265	8.43	31.8	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 125 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0044

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R10E</u>
D. Latitude, Longitude	<u>47°39' 121°25'</u>
E. Stream Name	<u>W.F. Miller River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/4.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

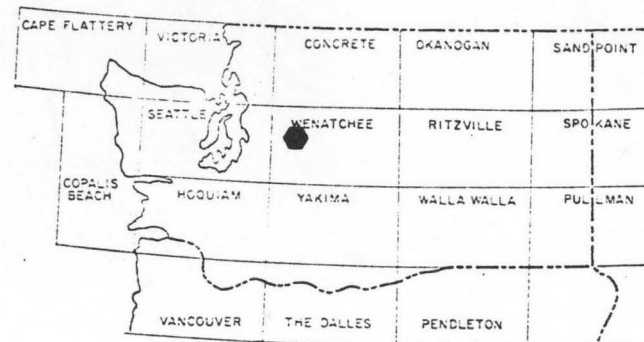
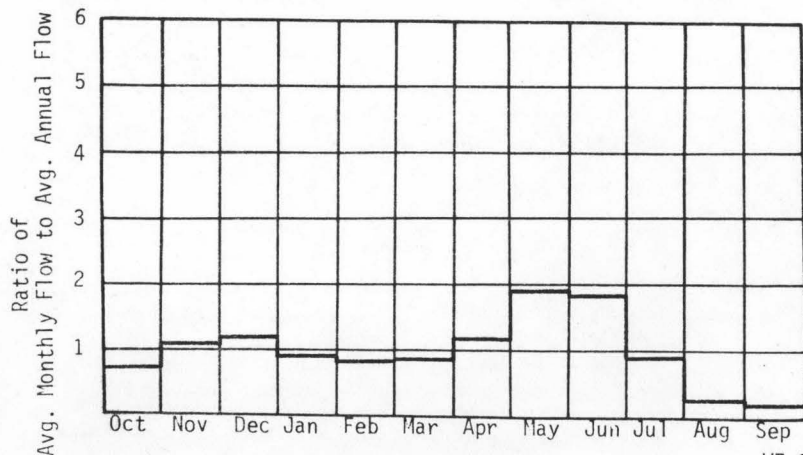
A. Upstream Elevation of Reach	<u>2220</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1170</u>	Ft. MSL
C. Total Available Head in Reach	<u>1050 + 66 = 1116</u>	Ft.
D. Average Slope in Reach	<u>233</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>14.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

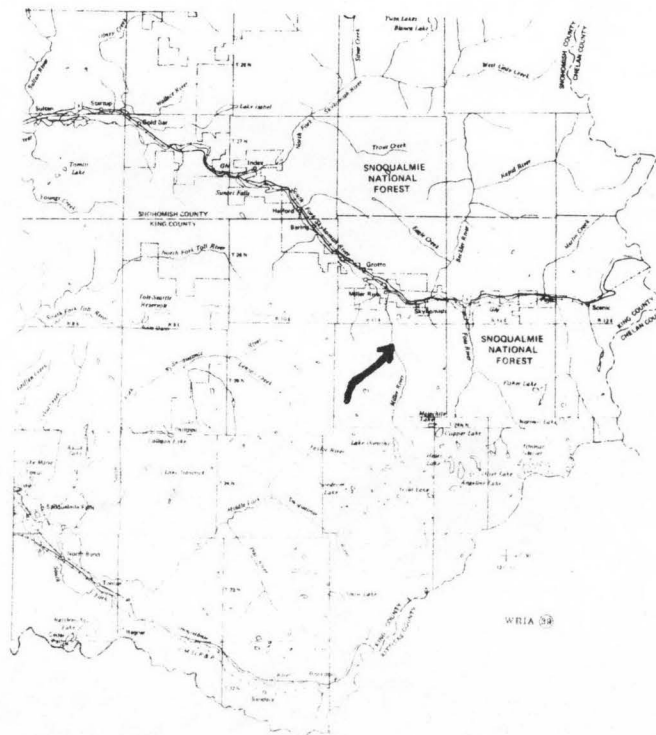
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.1	1.43	12.5	1.00
80	28.5	2.69	22.1	0.93
50	61.4	5.80	39.6	0.75
30	102	9.66	53.3	0.60
10	189	17.8	67.1	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 89 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0045

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R11E</u>
D. Latitude, Longitude	<u>47°44' 121°20'</u>
E. Stream Name	<u>Beckler River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/2.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

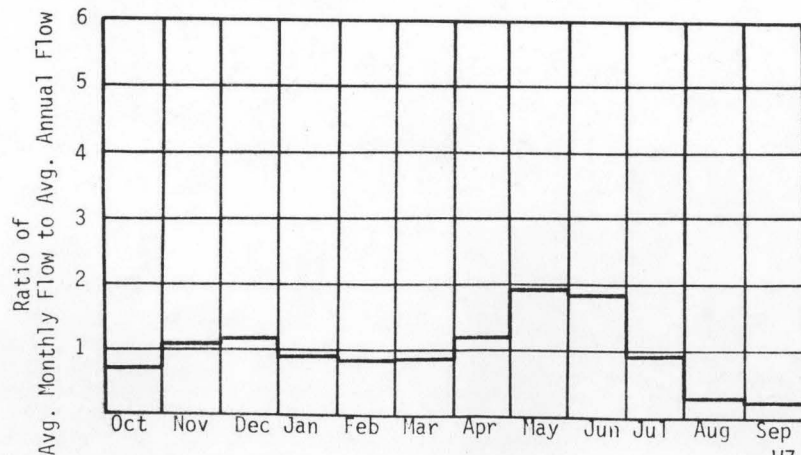
A. Upstream Elevation of Reach	<u>1050</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>930</u>	Ft. MSL
C. Total Available Head in Reach	<u>120</u>	Ft.
D. Average Slope in Reach	<u>48</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>96.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

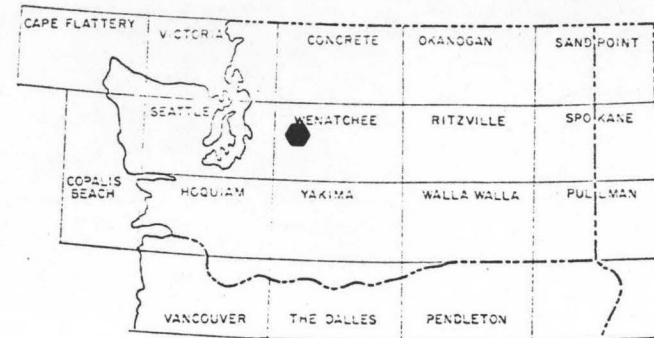
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	73.2	0.74	6.51	1.00
80	165	1.67	13.5	0.92
50	421	4.27	28.1	0.75
30	732	7.43	39.1	0.60
10	1310	13.3	49.0	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

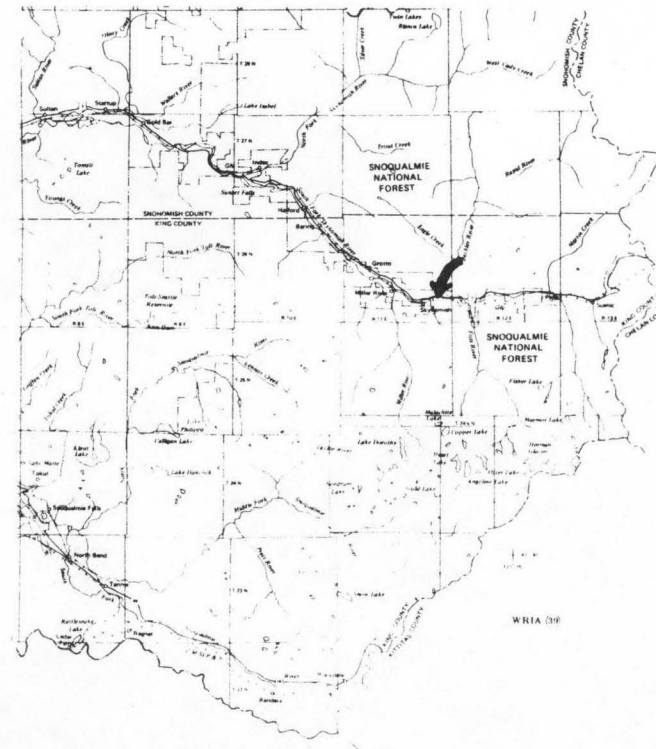
QMR = 610 cfs



W7-318



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0046

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R12E</u>
D. Latitude, Longitude	<u>121°18' 47°46'</u>
E. Stream Name	<u>Beckler River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>2.5/7.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

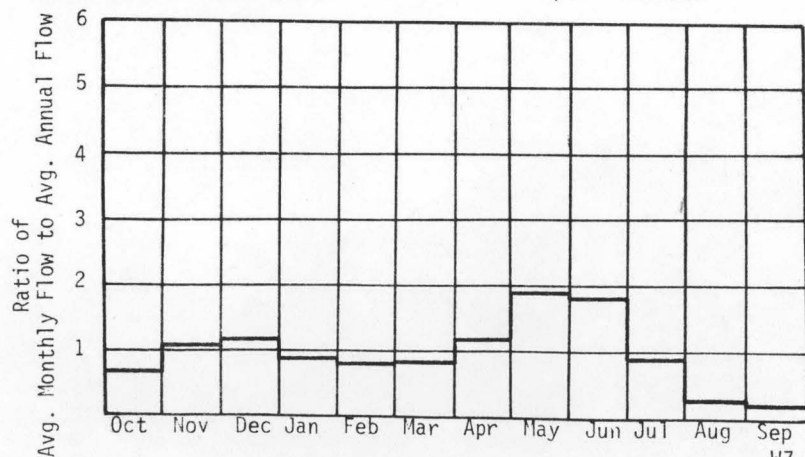
A. Upstream Elevation of Reach	<u>1335</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1050</u>	Ft. MSL
C. Total Available Head in Reach	<u>285</u>	Ft.
D. Average Slope in Reach	<u>54.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>89.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

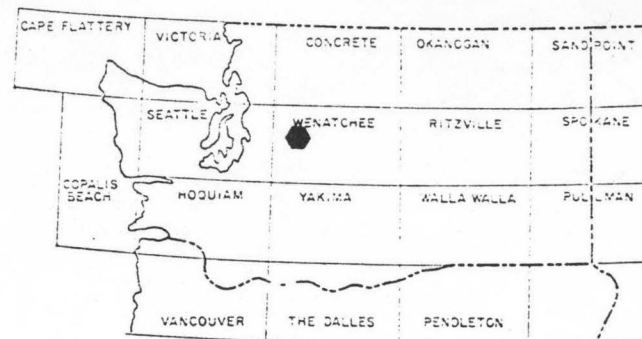
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	58.6	1.41	12.4	1.00
80	132	3.18	25.6	0.92
50	337	8.12	53.3	0.75
30	586	14.1	74.2	0.60
10	1050	25.3	93.1	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

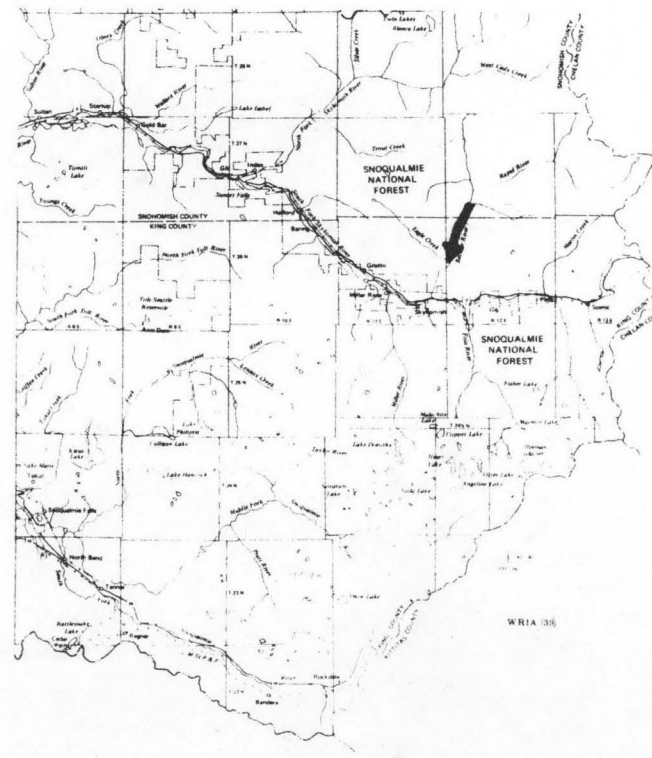
QMR = 488 cfs



W7-319



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0047

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R12E</u>
D. Latitude, Longitude	<u>47°50' 121°18'</u>
E. Stream Name	<u>Beckler River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>7.7/11.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

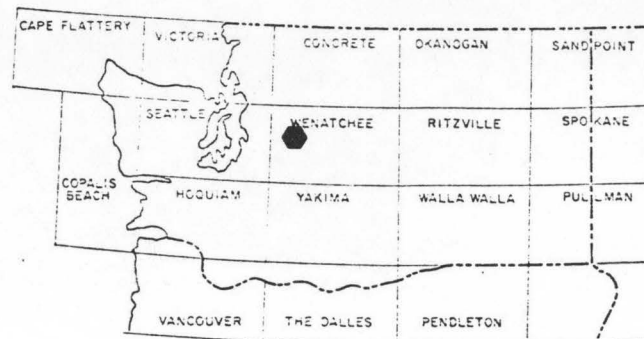
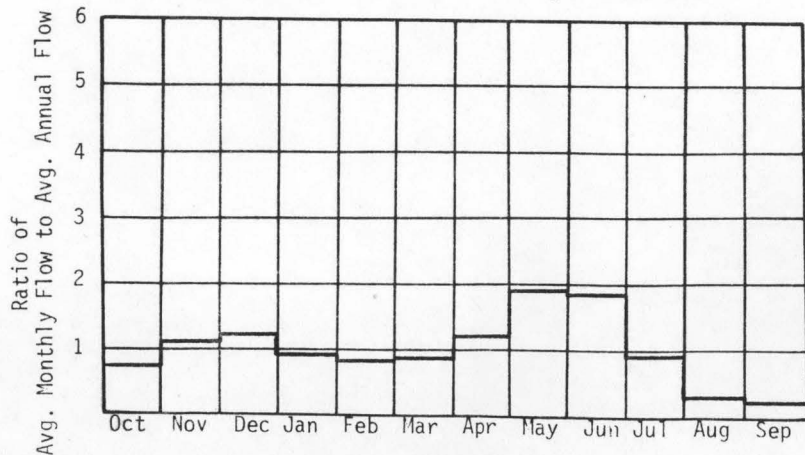
A. Upstream Elevation of Reach	<u>1960</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1335</u>	Ft. MSL
C. Total Available Head in Reach	<u>625 + 66 = 691</u>	Ft.
D. Average Slope in Reach	<u>152</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>41.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

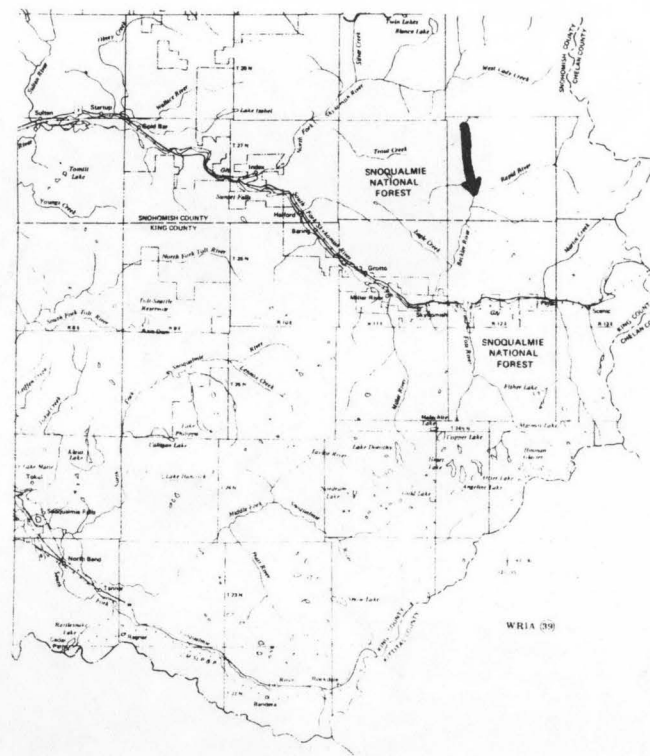
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.7	1.09	9.59	1.00
80	42.1	2.46	19.8	0.92
50	108	6.29	41.3	0.75
30	187	10.9	57.5	0.60
10	335	19.6	72.1	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 156 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0048

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Snohomish</u>
C. Township, Range	<u>T27N R12E</u>
D. Latitude, Longitude	<u>47°50' 121°12'</u>
E. Stream Name	<u>Rapid River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0.0/8.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

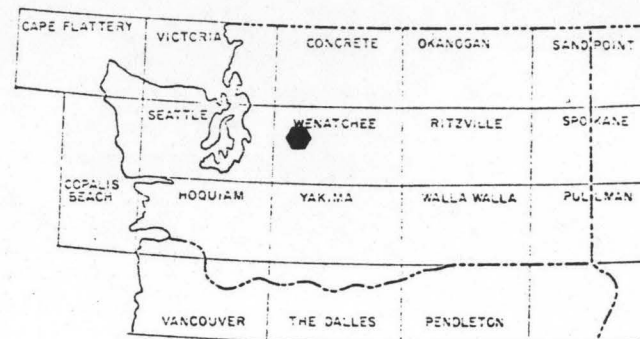
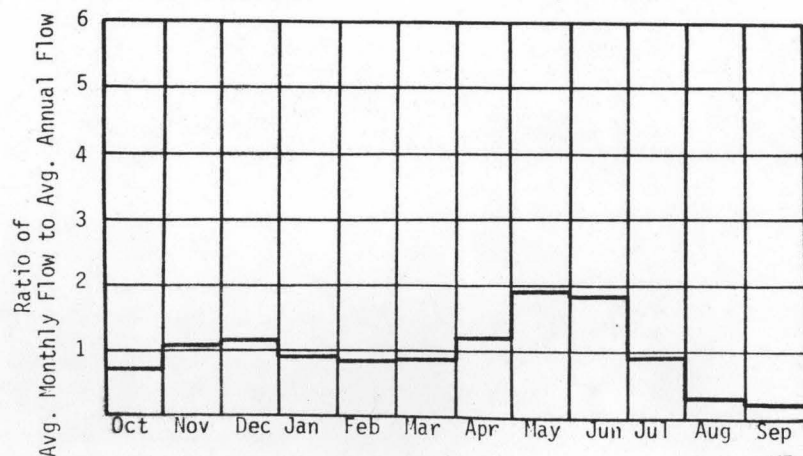
A. Upstream Elevation of Reach	<u>2820</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1335</u>	Ft. MSL
C. Total Available Head in Reach	<u>1485 + 66 = 1551</u>	Ft.
D. Average Slope in Reach	<u>183</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>26.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

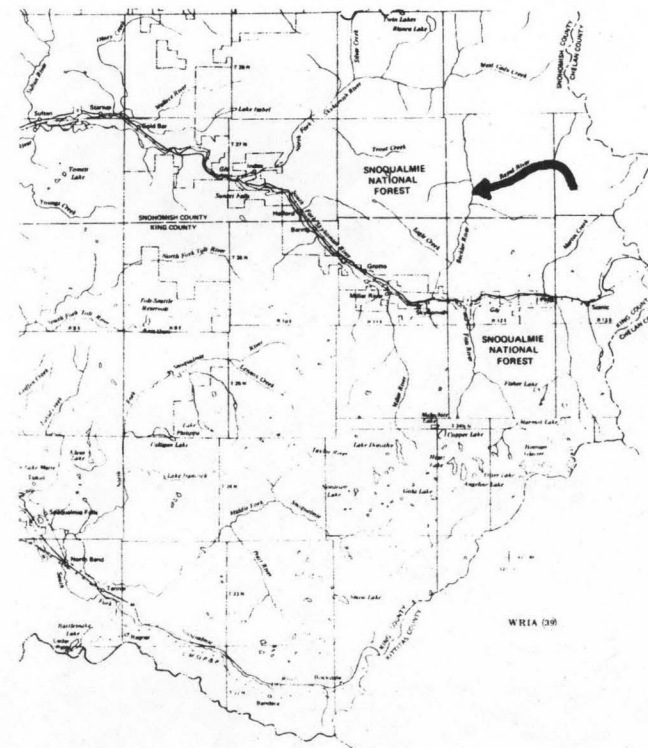
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.5	1.91	16.7	1.00
80	32.7	4.29	34.6	0.92
50	83.5	11.0	72.0	0.75
30	145	19.1	100	0.60
10	260	34.1	126	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 121 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0049

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R12E</u>
D. Latitude, Longitude	<u>47°41' 121°17'</u>
E. Stream Name	<u>Foss River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/4.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

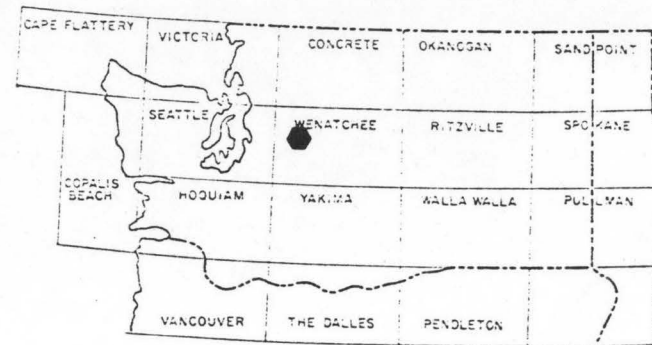
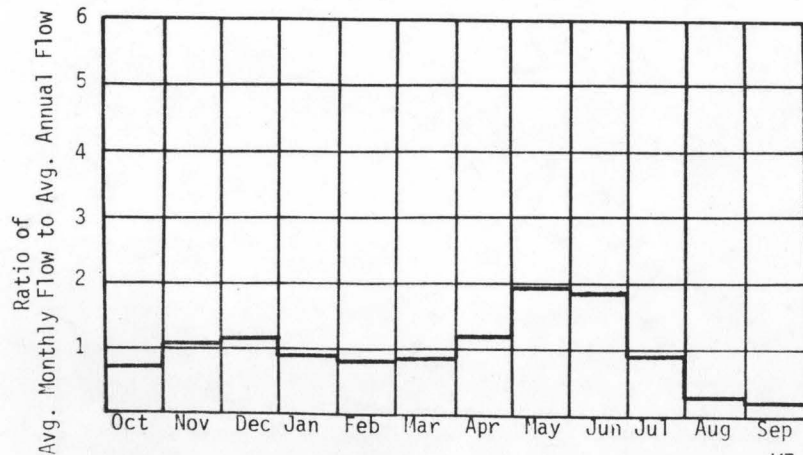
A. Upstream Elevation of Reach	<u>1532</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1010</u>	Ft. MSL
C. Total Available Head in Reach	<u>522</u>	Ft.
D. Average Slope in Reach	<u>124</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>137</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

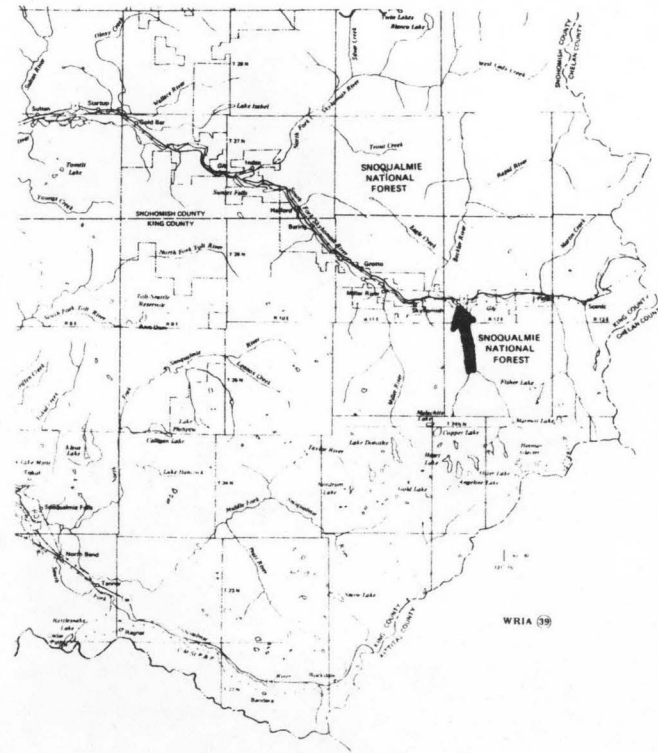
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	125	5.51	48.3	1.00
80	220	9.71	80.8	0.95
50	416	18.4	129	0.80
30	665	29.4	167	0.65
10	1270	55.9	210	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 594 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0050

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R12E</u>
D. Latitude, Longitude	<u>47°38' 121°18'</u>
E. Stream Name	<u>W.F. Foss River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/4.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

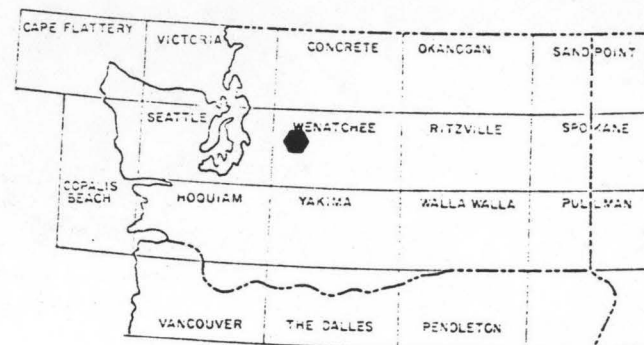
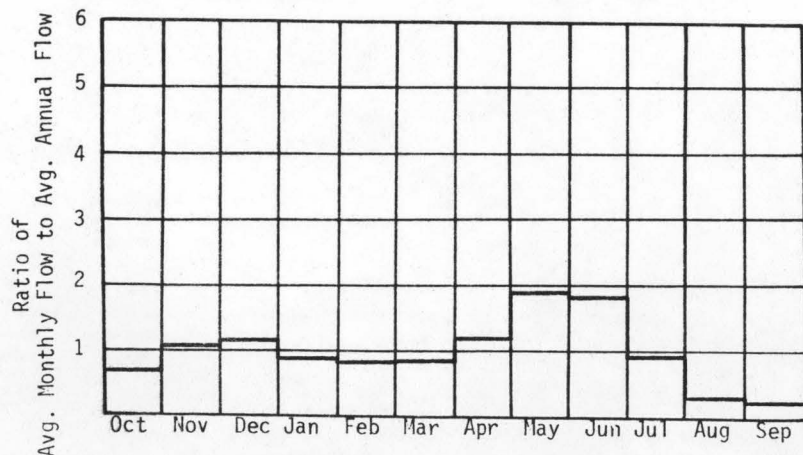
A. Upstream Elevation of Reach	<u>2640</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1532</u>	Ft. MSL
C. Total Available Head in Reach	<u>1008 + 66 = 1174</u>	Ft.
D. Average Slope in Reach	<u>277</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>20.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

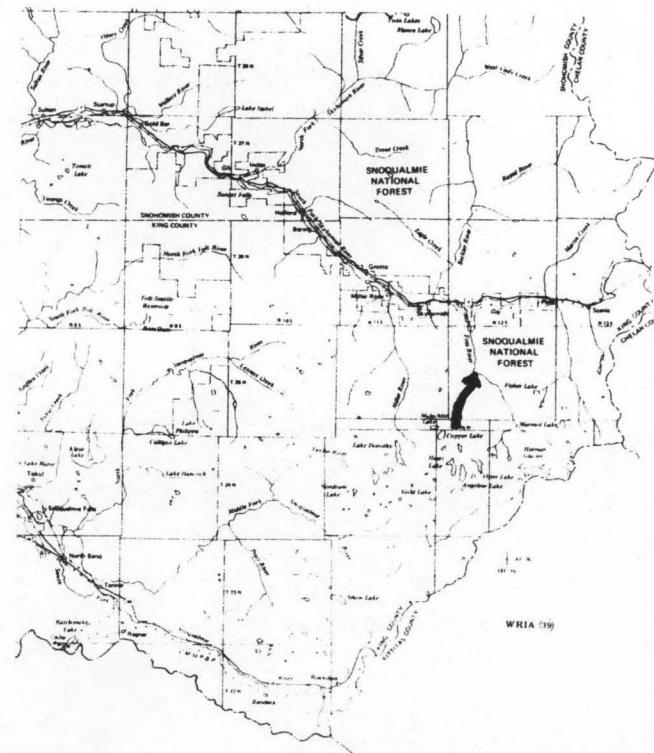
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	40.1	3.98	34.9	1.00
80	70.7	7.02	58.4	0.95
50	134	13.3	93.1	0.80
30	214	21.3	121	0.65
10	407	40.4	152	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 191 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0051

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R12E</u>
D. Latitude, Longitude	<u>47°38' 121°15'</u>
E. Stream Name	<u>E.F. Foss River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>4.2/8.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

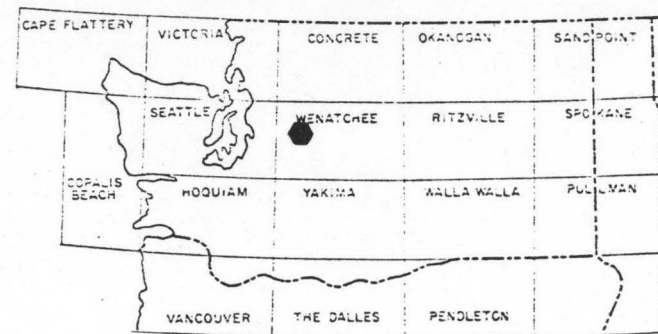
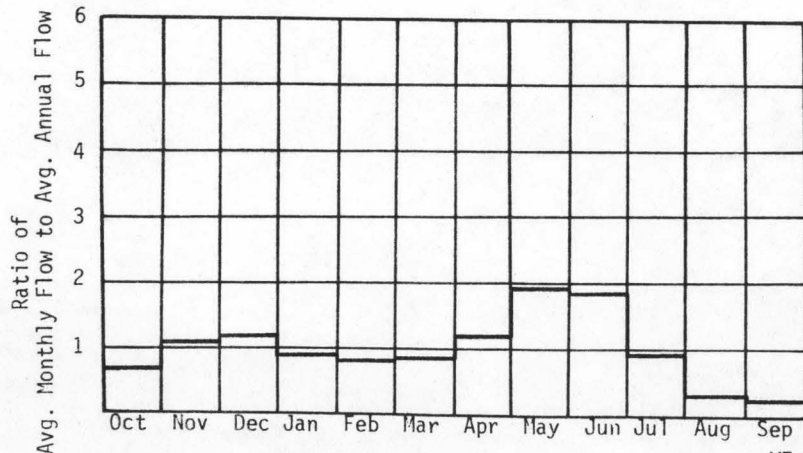
A. Upstream Elevation of Reach	<u>2160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1532</u>	Ft. MSL
C. Total Available Head in Reach	<u>628</u>	Ft.
D. Average Slope in Reach	<u>140</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

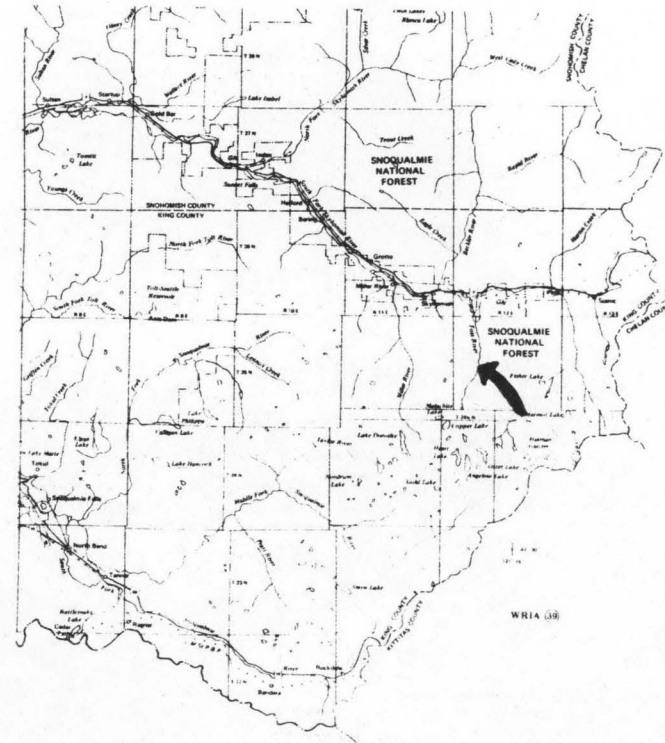
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	54.2	2.88	25.2	1.00
80	95.5	5.07	42.2	0.95
50	181	9.60	67.2	0.80
30	289	15.4	87.4	0.65
10	550	29.2	110	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 258 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0052

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R12E</u>
D. Latitude, Longitude	<u>47°37' 121°15'</u>
E. Stream Name	<u>F.F. Foss River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>8.7/9.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

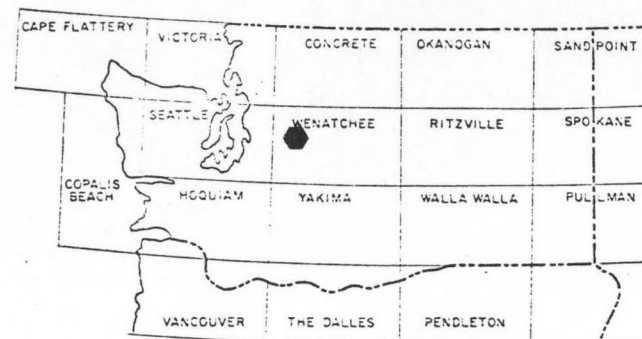
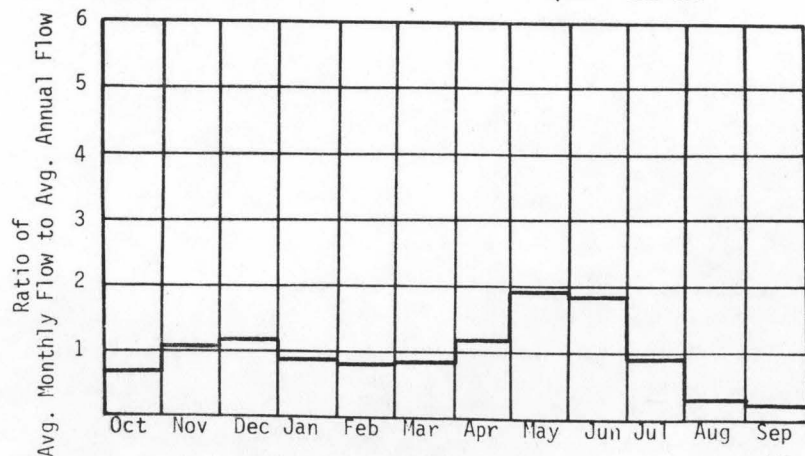
A. Upstream Elevation of Reach	<u>2240</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2160</u>	Ft. MSL
C. Total Available Head in Reach	<u>80 + 66 = 146</u>	Ft.
D. Average Slope in Reach	<u>267</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

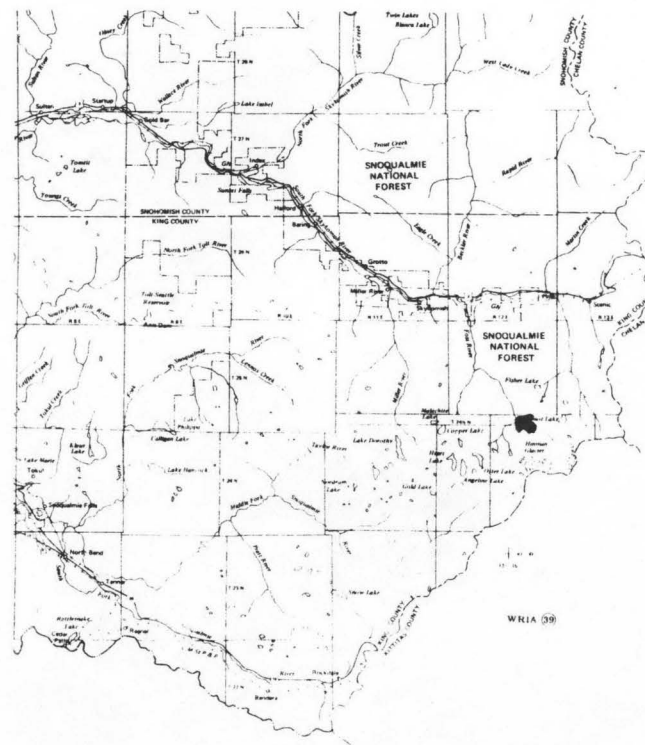
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	26.9	0.33	2.91	1.00
80	47.6	0.58	4.87	0.95
50	89.6	1.11	7.76	0.80
30	143	1.77	10.1	0.65
10	273	3.37	12.7	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 128 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0053

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R12E</u>
D. Latitude, Longitude	<u>47°43' 121°15'</u>
E. Stream Name	<u>Iye River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>19.7/25.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

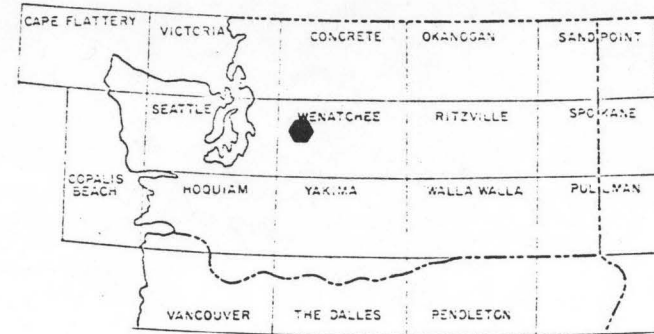
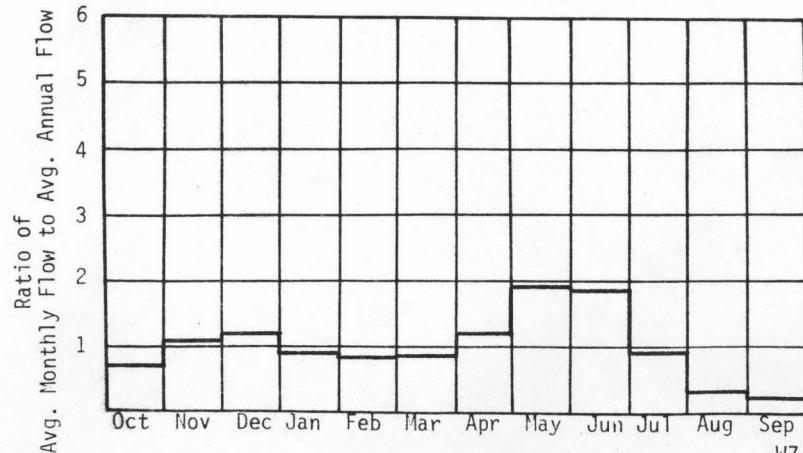
A. Upstream Elevation of Reach	<u>1580</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1010</u>	Ft. MSL
C. Total Available Head in Reach	<u>570</u>	Ft.
D. Average Slope in Reach	<u>102</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>81.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

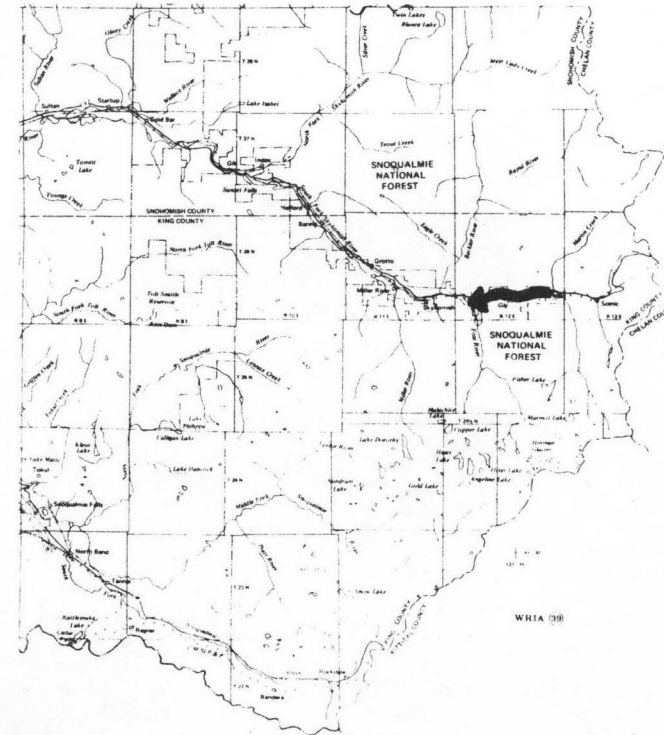
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	82.5	3.98	34.9	1.00
80	102	4.93	42.3	0.98
50	244	11.8	79.3	0.77
30	476	22.3	119	0.59
10	939	45.3	159	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 393 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0054

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R12E</u>
D. Latitude, Longitude	<u>47°43' 121°12'</u>
E. Stream Name	<u>Tye River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>25.3/26.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

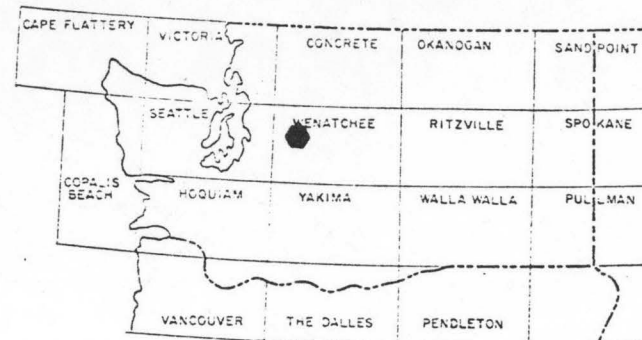
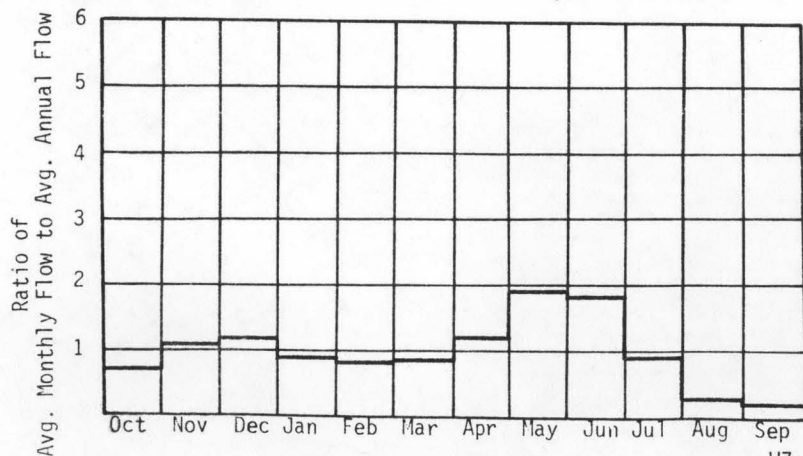
A. Upstream Elevation of Reach	<u>1740</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1580</u>	Ft. MSL
C. Total Available Head in Reach	<u>160</u>	Ft.
D. Average Slope in Reach	<u>178</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>52.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

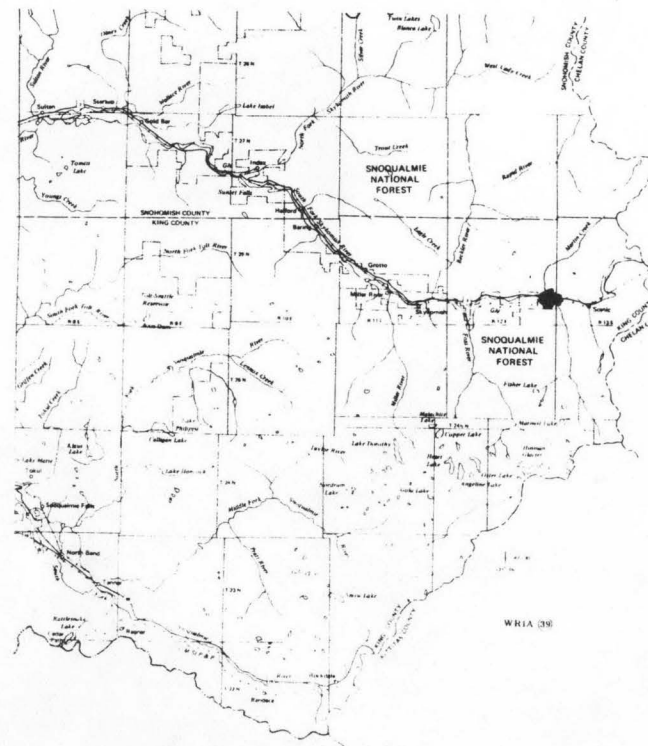
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	57.1	0.77	6.77	1.00
80	70.7	0.96	8.22	0.98
50	169	2.28	15.4	0.77
30	329	4.45	23.0	0.59
10	650	8.80	30.8	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 272 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0055

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R13E</u>
D. Latitude, Longitude	<u>47°43' 121°10'</u>
E. Stream Name	<u>Tye River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>26.2/29.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

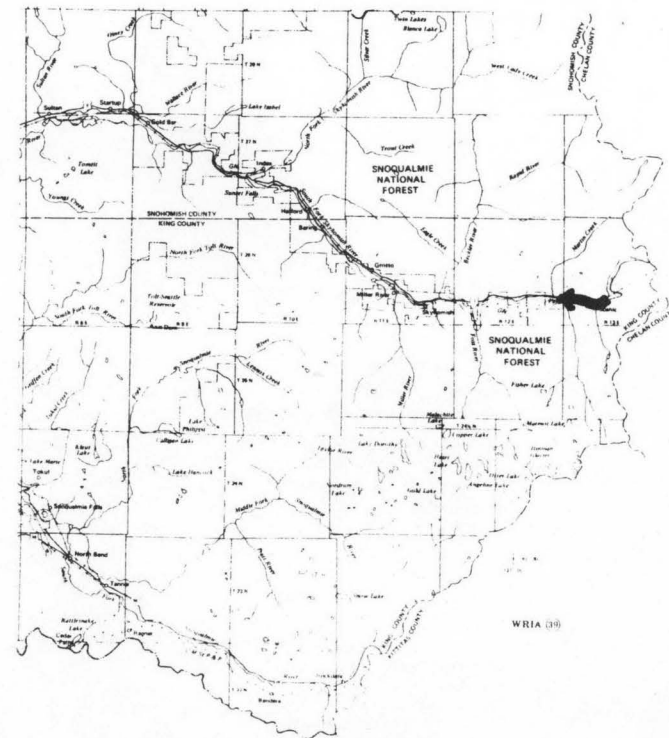
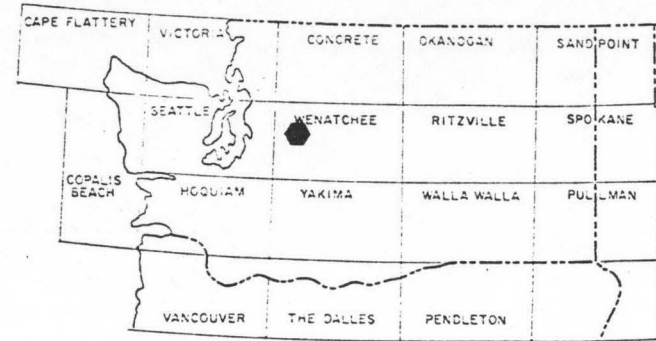
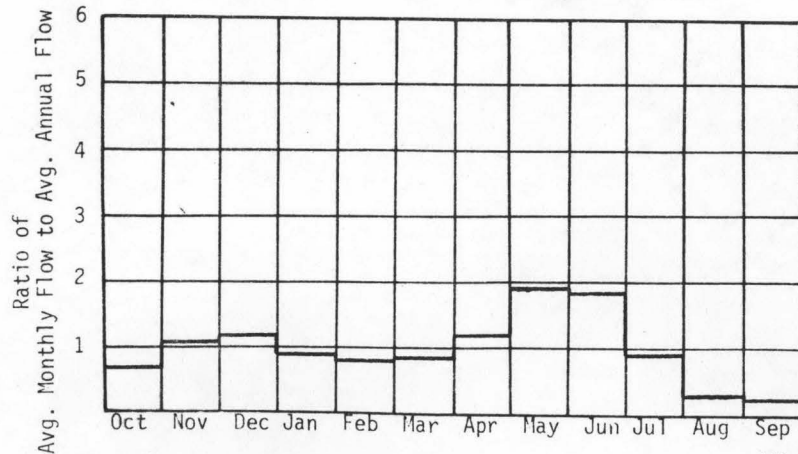
A. Upstream Elevation of Reach	<u>2380</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1740</u>	Ft. MSL
C. Total Available Head in Reach	<u>640 + 66 = 706</u>	Ft.
D. Average Slope in Reach	<u>188</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.6/29.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.1	1.08	9.45	1.00
80	22.4	1.34	11.5	0.98
50	53.3	3.18	21.5	0.77
30	104	6.22	32.1	0.59
10	206	12.3	43.0	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 86 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0056

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T26N R12E  
 D. Latitude, Longitude 47°43' 121°12'  
 E. Stream Name Martin Creek  
 F. Major Basin Name Snohomish  
 G. River Mile 0/1.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

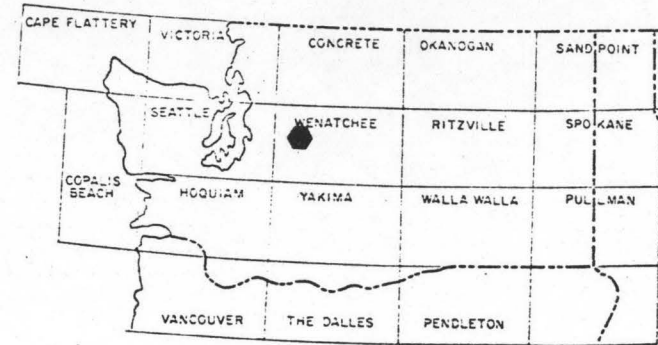
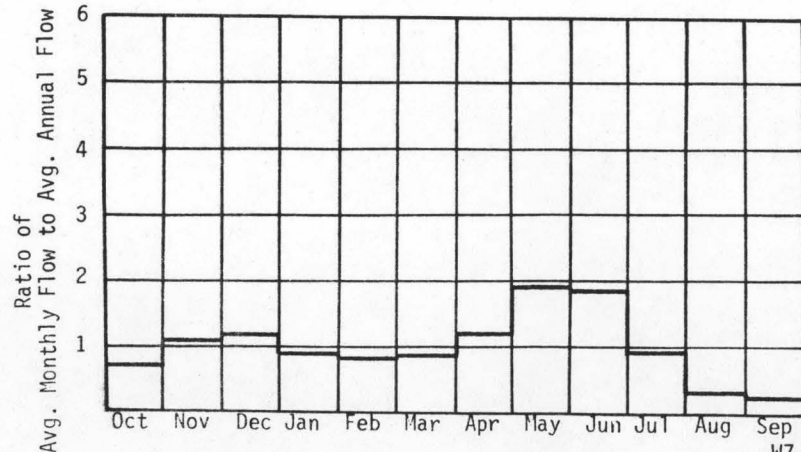
A. Upstream Elevation of Reach 2440 Ft. MSL  
 B. Downstream Elevation of Reach 1580 Ft. MSL  
 C. Total Available Head in Reach 860 + 66 = 926 Ft.  
 D. Average Slope in Reach 478 Ft./Mi.  
 E. Drainage Area above Reach Mouth 65.6 Sq.Mi.  
 F. Inflow Classification Natural

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

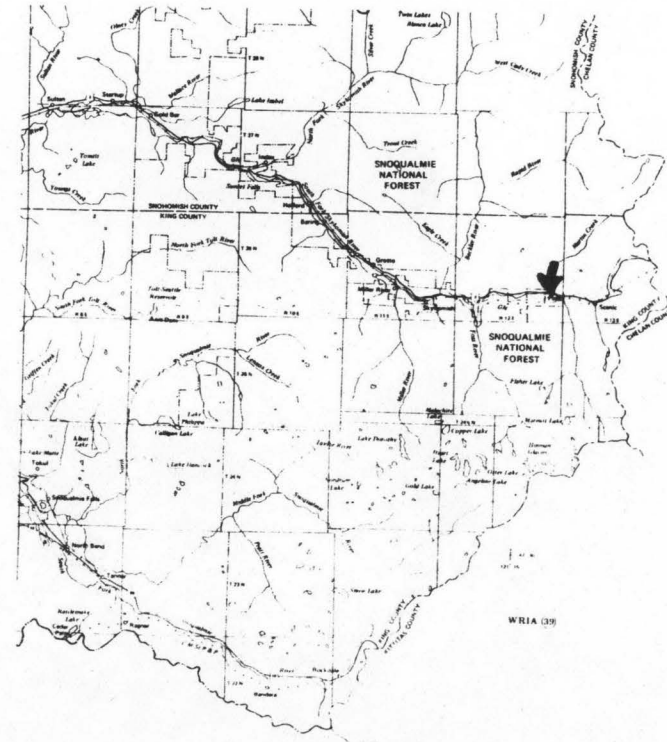
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	42.0	3.29	28.8	1.00
80	52.0	4.07	35.0	0.98
50	124	9.71	65.5	0.77
30	242	19.0	98.0	0.59
10	478	37.5	131	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 200 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0057

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R13E</u>
D. Latitude, Longitude	<u>47°41' 121°11'</u>
E. Stream Name	<u>Deception Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/4.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

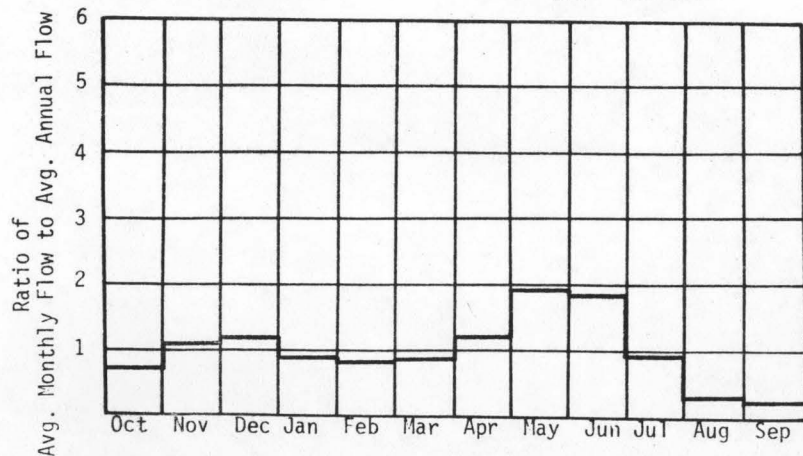
A. Upstream Elevation of Reach	<u>3145</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1740</u>	Ft. MSL
C. Total Available Head in Reach	<u>1405 + 66 = 1471</u>	Ft.
D. Average Slope in Reach	<u>293</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

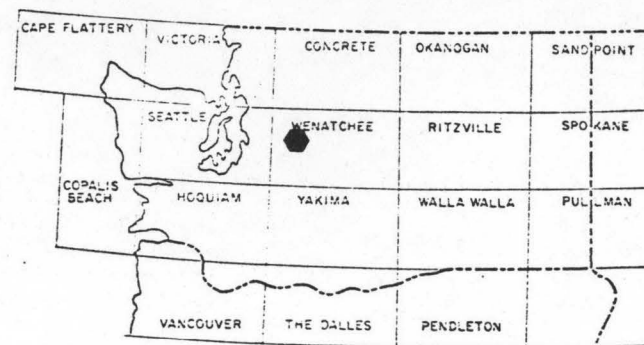
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	28.4	3.53	30.9	1.00
80	35.1	4.37	37.5	0.98
50	83.7	10.4	70.3	0.77
30	163	20.3	105	0.59
10	323	40.2	141	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

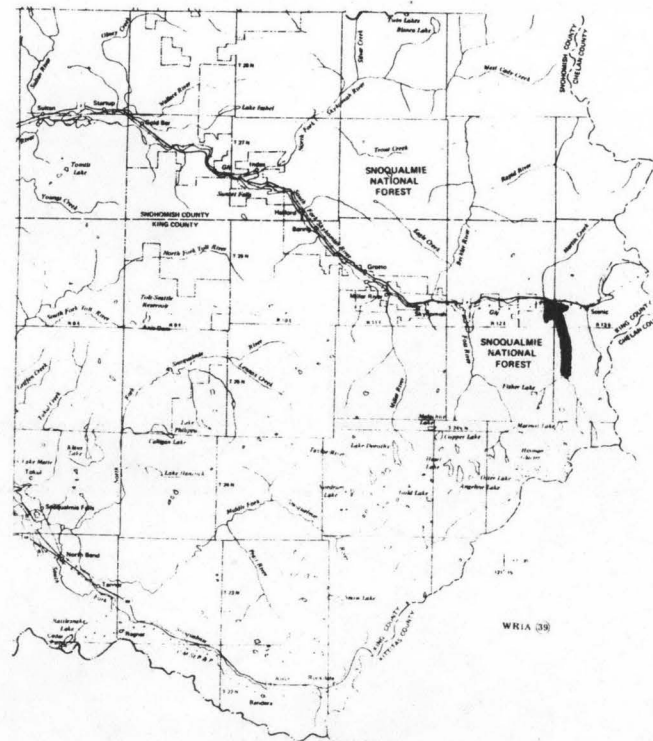
QMR = 135 cfs



W7-330



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0058

### I. LOCATION

A. State	Washington
B. County	Snohomish
C. Township, Range	T27N R6E
D. Latitude, Longitude	47°45' 122°
E. Stream Name	Snoqualmie River
F. Major Basin Name	Snohomish
G. River Mile	19.0/25.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

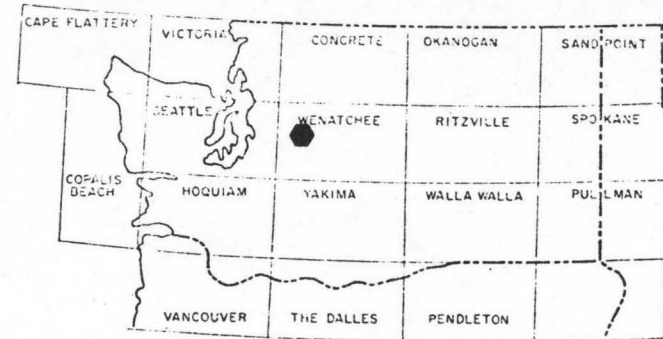
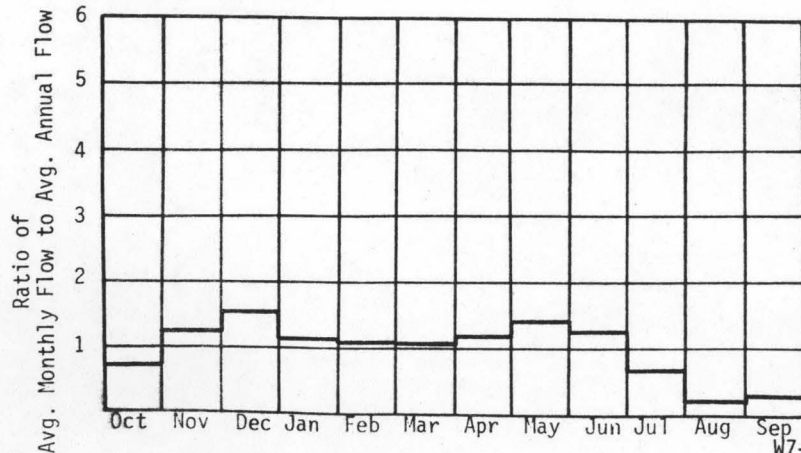
A. Upstream Elevation of Reach	19	Ft. MSL
B. Downstream Elevation of Reach	14	Ft. MSL
C. Total Available Head in Reach	5	Ft.
D. Average Slope in Reach	0.72	Ft./Mi.
E. Drainage Area above Reach Mouth	696	Sq.Mi.
F. Inflow Classification	Regulated	

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

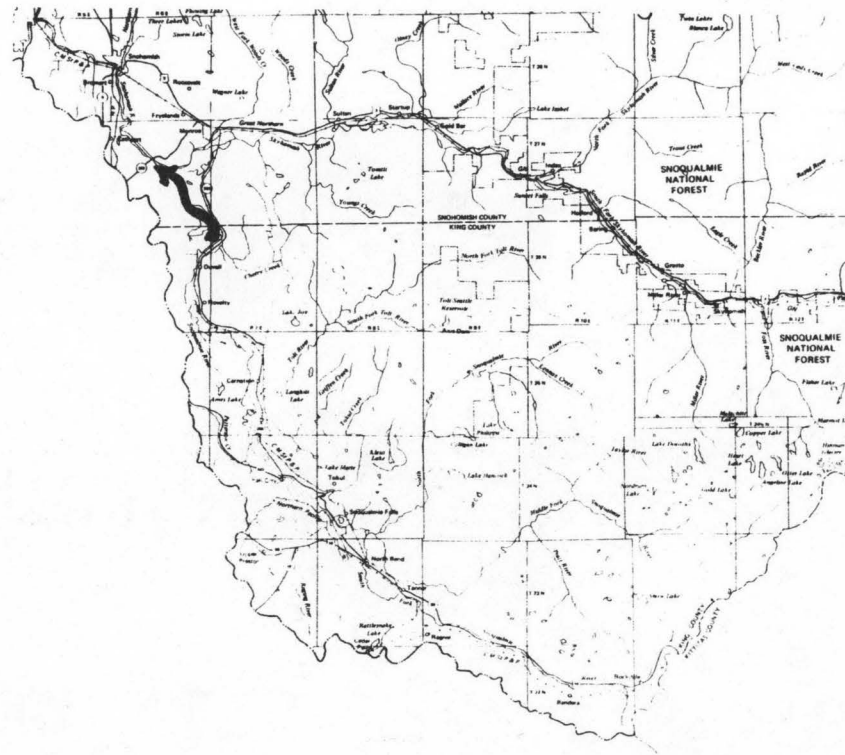
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	741	0.31	2.75	1.00
80	1600	0.68	5.51	0.93
50	3081	1.30	9.13	0.80
30	4563	1.93	11.3	0.67
10	7490	3.17	13.3	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3900 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0059

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R6E</u>
D. Latitude, Longitude	<u>47°42' 121°59'</u>
E. Stream Name	<u>Snoqualmie River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>25.9/43.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

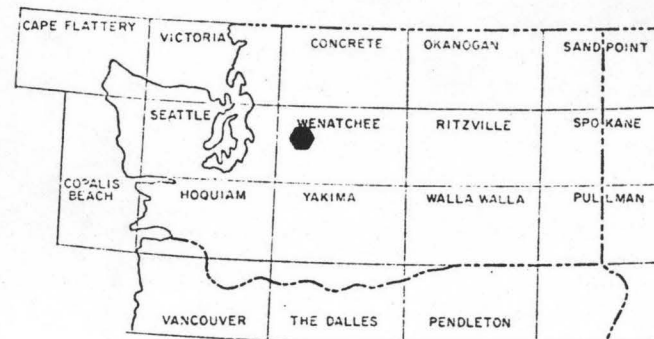
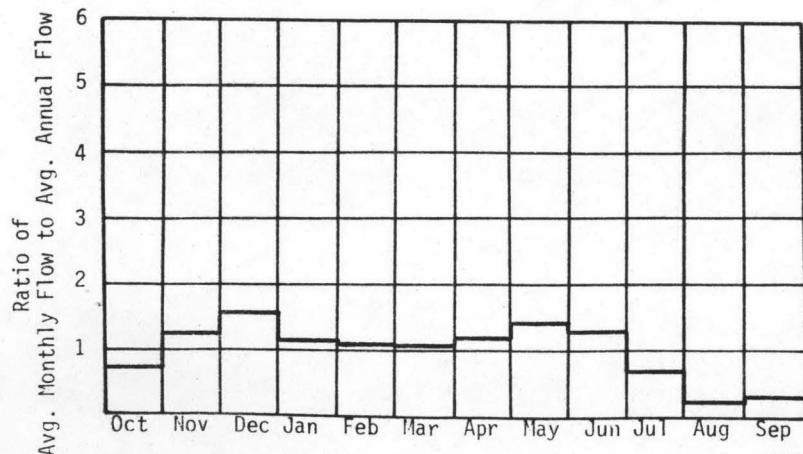
A. Upstream Elevation of Reach	<u>56</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>19</u>	Ft. MSL
C. Total Available Head in Reach	<u>37</u>	Ft.
D. Average Slope in Reach	<u>2.10</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>651</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

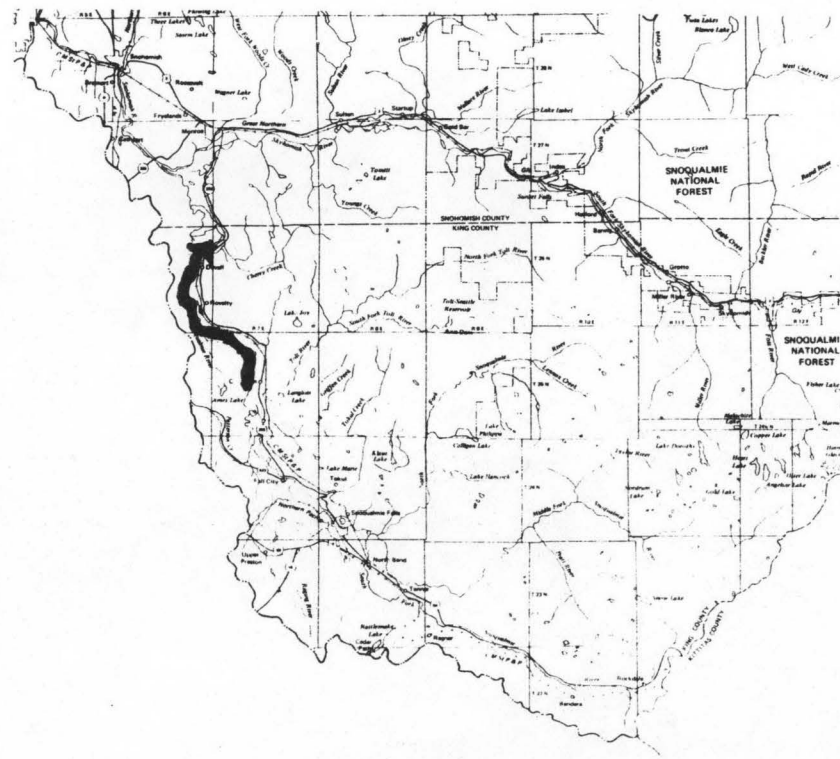
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	724	2.27	19.9	1.00
80	1560	4.89	39.9	0.93
50	3010	9.42	66.0	0.80
30	4460	14.0	81.9	0.67
10	7320	22.9	96.3	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3811 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0060

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R7E</u>
D. Latitude, Longitude	<u>47°36' 121°55'</u>
E. Stream Name	<u>Snoqualmie River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>43.5/54.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

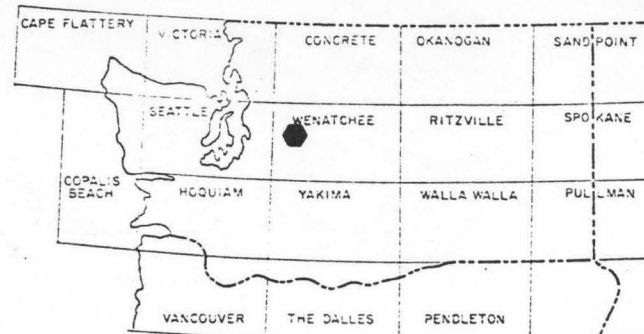
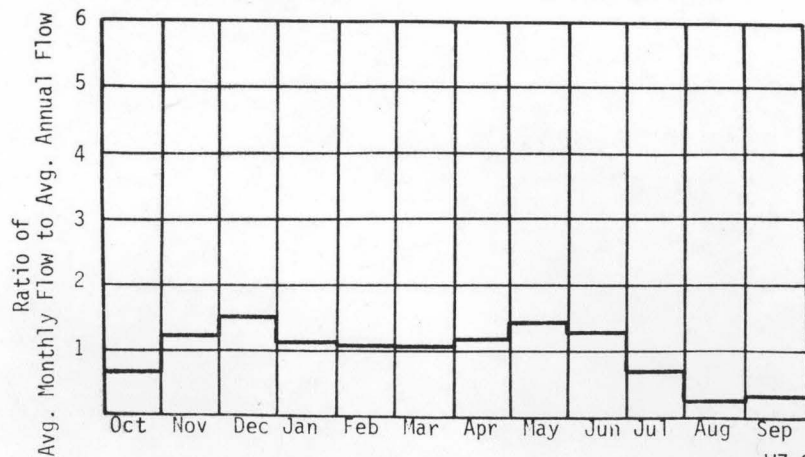
A. Upstream Elevation of Reach	<u>79</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>56</u>	Ft. MSL
C. Total Available Head in Reach	<u>23</u>	Ft.
D. Average Slope in Reach	<u>2.11</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>501</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

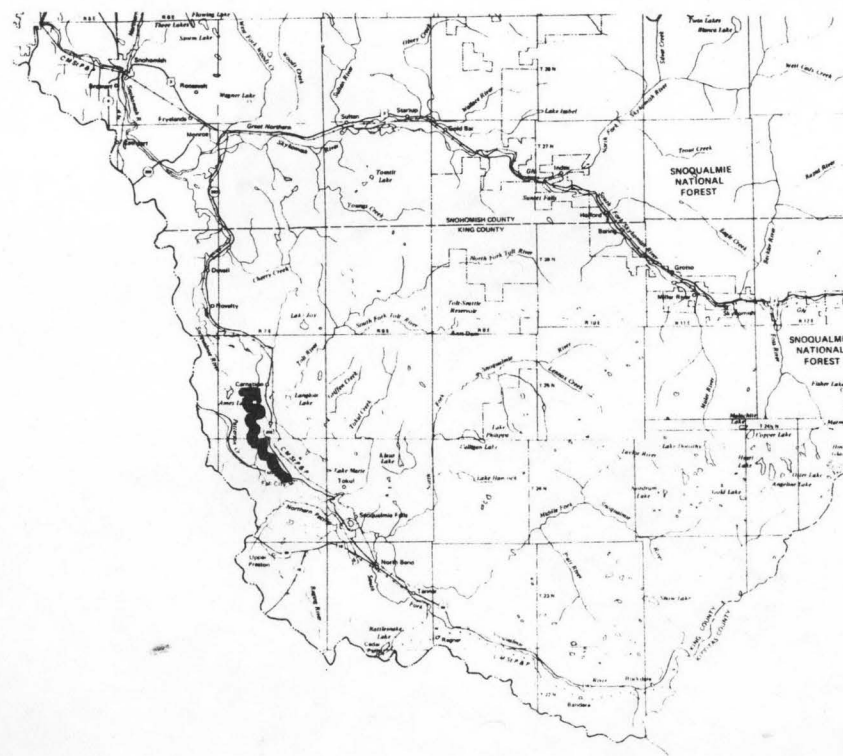
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	517	1.01	8.81	1.00
80	1100	2.13	17.4	0.93
50	2460	4.79	32.8	0.78
30	3590	6.98	40.4	0.66
10	5780	11.3	47.3	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 3042 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0061

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R7E</u>
D. Latitude, Longitude	<u>47°34' 121°52'</u>
E. Stream Name	<u>Snoqualmie</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>54.4/57.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

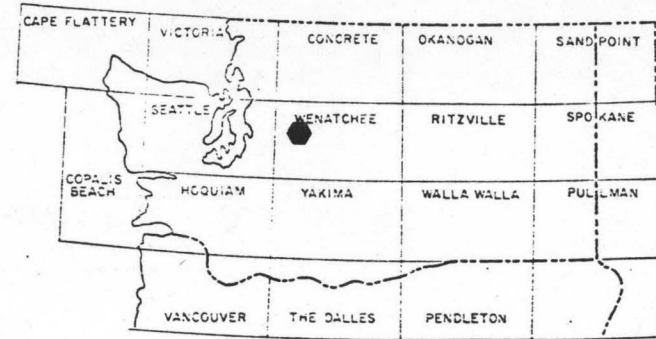
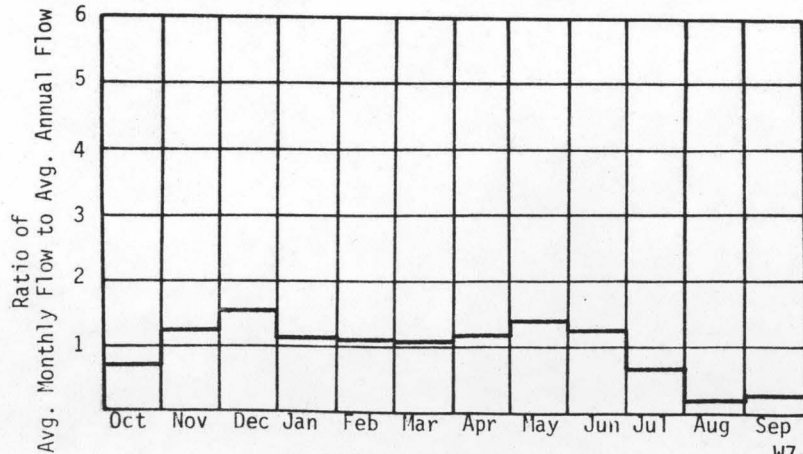
A. Upstream Elevation of Reach	<u>103</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>79</u>	Ft. MSL
C. Total Available Head in Reach	<u>24</u>	Ft.
D. Average Slope in Reach	<u>6.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>418</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

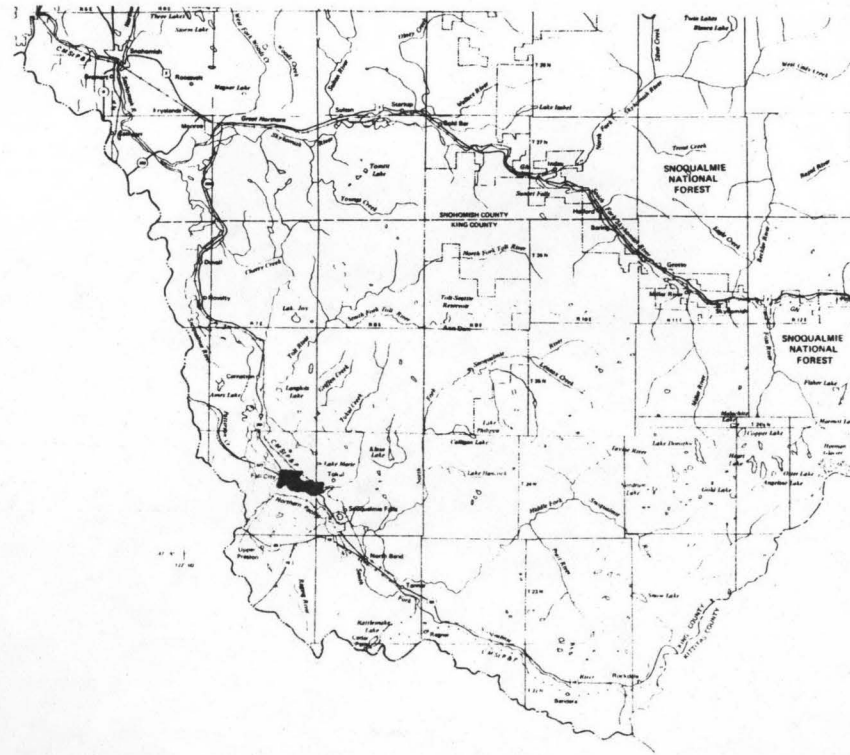
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	620	1.26	11.0	1.00
80	1210	2.46	20.3	0.94
50	2370	4.80	33.7	0.80
30	3460	7.04	41.3	0.67
10	5800	11.8	49.5	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 2817 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0062

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R8E</u>
D. Latitude, Longitude	<u>47°32' 121°49'</u>
E. Stream Name	<u>Snoqualmie</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>57.8/62.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

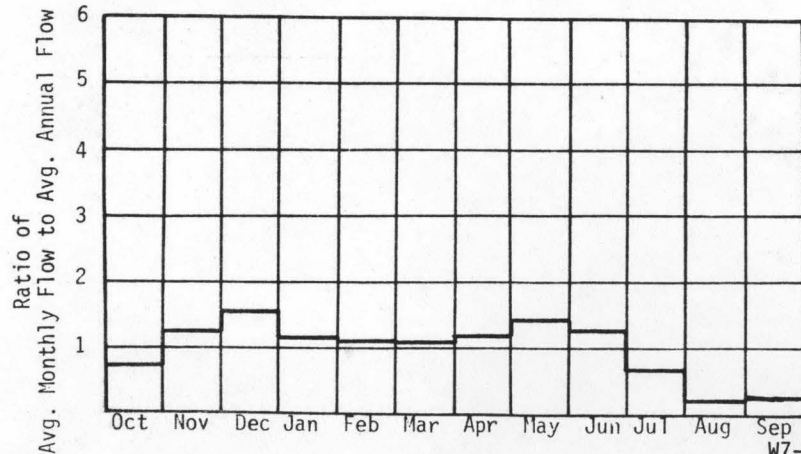
A. Upstream Elevation of Reach	<u>400</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>103</u>	Ft. MSL
C. Total Available Head in Reach	<u>297</u>	Ft.
D. Average Slope in Reach	<u>70.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>278</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

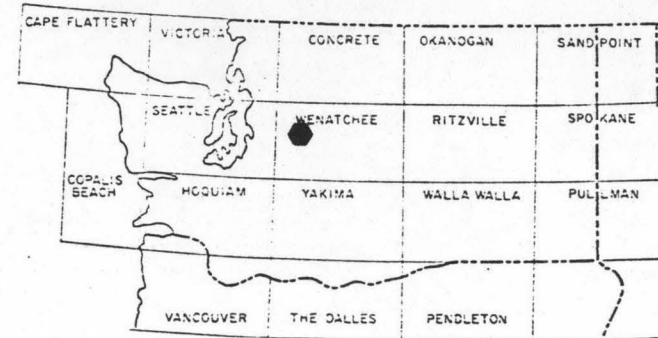
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	585	14.7	129	1.00
80	1140	28.8	237	0.94
50	2240	56.2	394	0.80
30	3273	82.2	483	0.67
10	5480	138	579	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

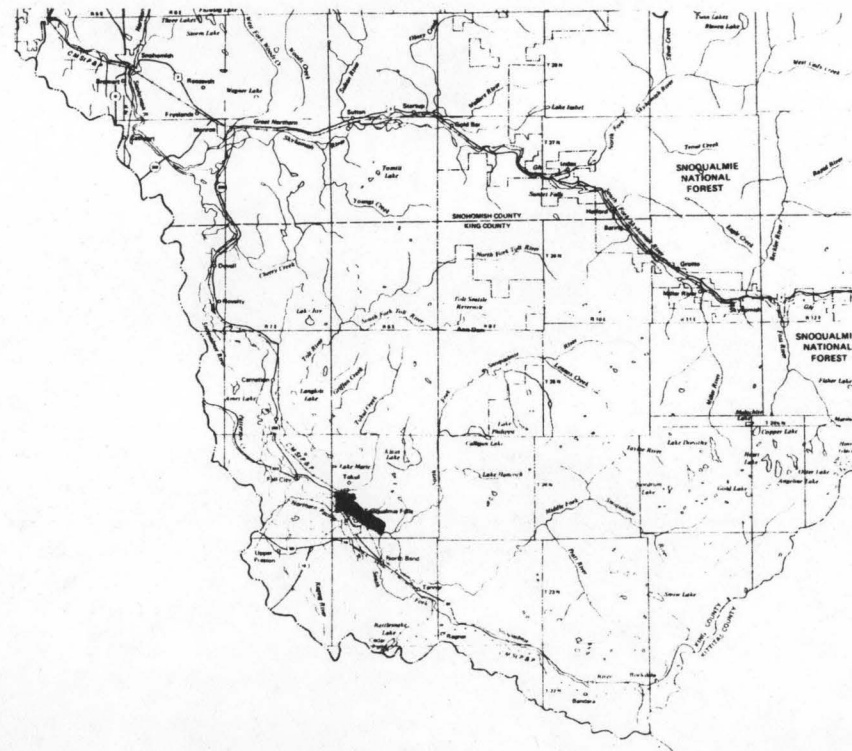
QMR = 2661 cfs



W7-335



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0063

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R7E</u>
D. Latitude, Longitude	<u>47°40' 121°53'</u>
E. Stream Name	<u>Tolt River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/8.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

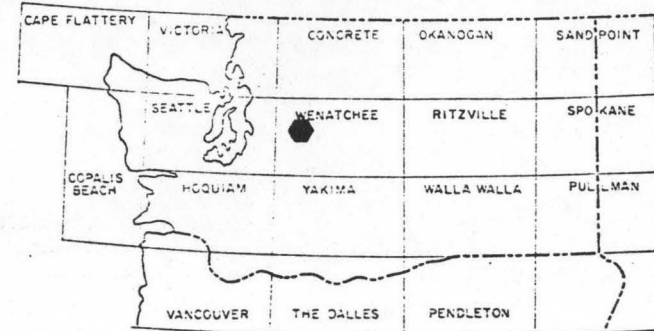
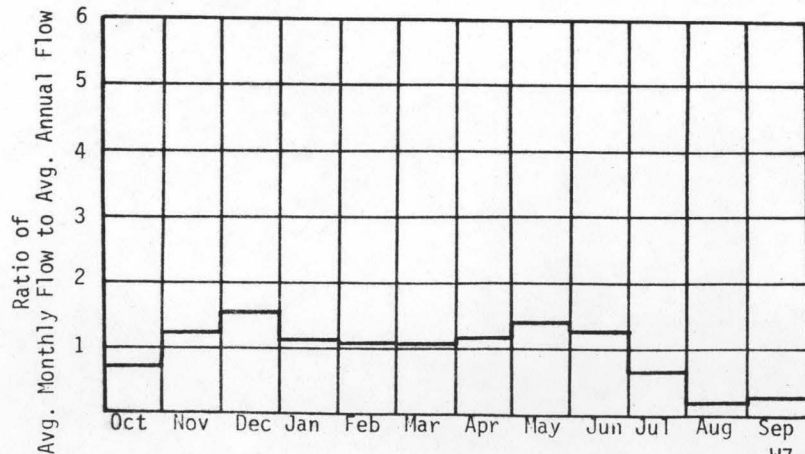
A. Upstream Elevation of Reach	<u>355</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>56</u>	Ft. MSL
C. Total Available Head in Reach	<u>299</u>	Ft.
D. Average Slope in Reach	<u>35.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>102</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

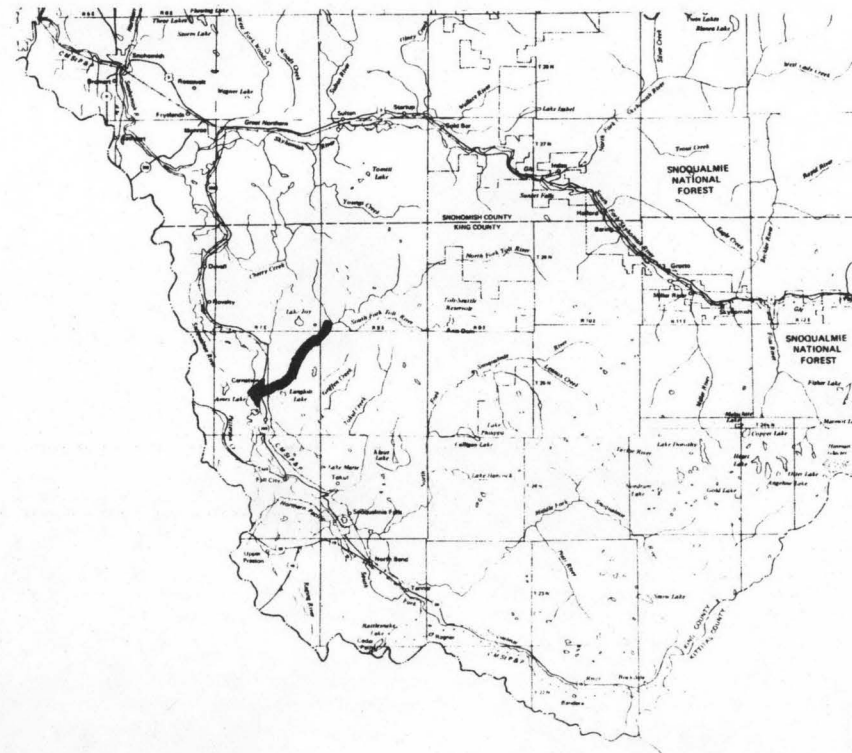
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	121	3.07	26.9	1.00
80	242	6.13	50.5	0.94
50	504	12.8	88.2	0.79
30	715	18.1	108	0.68
10	1190	30.2	127	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 638 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0064

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R8E</u>
D. Latitude, Longitude	<u>47°42' 121°45'</u>
E. Stream Name	<u>S.F. Tolt River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>8.4/15.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

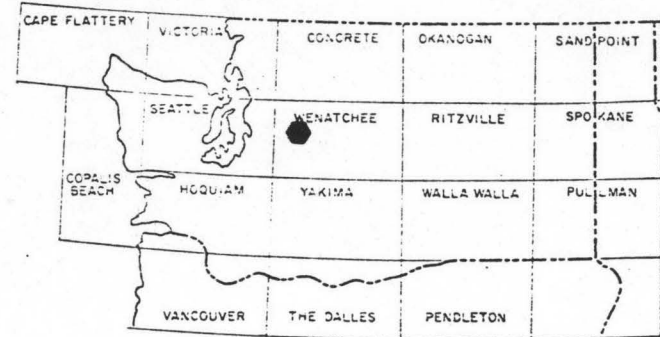
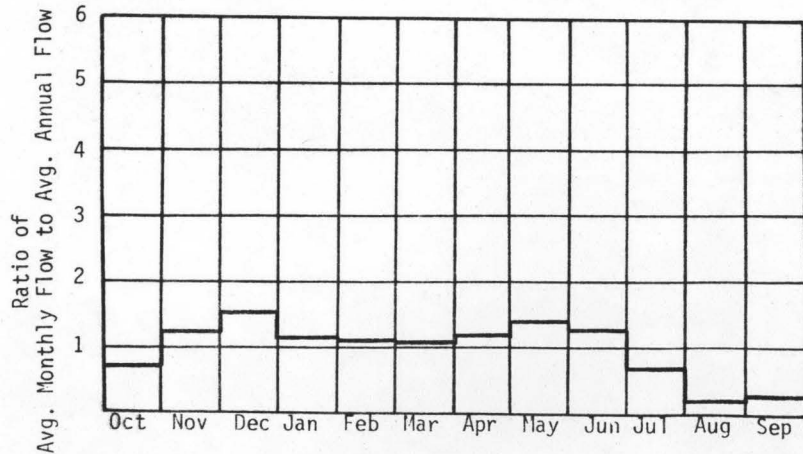
A. Upstream Elevation of Reach	<u>1280</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>355</u>	Ft. MSL
C. Total Available Head in Reach	<u>925</u>	Ft.
D. Average Slope in Reach	<u>125</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>32.0</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

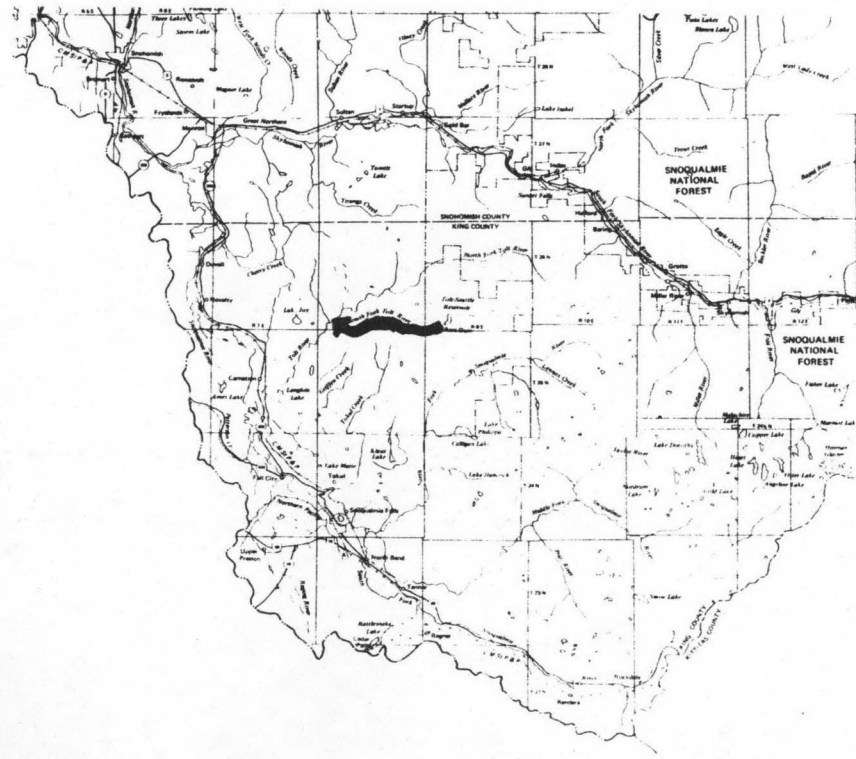
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	27.7	2.17	19.0	1.00
80	57.0	4.46	36.3	0.93
50	122	9.52	65.1	0.78
30	172	13.5	79.2	0.67
10	303	23.7	95.7	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 154 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0065

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R9E</u>
D. Latitude, Longitude	<u>47°42' 121°42'</u>
E. Stream Name	<u>S.F. Tolt River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>15.8/17.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

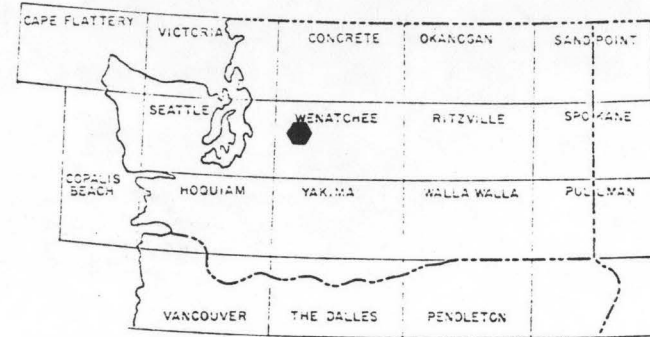
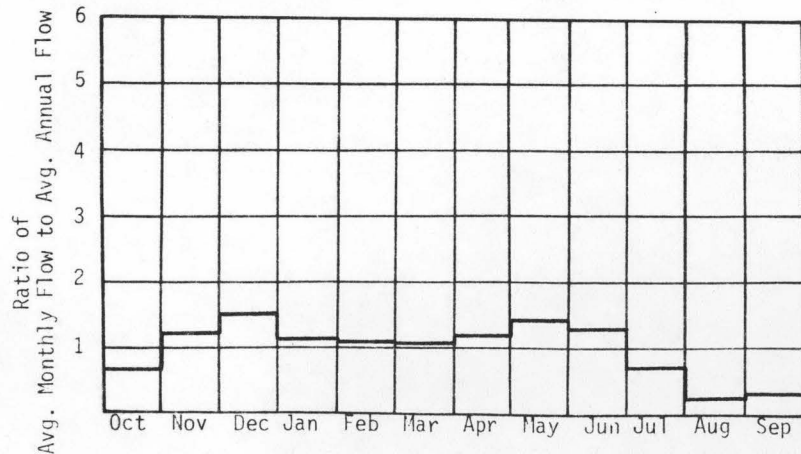
A. Upstream Elevation of Reach	<u>1500</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1280</u>	Ft. MSL
C. Total Available Head in Reach	<u>220 + 66 = 286</u>	Ft.
D. Average Slope in Reach	<u>183</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>19.8</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

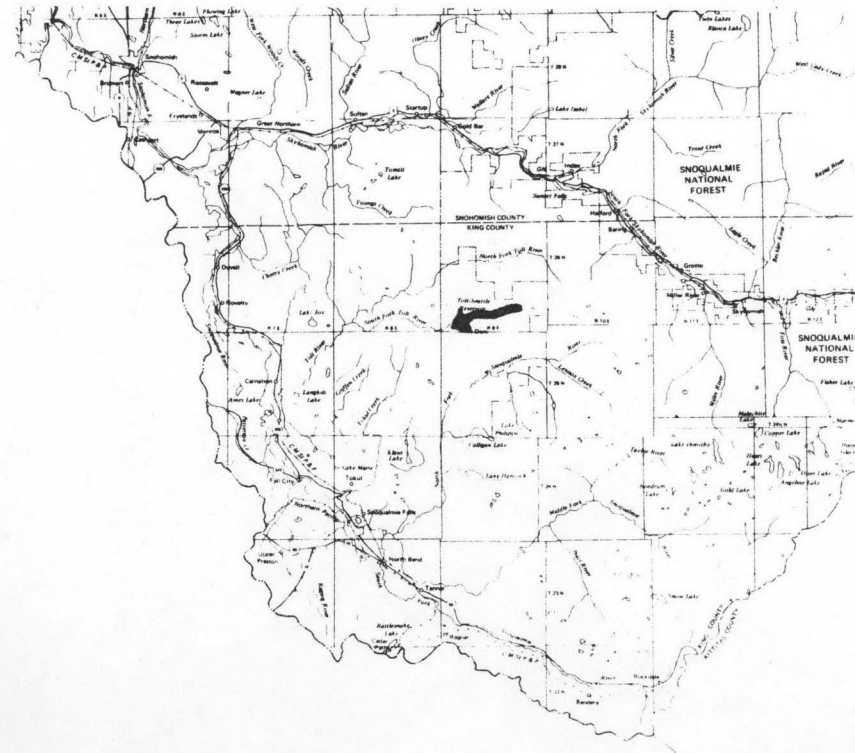
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.1	0.44	3.83	1.00
80	32.8	0.79	6.53	0.94
50	54.2	1.31	9.43	0.82
30	97.2	2.35	13.2	0.64
10	211	5.11	17.9	0.40

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 113 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0066

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R8E</u>
D. Latitude, Longitude	<u>47°42' 121°48'</u>
E. Stream Name	<u>N.F. Tolt River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/3.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

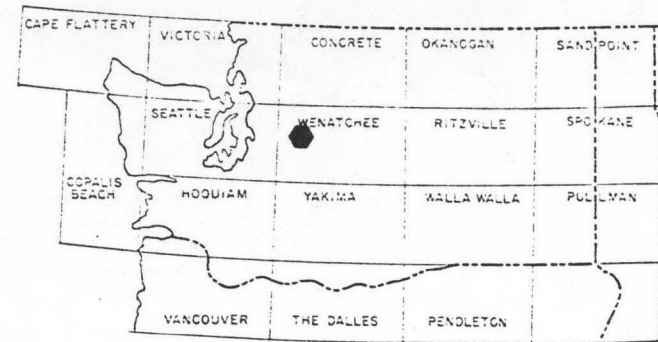
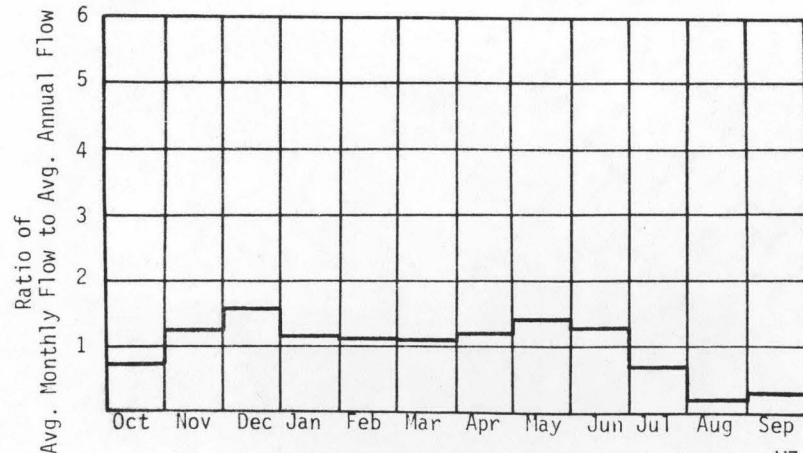
A. Upstream Elevation of Reach	<u>655</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>355</u>	Ft. MSL
C. Total Available Head in Reach	<u>300</u>	Ft.
D. Average Slope in Reach	<u>100</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>50.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

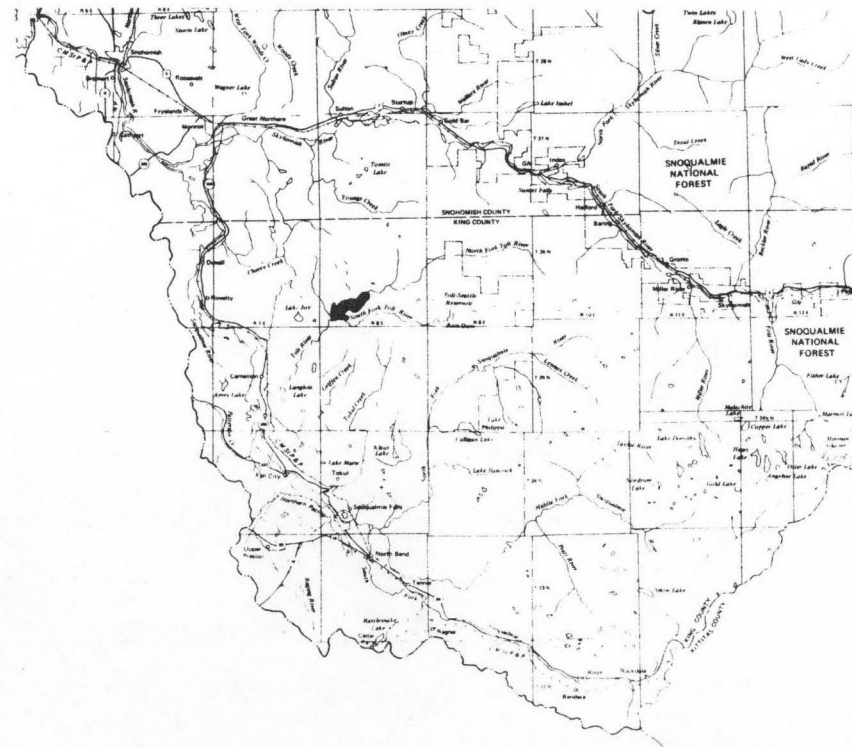
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	73.0	1.85	16.2	1.00
80	146	3.70	30.5	0.94
50	304	7.70	53.3	0.79
30	430	10.9	65.0	0.68
10	718	18.2	76.6	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 384 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0067

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T28N R9E</u>
D. Latitude, Longitude	<u>47°45' 121°40'</u>
E. Stream Name	<u>N.F. Tolt River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>3.0/15.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

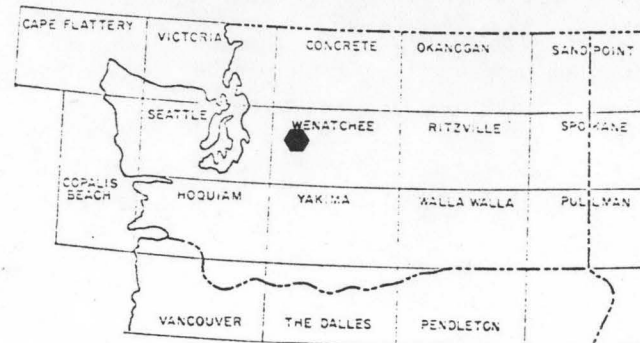
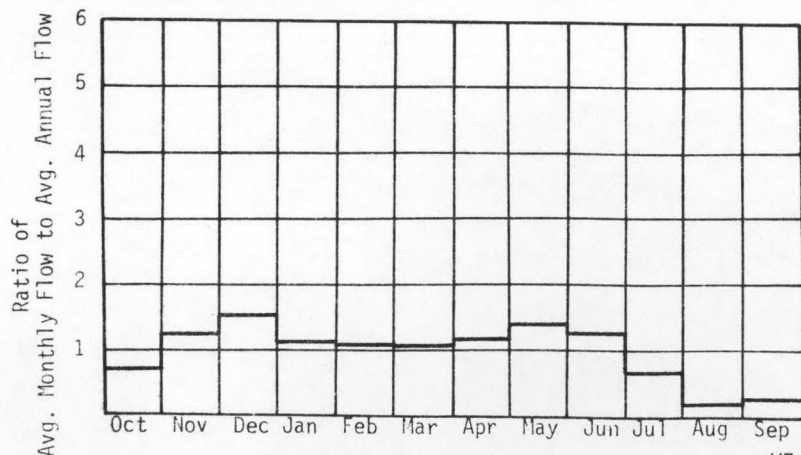
A. Upstream Elevation of Reach	<u>1980</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>655</u>	Ft. MSL
C. Total Available Head in Reach	<u>1325 + 66 = 1391</u>	Ft.
D. Average Slope in Reach	<u>110</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>40.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

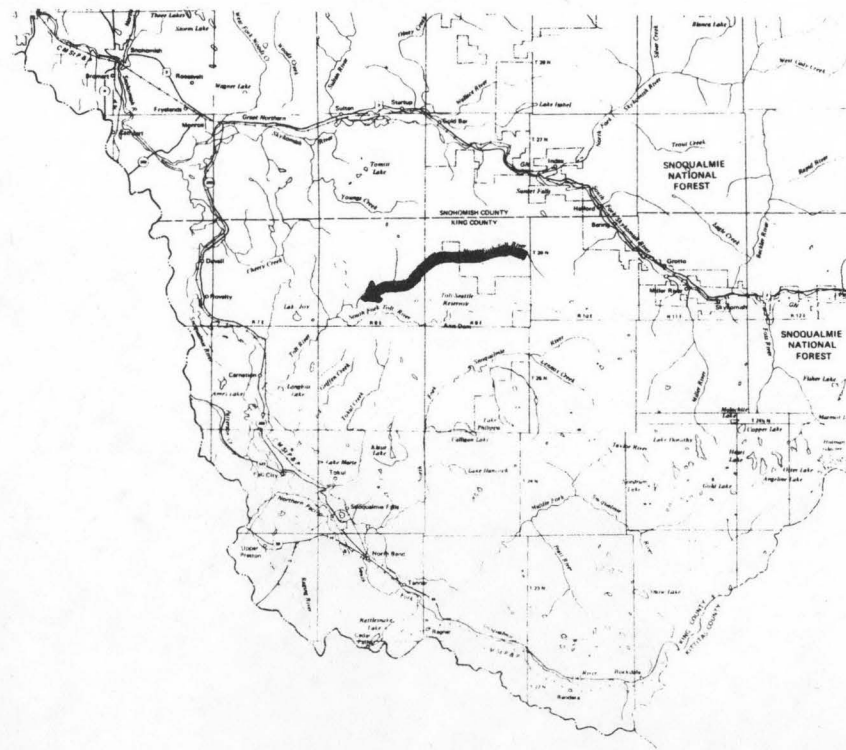
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	33.8	3.98	34.9	1.00
80	67.6	7.96	65.5	0.94
50	141	16.6	115	0.79
30	199	23.5	140	0.68
10	333	39.2	165	0.48

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 178 cfs



LOCAT.CNS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0068

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T24N R7E  
 D. Latitude, Longitude 47°32' 121°55'  
 E. Stream Name Raging River  
 F. Major Basin Name Snohomish  
 G. River Mile 0/7.6

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

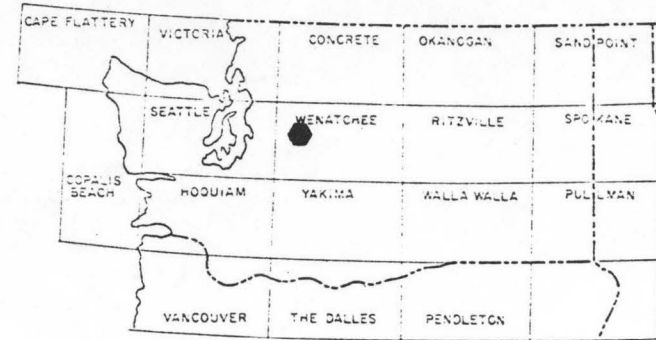
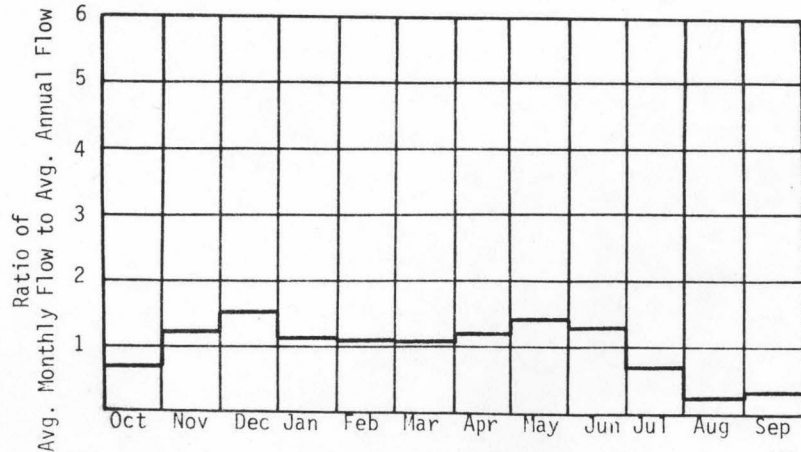
A. Upstream Elevation of Reach 610 Ft. MSL  
 B. Downstream Elevation of Reach 79 Ft. MSL  
 C. Total Available Head in Reach 561 + 66 = 627 Ft.  
 D. Average Slope in Reach 73.8 Ft./Mi.  
 E. Drainage Area above Reach Mouth 33.3 Sq.Mi.  
 F. Inflow Classification Natural

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

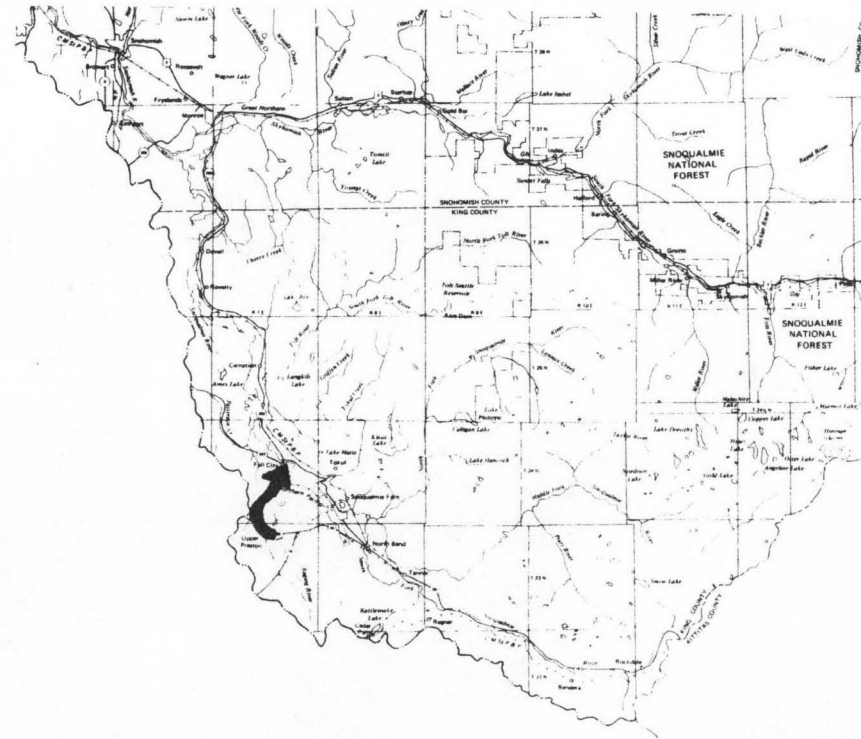
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.4	0.55	4.85	1.00
80	19.7	1.05	8.61	0.94
50	71.9	3.81	24.1	0.72
30	130	6.89	35.0	0.58
10	269	14.3	47.5	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 116 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0069

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R8E</u>
D. Latitude, Longitude	<u>47°35' 121°47'</u>
E. Stream Name	<u>Tokol Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/9.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

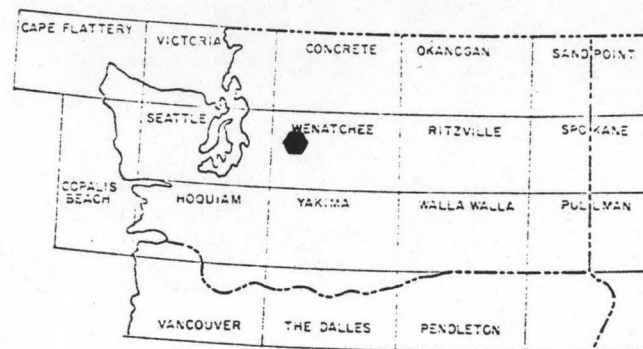
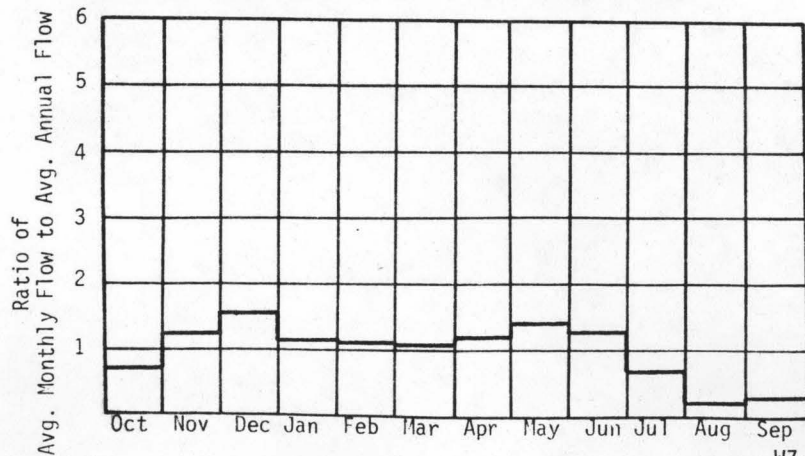
A. Upstream Elevation of Reach	<u>765</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>103</u>	Ft. MSL
C. Total Available Head in Reach	<u>662 + 66 = 728</u>	Ft.
D. Average Slope in Reach	<u>68.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>33.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

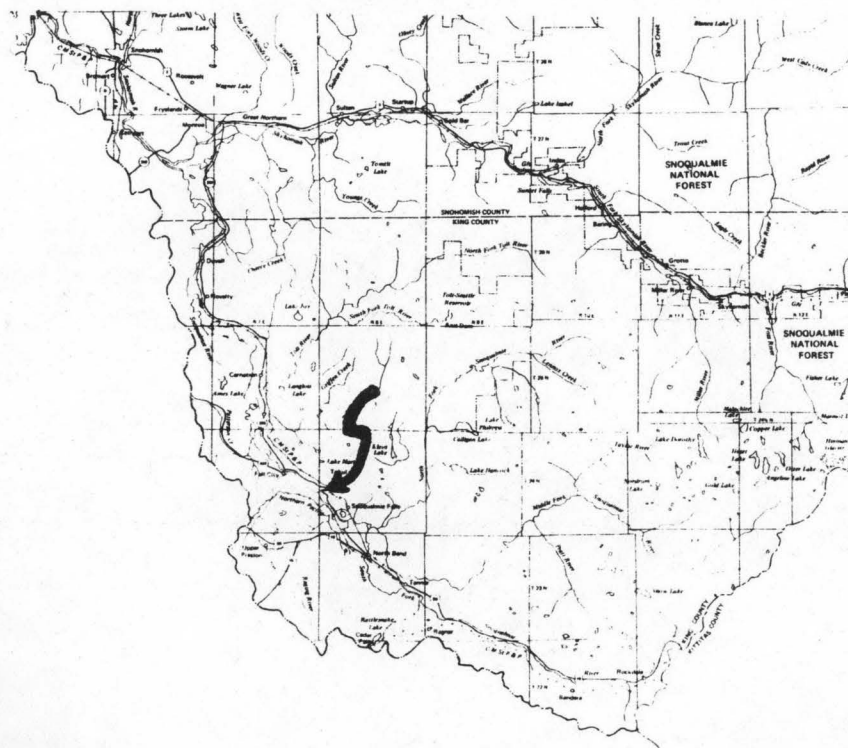
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	16.6	1.02	8.96	1.00
80	27.4	1.69	14.0	0.95
50	63.9	3.94	26.6	0.77
30	100	6.19	34.7	0.64
10	177	10.9	42.9	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 83 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0070

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R8E</u>
D. Latitude, Longitude	<u>47°32' 121°45'</u>
E. Stream Name	<u>N.F. Snoqualmie Riv.</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/6.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

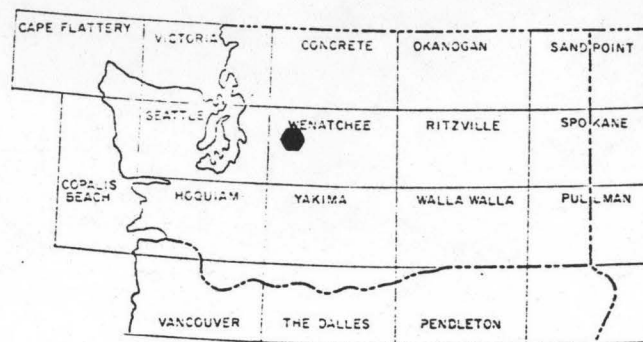
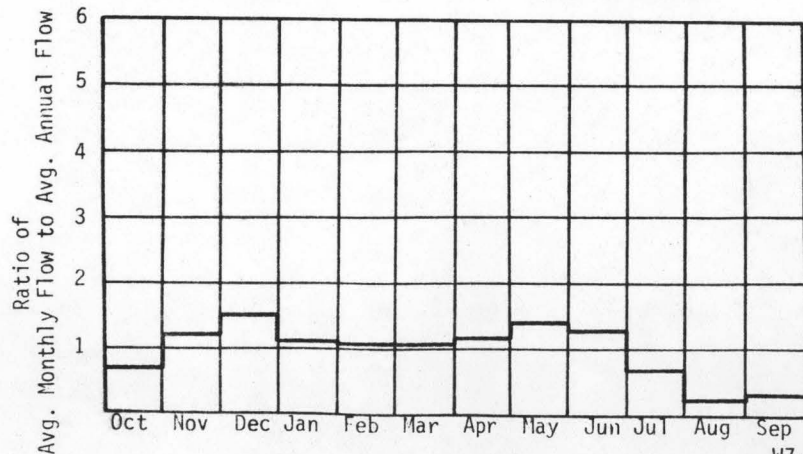
A. Upstream Elevation of Reach	<u>1020</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>410</u>	Ft. MSL
C. Total Available Head in Reach	<u>610</u>	Ft.
D. Average Slope in Reach	<u>100</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>101</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

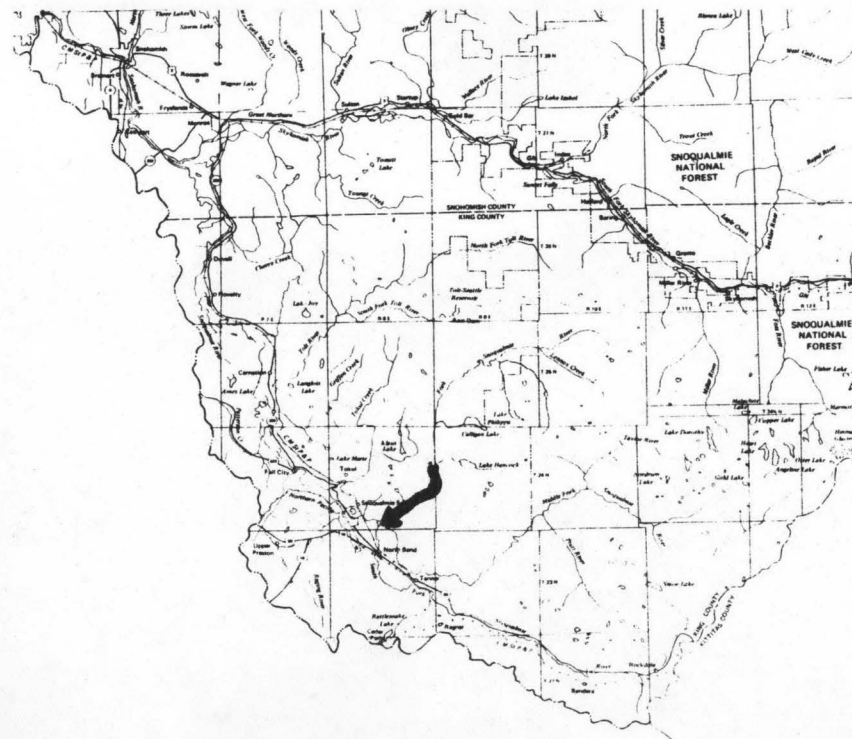
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	94.5	4.88	42.7	1.00
80	209	10.8	88.0	0.93
50	500	25.8	172	0.76
30	776	40.1	221	0.63
10	1390	71.8	283	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 675 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0071

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T24N R9E  
 D. Latitude, Longitude 47°36' 121°43'  
 E. Stream Name N.E. Snoqualmie Riv.  
 F. Major Basin Name Snohomish  
 G. River Mile 6.1/8.4

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

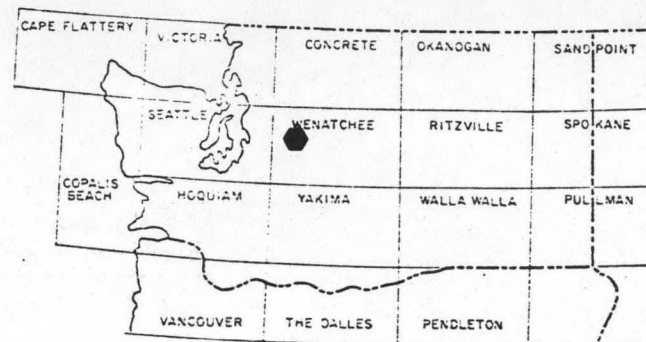
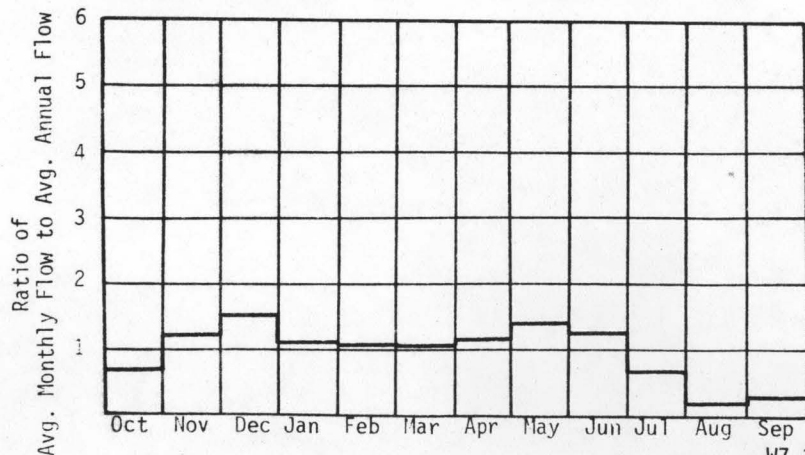
A. Upstream Elevation of Reach 1100 Ft. MSL  
 B. Downstream Elevation of Reach 1020 Ft. MSL  
 C. Total Available Head in Reach 80 Ft.  
 D. Average Slope in Reach 34.8 Ft./Mi.  
 E. Drainage Area above Reach Mouth 76.9 Sq.Mi.  
 F. Inflow Classification Natural

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

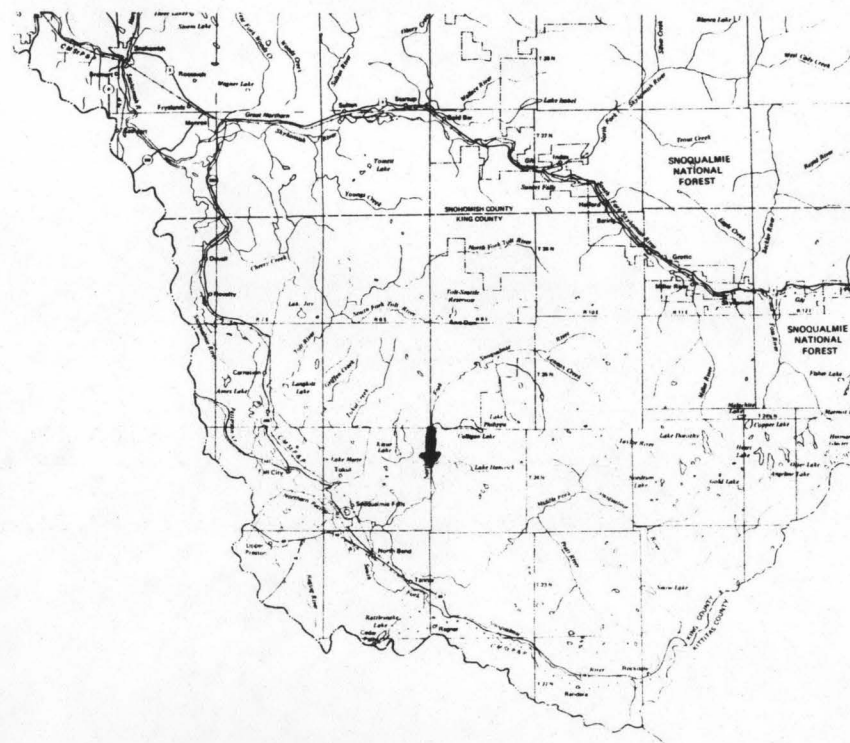
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	81.5	0.55	4.83	1.00
80	180	1.22	9.95	0.93
50	431	2.91	19.4	0.76
30	669	4.53	25.0	0.63
10	1200	8.11	32.0	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 582 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0072

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R9E</u>
D. Latitude, Longitude	<u>47°39' 121°41'</u>
E. Stream Name	<u>N.F. Snoqualmie Riv.</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>8.4/16.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

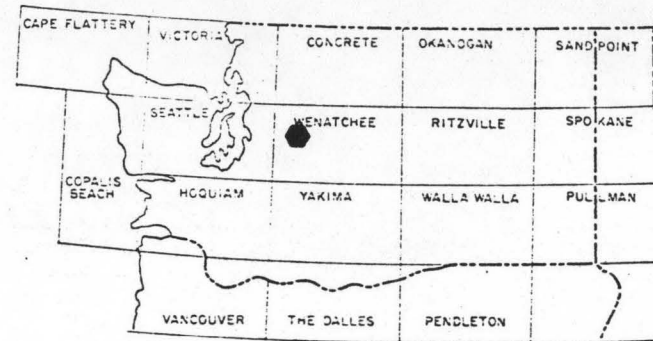
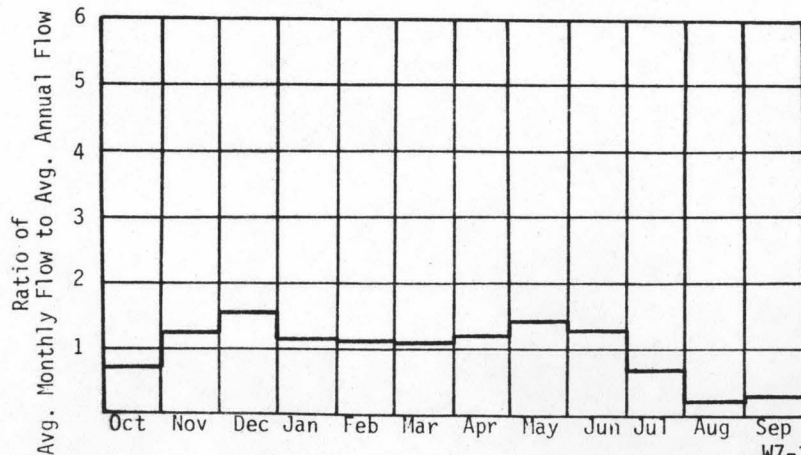
A. Upstream Elevation of Reach	<u>1450</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1100</u>	Ft. MSL
C. Total Available Head in Reach	<u>350</u>	Ft.
D. Average Slope in Reach	<u>44.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>64.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

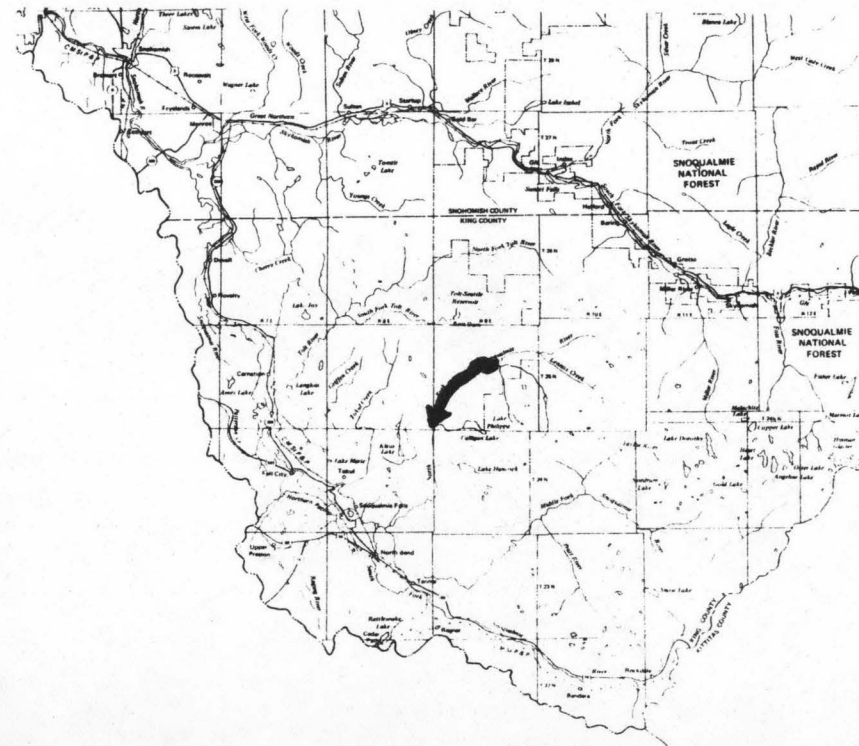
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	65.2	1.93	16.9	1.00
80	144	4.28	34.9	0.93
50	331	9.80	66.1	0.77
30	527	15.6	86.1	0.63
10	1010	29.8	110	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 466 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0073

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T25N R9E  
 D. Latitude, Longitude 47°40' 121°36'  
 E. Stream Name N.E. Snoqualmie Riv.  
 F. Major Basin Name Snohomish  
 G. River Mile 16.2/19.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

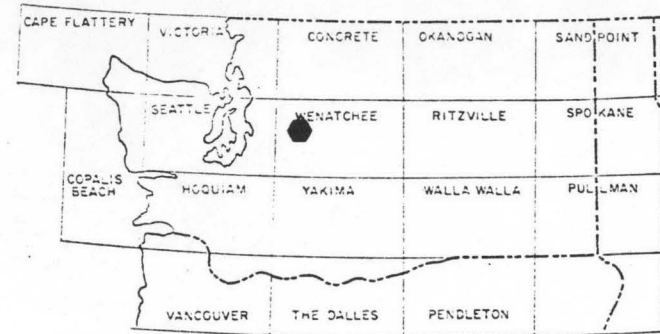
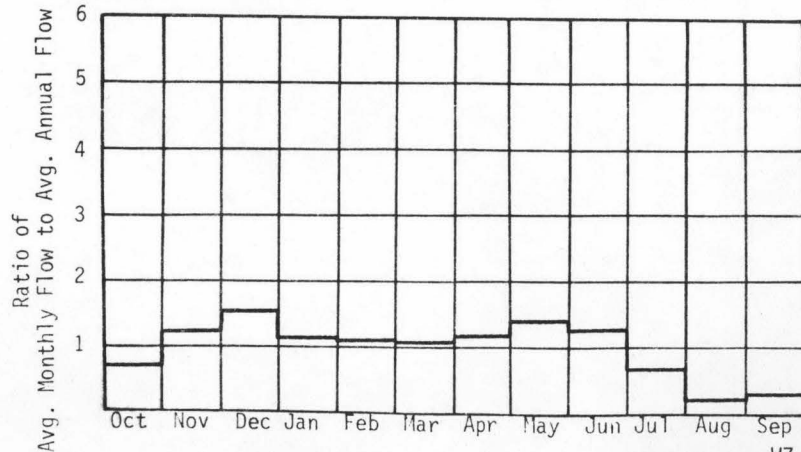
A. Upstream Elevation of Reach 1525 Ft. MSL  
 B. Downstream Elevation of Reach 1450 Ft. MSL  
 C. Total Available Head in Reach 75 Ft.  
 D. Average Slope in Reach 20.3 Ft./Mi.  
 E. Drainage Area above Reach Mouth 31.7 Sq.Mi.  
 F. Inflow Classification Natural

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

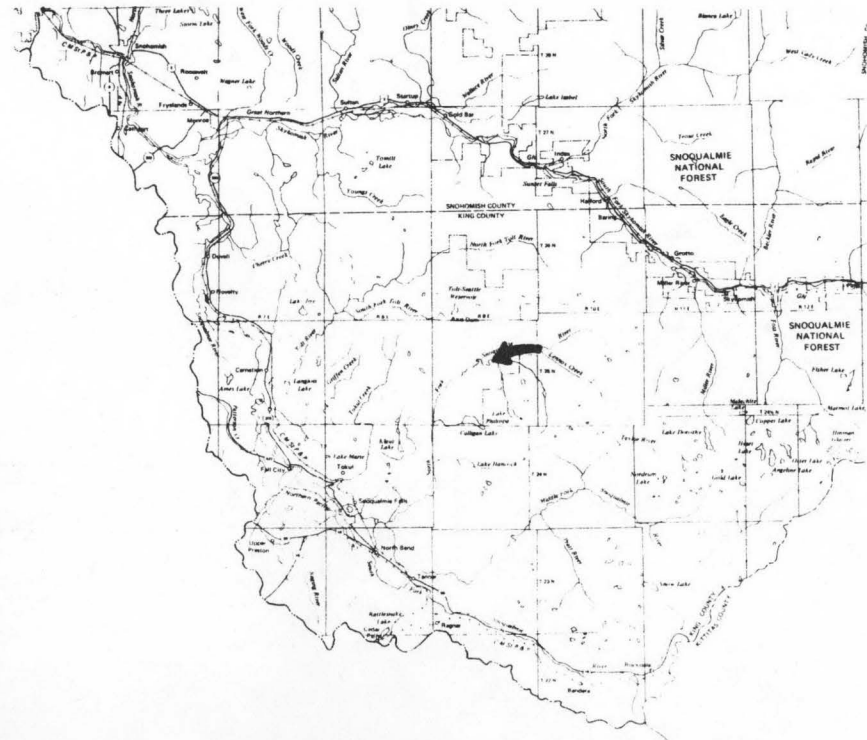
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	29.1	0.18	1.62	1.00
80	64.5	0.41	3.33	0.93
50	148	0.94	6.32	0.77
30	235	1.49	8.23	0.63
10	449	2.85	10.5	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 208 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0074

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R10E</u>
D. Latitude, Longitude	<u>47°41' 121°34'</u>
E. Stream Name	<u>N.F. Snoqualmie Riv.</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>19.9/23.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

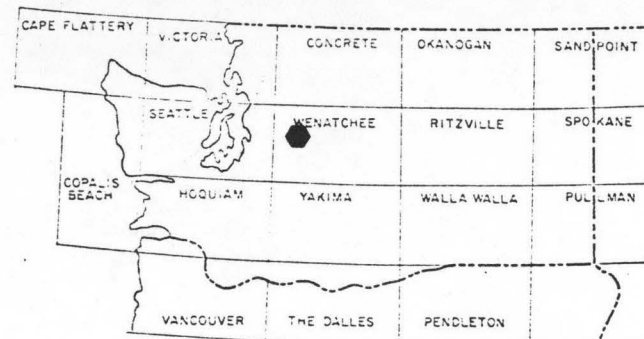
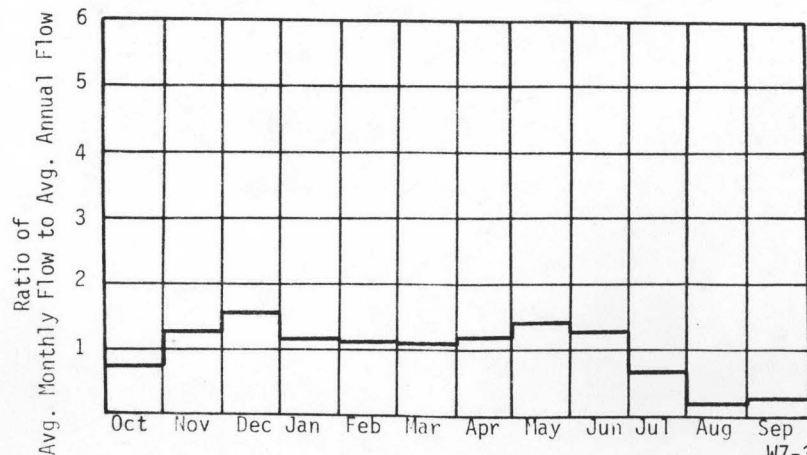
A. Upstream Elevation of Reach	<u>2240</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1525</u>	Ft. MSL
C. Total Available Head in Reach	<u>715 + 66 = 781</u>	Ft.
D. Average Slope in Reach	<u>188</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

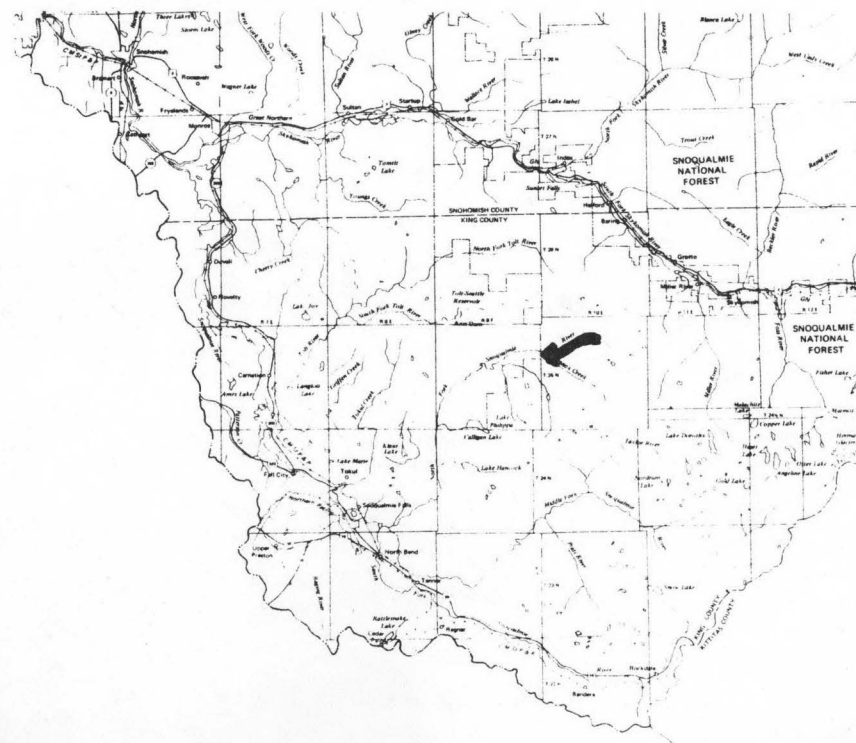
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	9.80	0.65	5.67	1.00
80	21.7	1.43	11.7	0.93
50	49.7	3.28	22.2	0.77
30	79.1	5.23	28.8	0.63
10	151	9.99	36.8	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 70 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0075

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R9E</u>
D. Latitude, Longitude	<u>47°34' 121°42'</u>
E. Stream Name	<u>Hancock Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/1.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

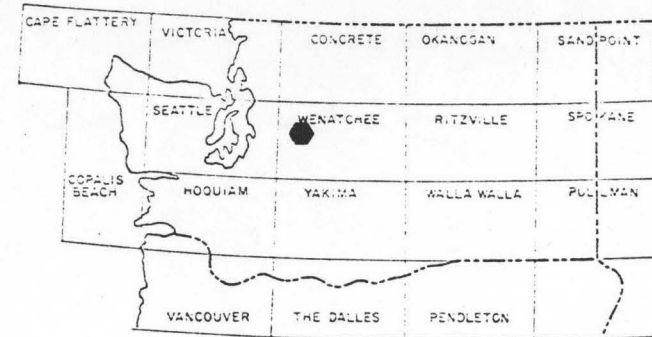
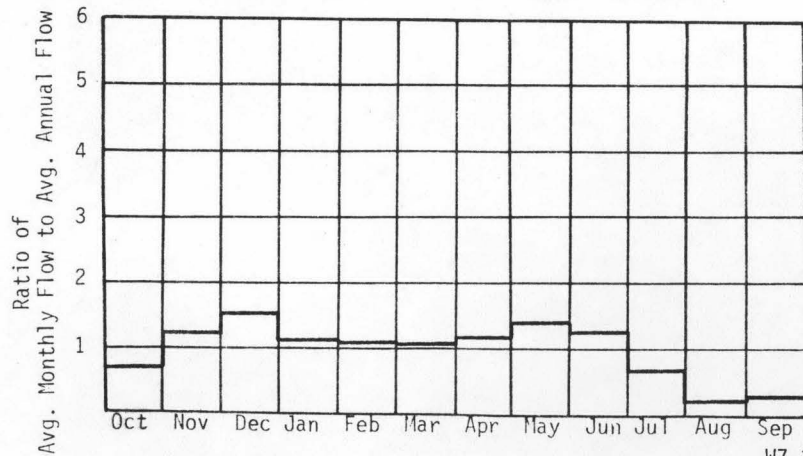
A. Upstream Elevation of Reach	<u>2172</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1020</u>	Ft. MSL
C. Total Available Head in Reach	<u>1152 + 66 = 1218</u>	Ft.
D. Average Slope in Reach	<u>678</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

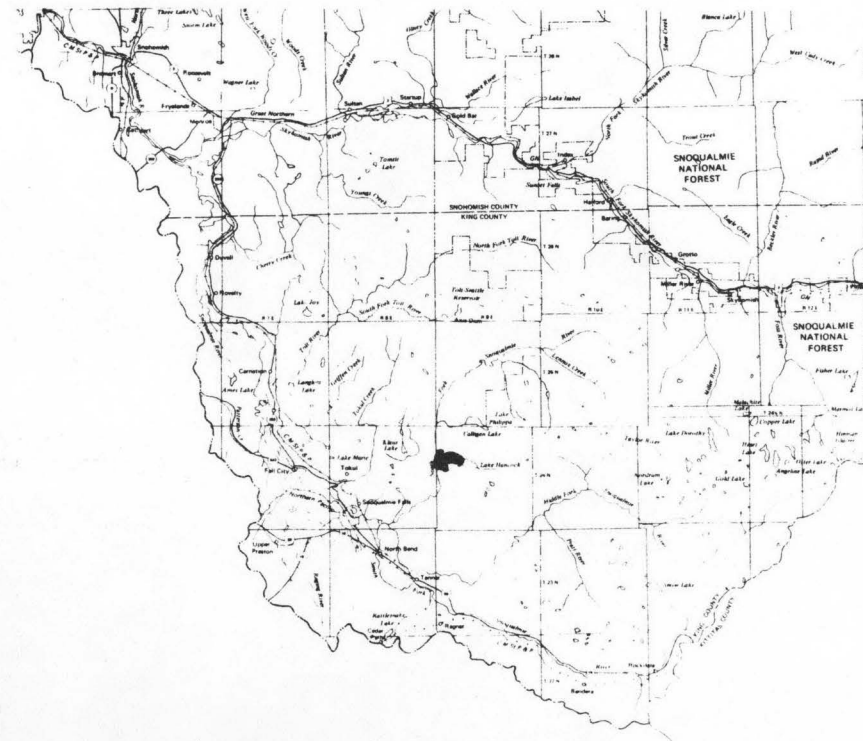
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	4.16	0.43	3.76	1.00
80	15.1	1.55	12.3	0.90
50	38.5	3.97	26.1	0.75
30	63.4	6.54	34.9	0.61
10	111	11.5	43.2	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 52 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0076

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R9E</u>
D. Latitude, Longitude	<u>47°36' 121°42'</u>
E. Stream Name	<u>Calligan Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/2.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

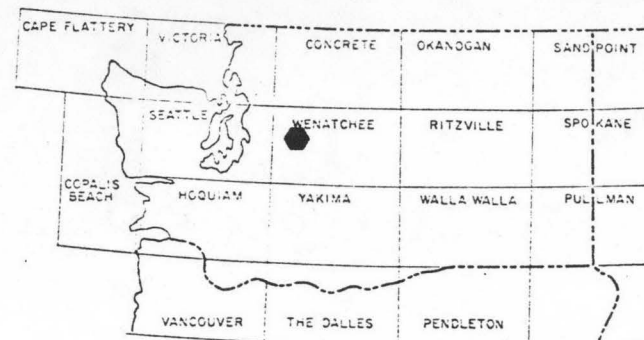
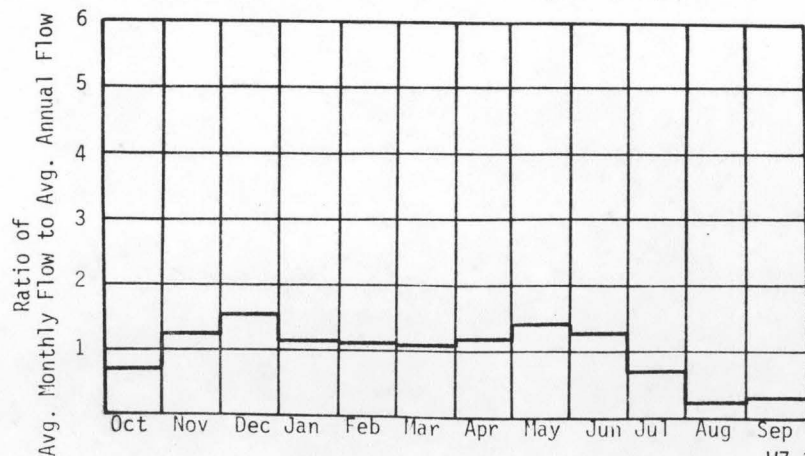
A. Upstream Elevation of Reach	<u>2222</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1100</u>	Ft. MSL
C. Total Available Head in Reach	<u>1122 + 66 = 1188</u>	Ft.
D. Average Slope in Reach	<u>323</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>12.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

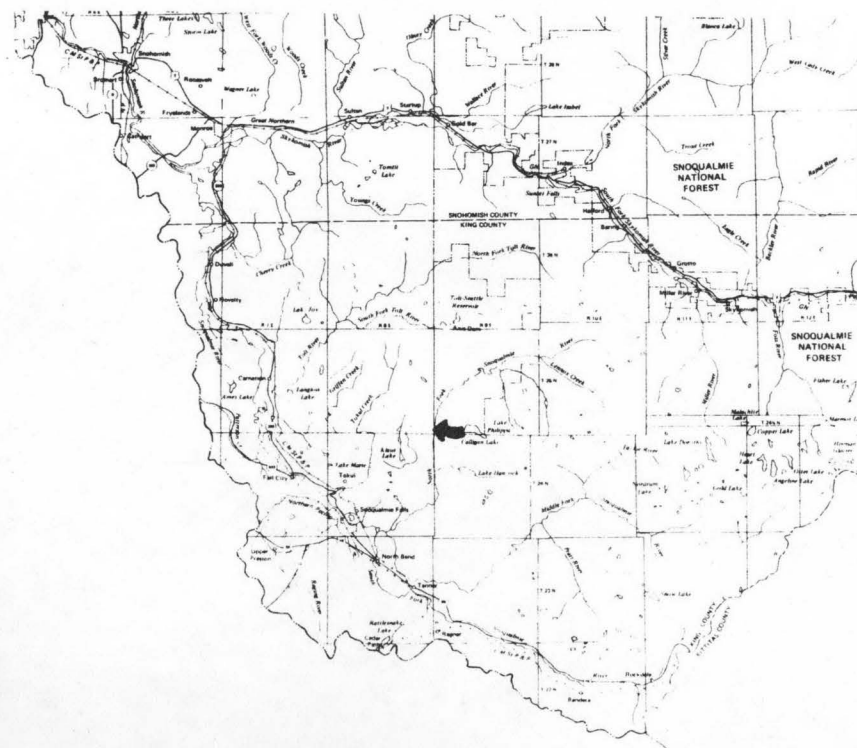
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	0.00	0.00	0.00	1.00
80	14.3	1.43	10.8	0.86
50	45.3	4.55	28.7	0.72
30	77.5	7.79	40.3	0.59
10	128	12.9	48.6	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 62 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0077

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R10E</u>
D. Latitude, Longitude	<u>47°38' 121°35'</u>
E. Stream Name	<u>Sunday Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/6.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

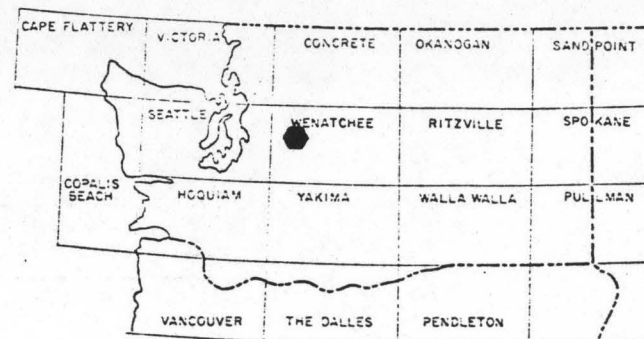
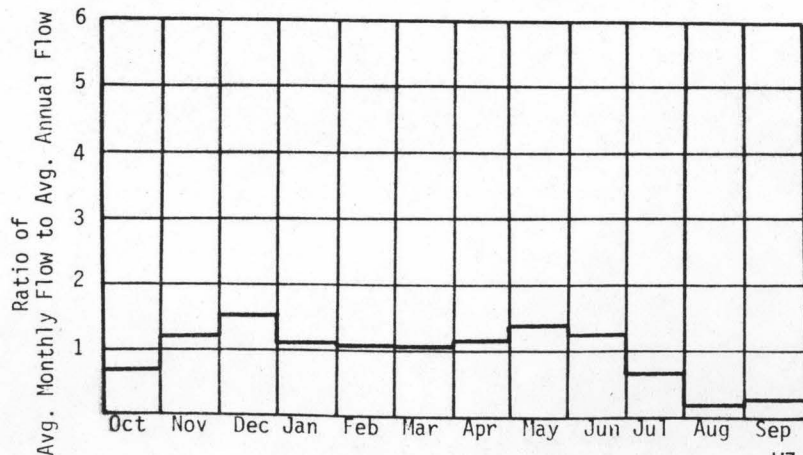
A. Upstream Elevation of Reach	<u>2160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1450</u>	Ft. MSL
C. Total Available Head in Reach	<u>710 + 66 = 776</u>	Ft.
D. Average Slope in Reach	<u>118</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

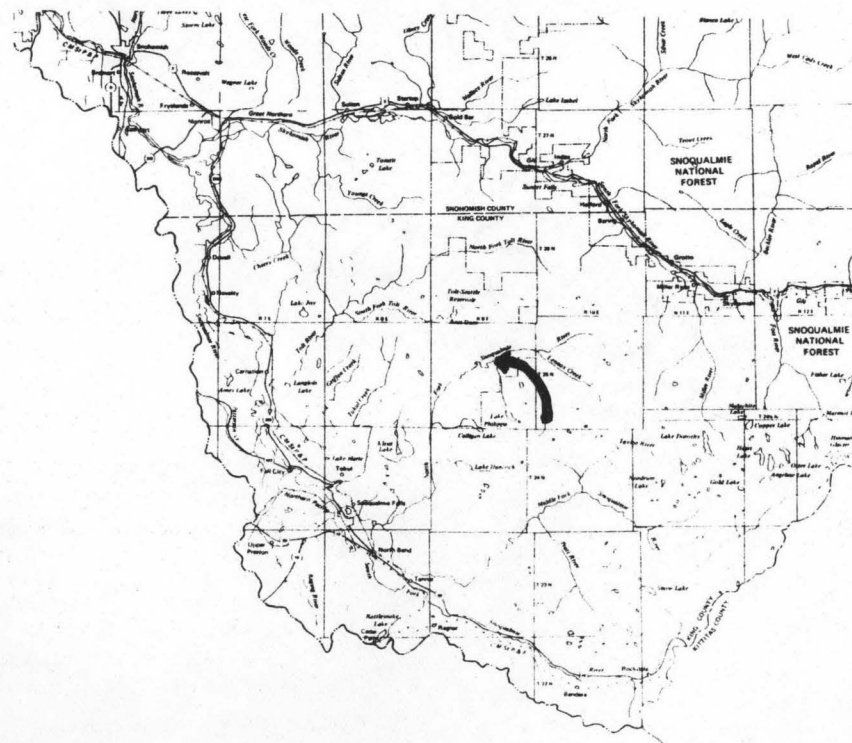
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.8	0.71	6.20	1.00
80	23.9	1.57	12.8	0.93
50	54.7	3.59	24.2	0.77
30	87.0	5.71	31.5	0.63
10	166	10.9	40.2	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 77 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0078

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T25N R10E</u>
D. Latitude, Longitude	<u>47°39' 121°33'</u>
E. Stream Name	<u>Lennox</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/4.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

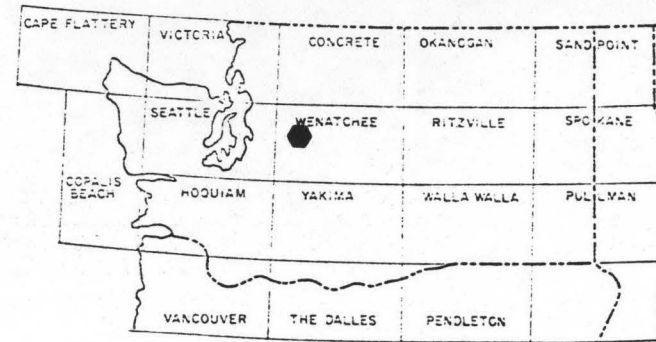
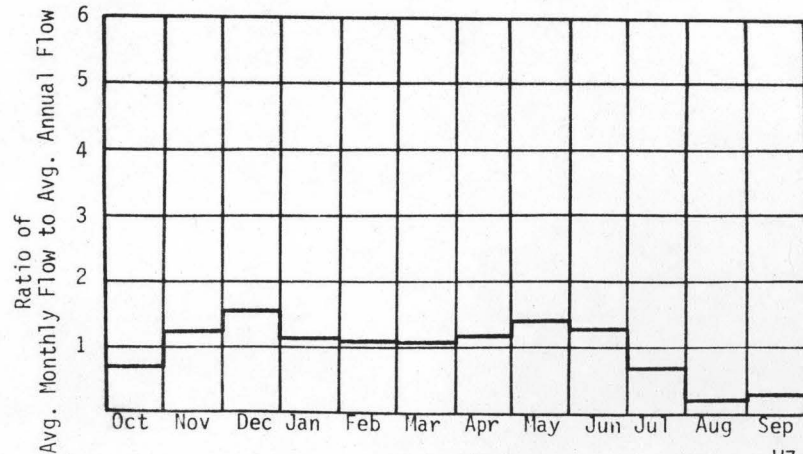
A. Upstream Elevation of Reach	<u>2160</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1525</u>	Ft. MSL
C. Total Available Head in Reach	<u>635 + 66 = 701</u>	Ft.
D. Average Slope in Reach	<u>151</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>21.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

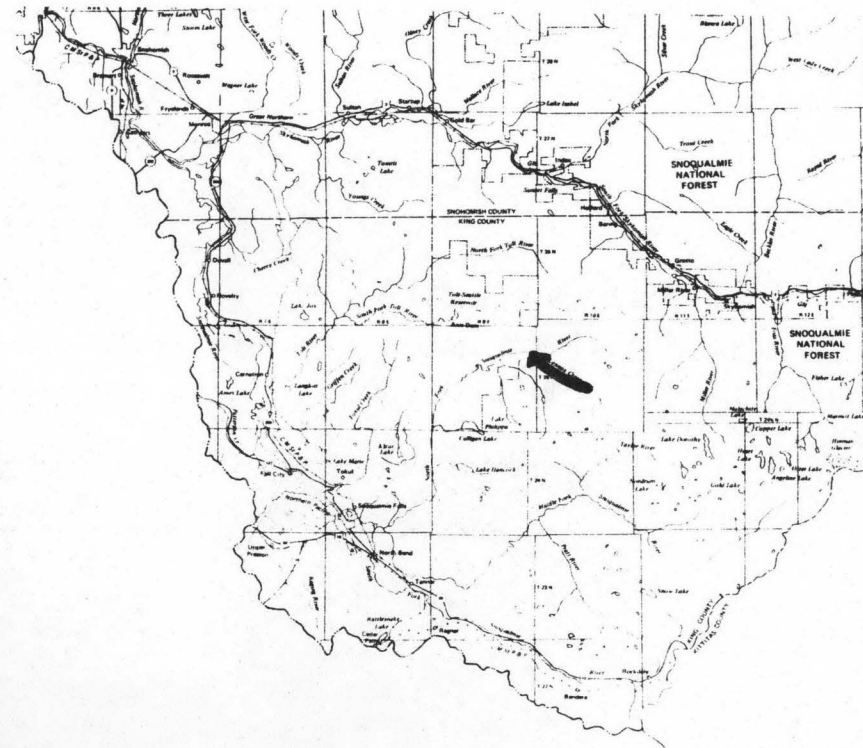
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.0	0.77	6.76	1.00
80	28.8	1.71	13.9	0.93
50	66.0	3.92	26.4	0.77
30	105	6.23	34.4	0.63
10	201	11.9	43.8	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 93 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0079

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T23N R9E</u>
D. Latitude, Longitude	<u>47°27' 121°43'</u>
E. Stream Name	<u>S.F. Snoqualmie Riv.</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/17.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

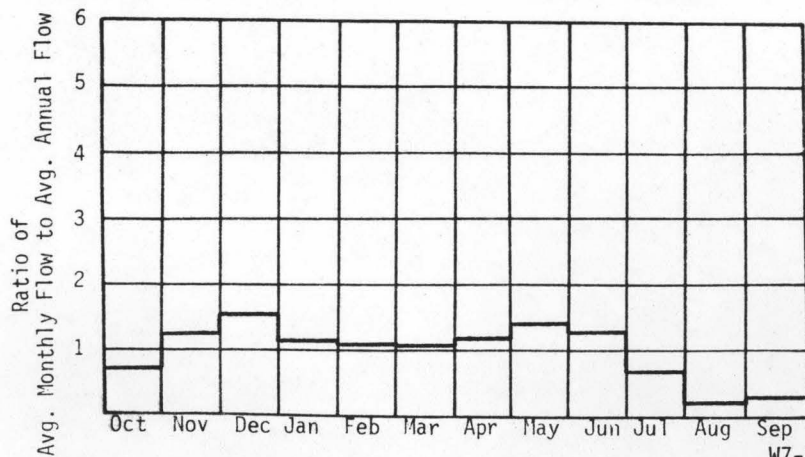
A. Upstream Elevation of Reach	<u>1460</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>400</u>	Ft. MSL
C. Total Available Head in Reach	<u>1060</u>	Ft.
D. Average Slope in Reach	<u>62.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>86.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

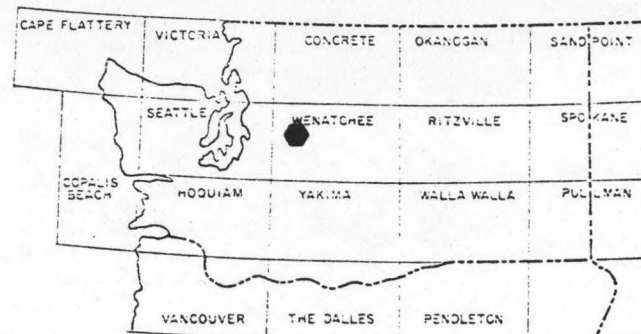
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	86.4	7.75	67.9	1.00
80	151	13.6	112	0.94
50	354	31.8	214	0.77
30	514	46.1	267	0.66
10	864	77.5	319	0.47

### IV. TYPICAL ANNUAL HYDROGRAPH

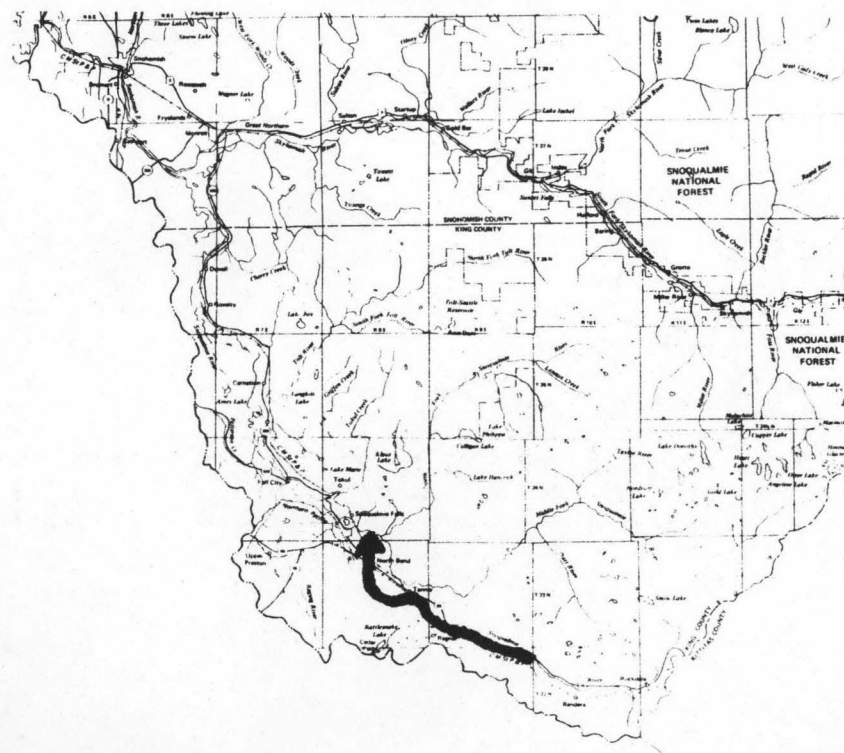
QMR = 432 cfs



W7-352



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0080

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T22N R10E  
 D. Latitude, Longitude 47°24' 121°31'  
 E. Stream Name S.F. Snoqualmie Riv.  
 F. Major Basin Name Snohomish  
 G. River Mile 17.0/22.3

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

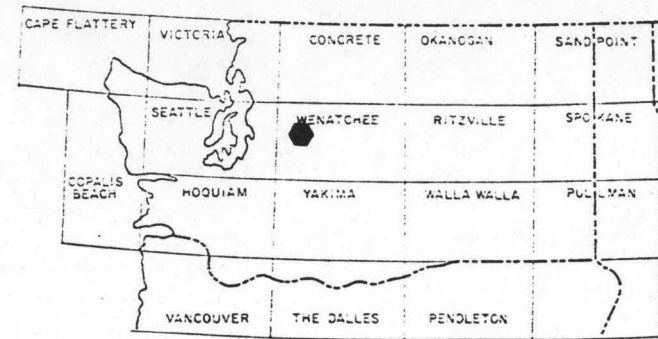
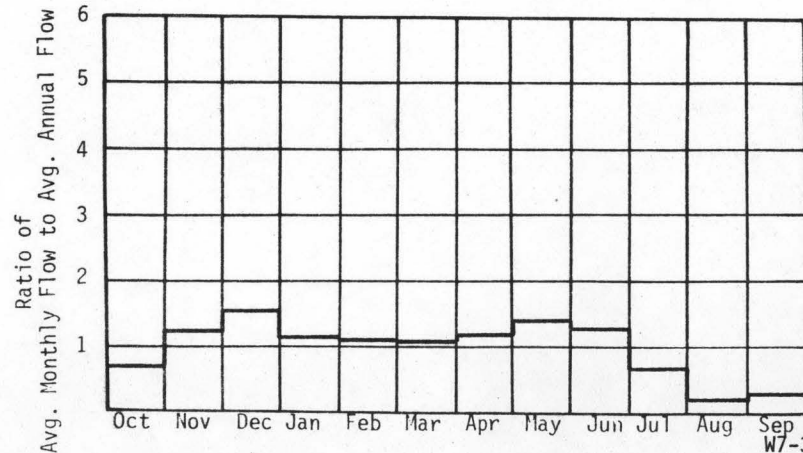
A. Upstream Elevation of Reach 1760 Ft. MSL  
 B. Downstream Elevation of Reach 1460 Ft. MSL  
 C. Total Available Head in Reach 300 Ft.  
 D. Average Slope in Reach 56.6 Ft./Mi.  
 E. Drainage Area above Reach Mouth 42.1 Sq.Mi.  
 F. Inflow Classification Natural

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

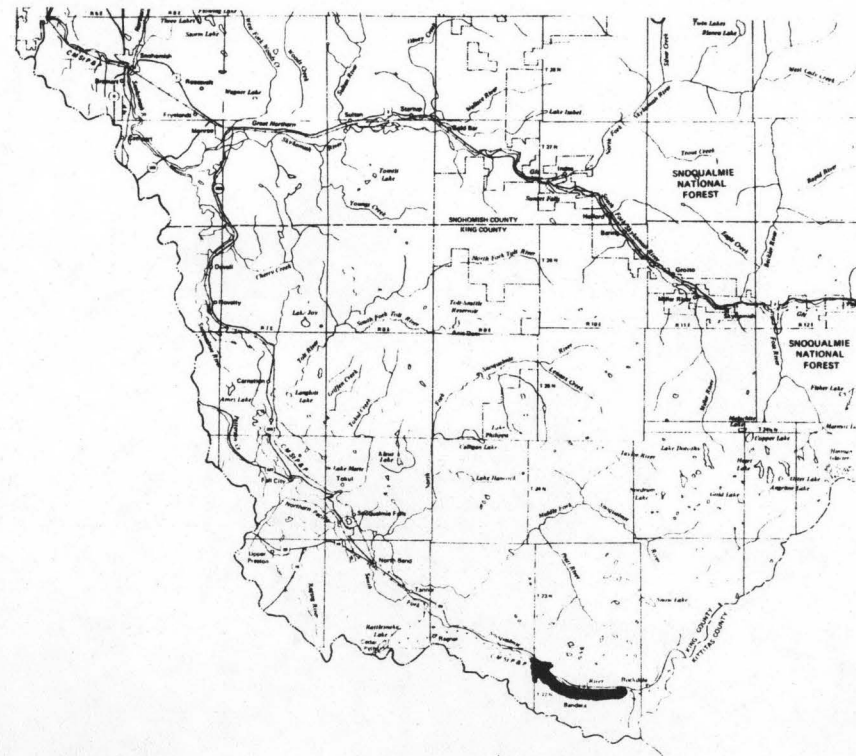
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	45.7	1.16	10.2	1.00
80	118	3.00	24.2	0.92
50	215	5.46	38.3	0.80
30	290	7.37	45.2	0.70
10	498	12.6	54.2	0.49

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 269 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0081

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R11E</u>
D. Latitude, Longitude	<u>47°25' 121°26'</u>
E. Stream Name	<u>S.F. Snoqualmie</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>22.3/27.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

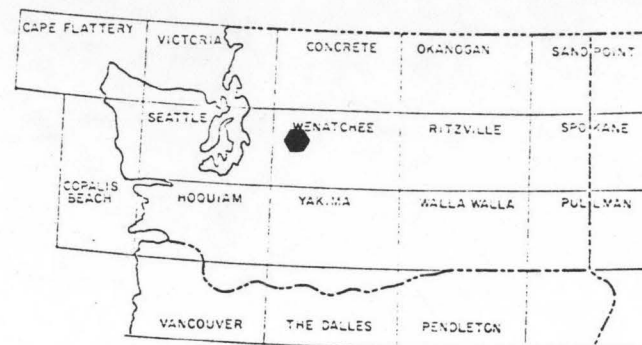
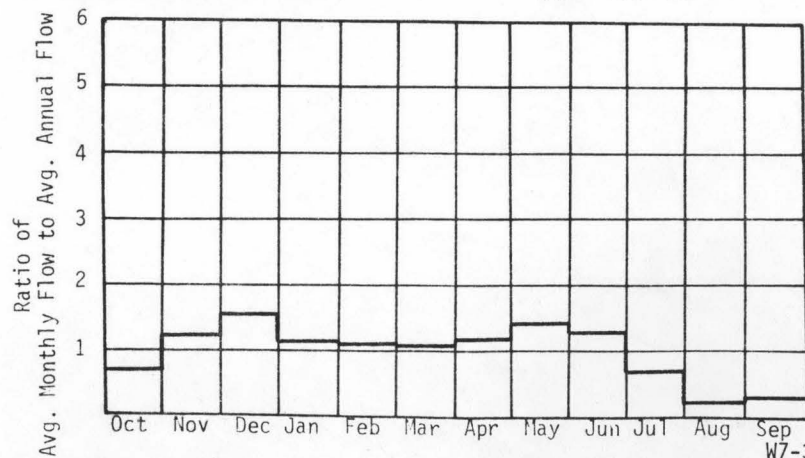
A. Upstream Elevation of Reach	<u>2860</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1760</u>	Ft. MSL
C. Total Available Head in Reach	<u>1100 + 66 = 1166</u>	Ft.
D. Average Slope in Reach	<u>200</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>21.4</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

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

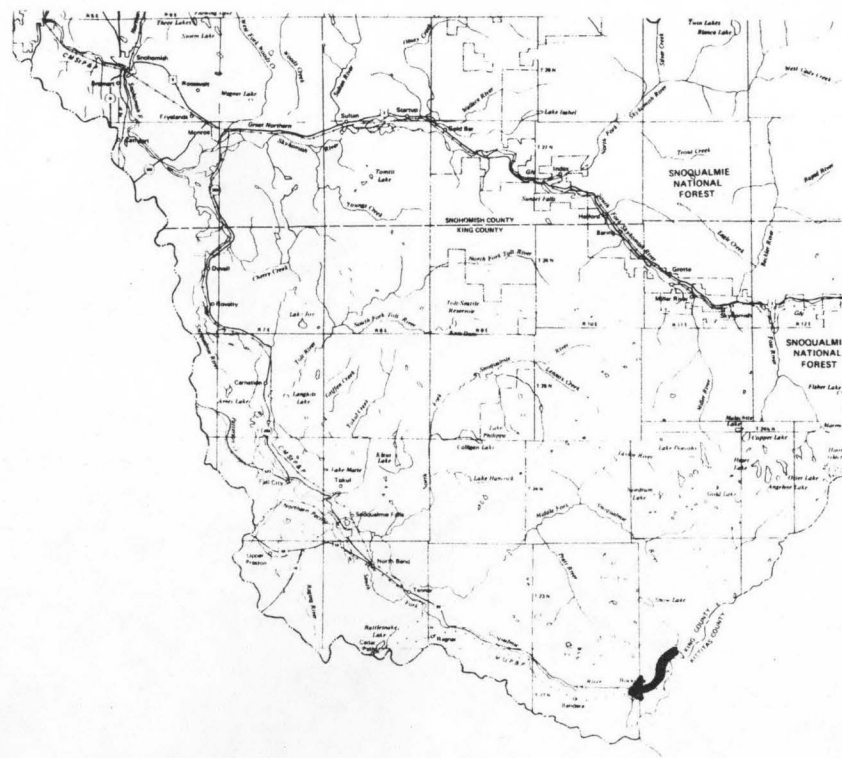
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.7	2.14	18.8	1.00
80	48.1	4.74	38.6	0.93
50	107	10.6	72.1	0.78
30	174	17.1	94.5	0.63
10	332	32.7	120	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 155 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0082

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T23N R9E</u>
D. Latitude, Longitude	<u>47°29' 121°41'</u>
E. Stream Name	<u>M.F. Snoqualmie</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>62.6/78.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

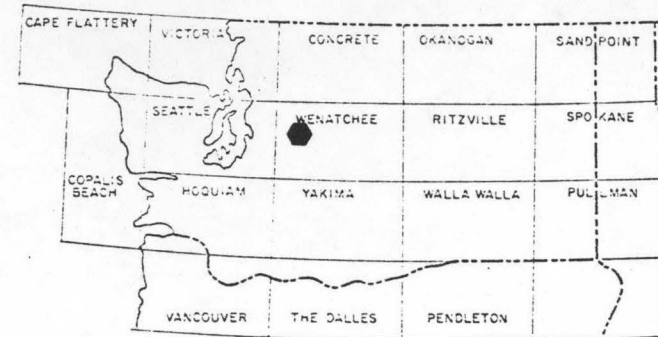
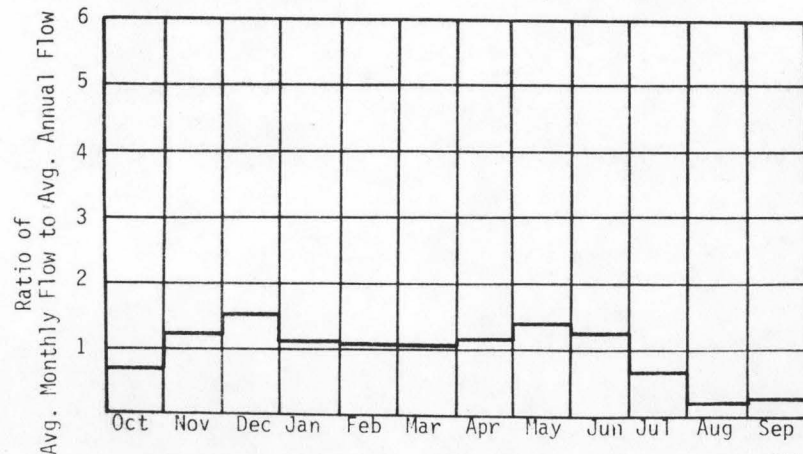
A. Upstream Elevation of Reach	<u>900</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>410</u>	Ft. MSL
C. Total Available Head in Reach	<u>490</u>	Ft.
D. Average Slope in Reach	<u>30.4</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>172.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

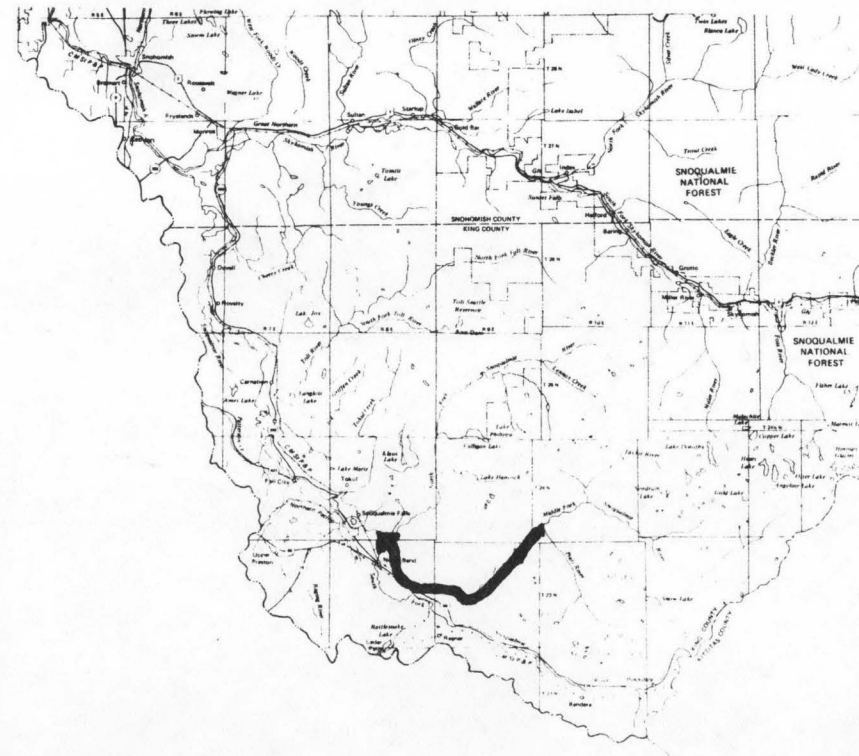
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	242	9.97	87.4	1.00
80	468	19.4	160	0.94
50	912	37.8	265	0.80
30	1390	57.7	334	0.66
10	2570	107	411	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1266 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0083

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R10E</u>
D. Latitude, Longitude	<u>47°32' 121°34'</u>
E. Stream Name	<u>M.F. Snoqualmie</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>78.7/82.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

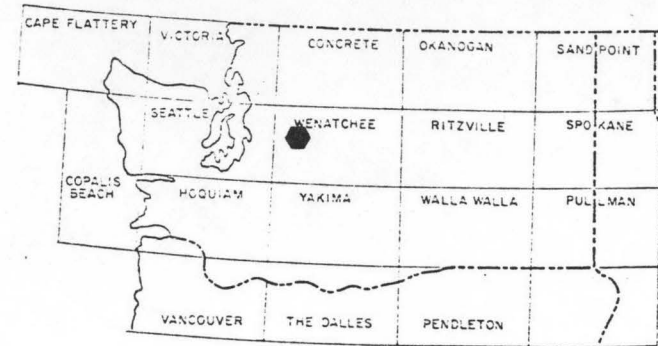
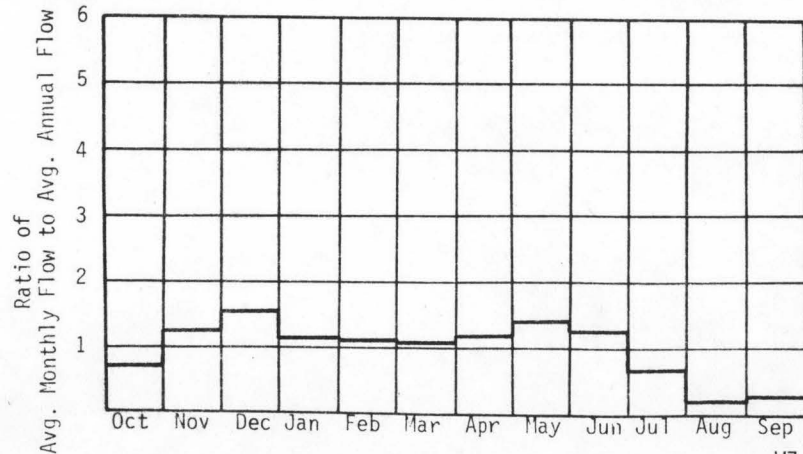
A. Upstream Elevation of Reach	<u>1015</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>900</u>	Ft. MSL
C. Total Available Head in Reach	<u>115</u>	Ft.
D. Average Slope in Reach	<u>30.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>107</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

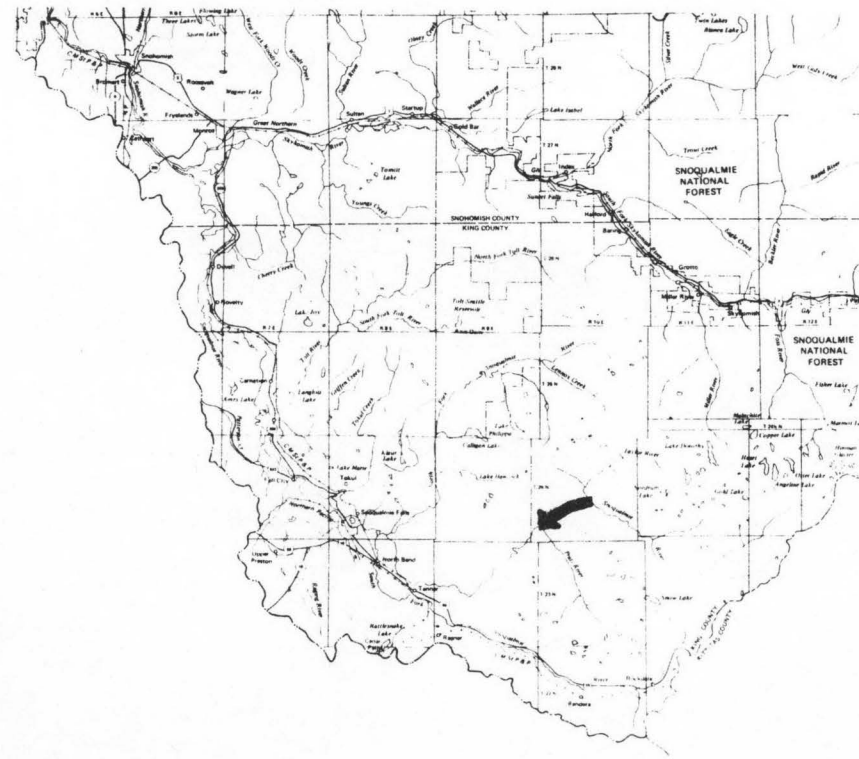
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	175	1.70	14.9	1.00
80	340	3.31	27.2	0.94
50	662	6.44	45.1	0.80
30	1010	9.84	56.9	0.66
10	1870	18.2	70.0	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 919 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0084

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R10E</u>
D. Latitude, Longitude	<u>47°33' 121°30'</u>
E. Stream Name	<u>M.F. Snoqualmie</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>82.5/88.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

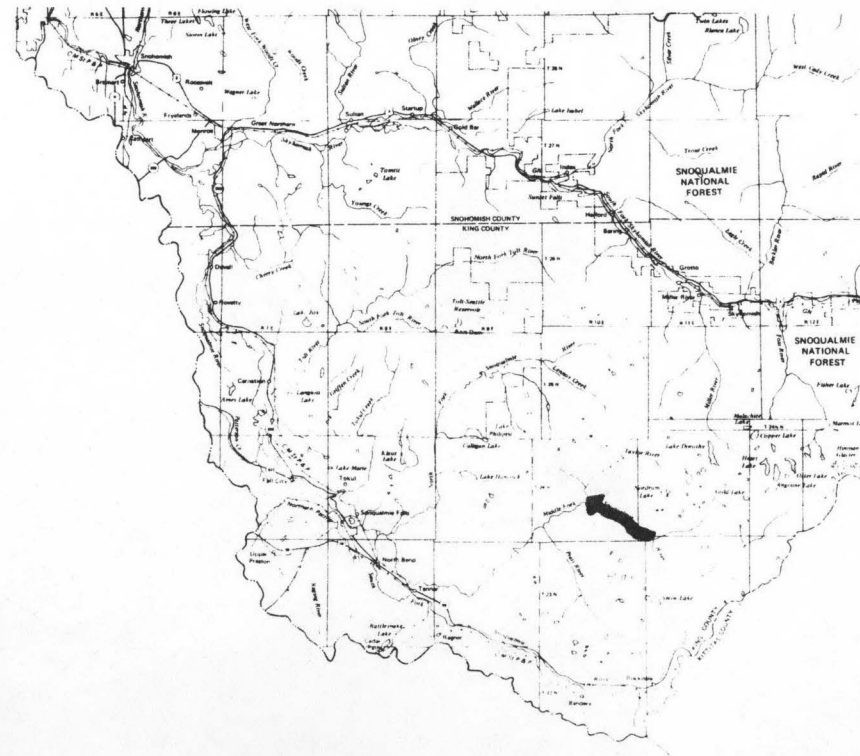
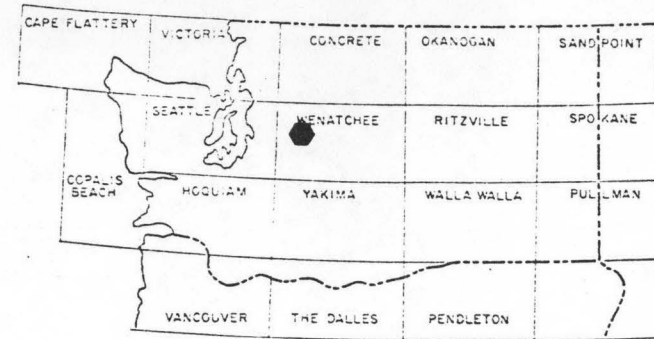
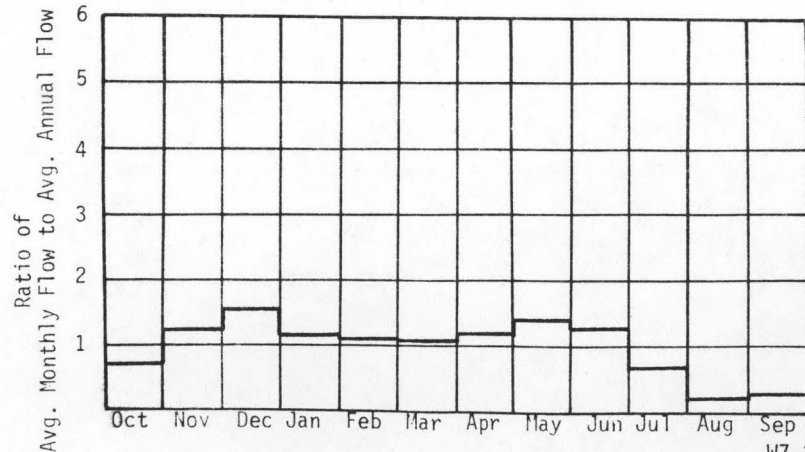
A. Upstream Elevation of Reach	<u>1285</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1015</u>	Ft. MSL
C. Total Available Head in Reach	<u>270</u>	Ft.
D. Average Slope in Reach	<u>49</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>65.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	106	2.41	21.4	1.00
80	206	4.70	38.7	0.94
50	400	9.14	64.1	0.80
30	612	14.0	80.8	0.66
10	1130	25.8	99.4	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 556 cfs



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0085

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T23N R11E  
 D. Latitude, Longitude 47°29' 121°26'  
 E. Stream Name M.F. Snoqualmie River  
 F. Major Basin Name Snohomish  
 G. River Mile 88.0/92.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

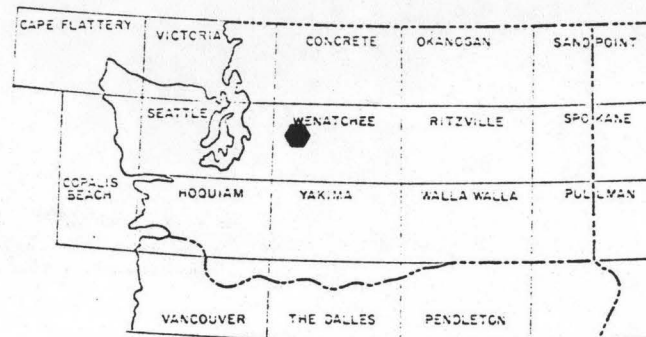
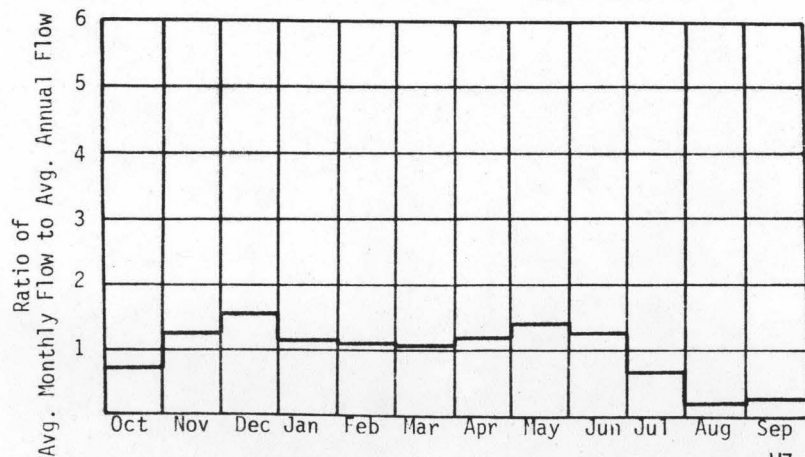
A. Upstream Elevation of Reach 1680 Ft. MSL  
 B. Downstream Elevation of Reach 1285 Ft. MSL  
 C. Total Available Head in Reach 395 Ft.  
 D. Average Slope in Reach 82 Ft./Mi.  
 E. Drainage Area above Reach Mouth 40.9 Sq.Mi.  
 F. Inflow Classification Natural

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

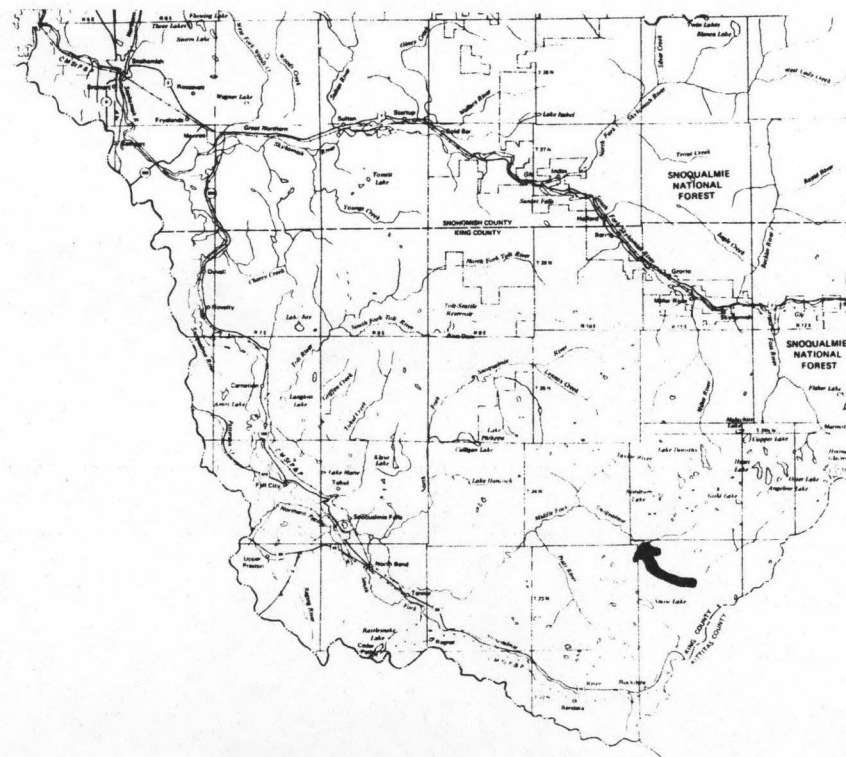
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	59.7	1.99	17.5	1.00
80	116	3.88	32.0	0.94
50	226	7.55	52.9	0.80
30	345	11.5	66.7	0.66
10	637	21.3	82.1	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 314 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0086

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T23N R11E  
 D. Latitude, Longitude 47°31' 121°22'  
 E. Stream Name M.F. Snoqualmie  
 F. Major Basin Name Snohomish  
 G. River Mile 92.8/100.2

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

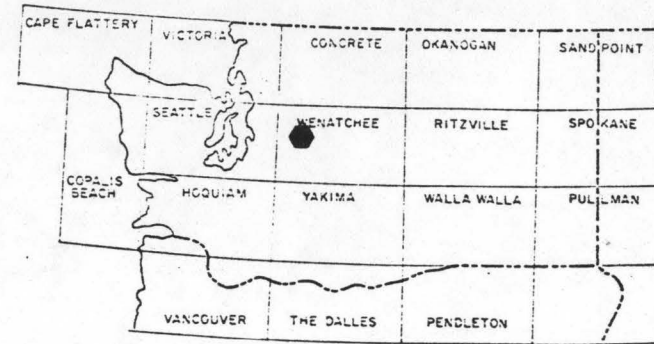
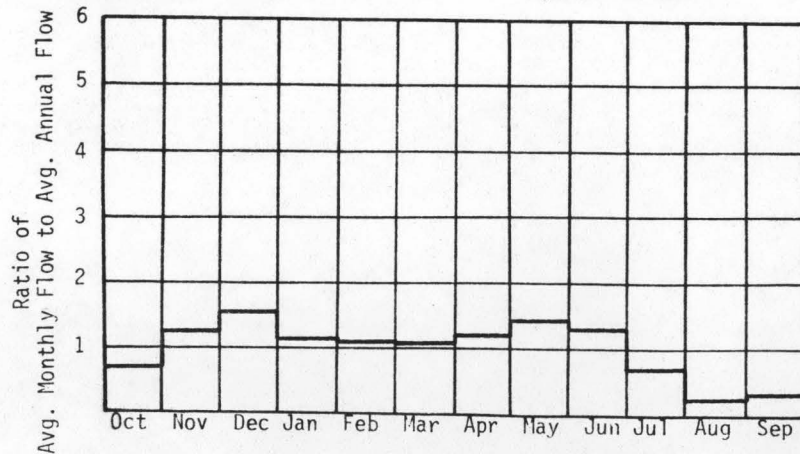
A. Upstream Elevation of Reach 3800 Ft. MSL  
 B. Downstream Elevation of Reach 1680 Ft. MSL  
 C. Total Available Head in Reach 2120 + 66 = 2186 Ft.  
 D. Average Slope in Reach 286 Ft./Mi.  
 E. Drainage Area above Reach Mouth 18.3 Sq.Mi.  
 F. Inflow Classification Natural

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

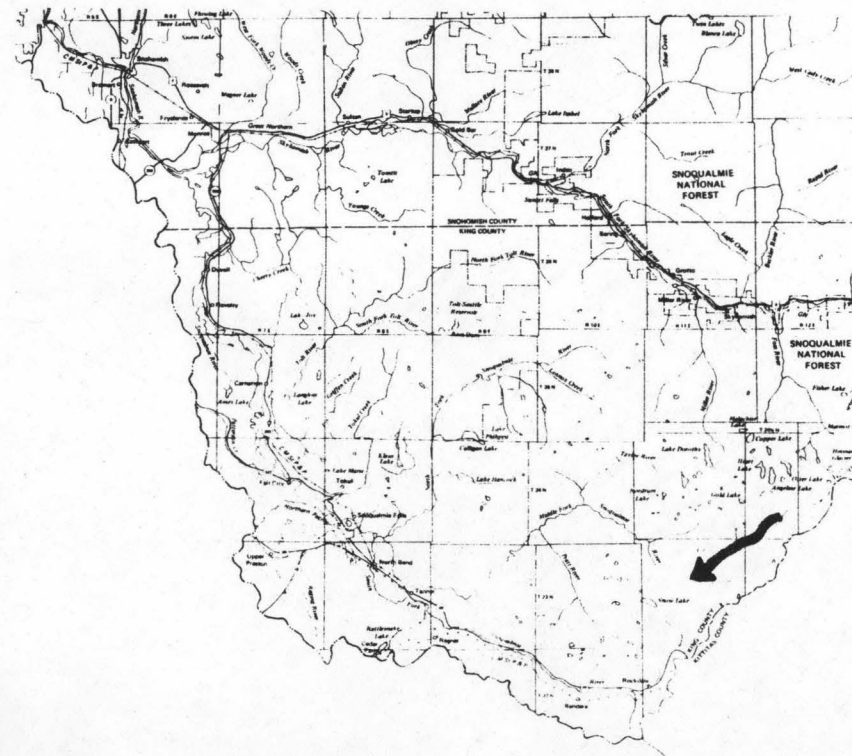
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.3	3.94	34.5	1.00
80	41.4	7.66	63.1	0.94
50	80.6	14.9	105	0.80
30	123	22.8	132	0.66
10	227	42.1	162	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 112 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0087

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T24N R10E  
 D. Latitude, Longitude 47°30' 121°35'  
 E. Stream Name Pratt River  
 F. Major Basin Name Snohomish  
 G. River Mile 0/4.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

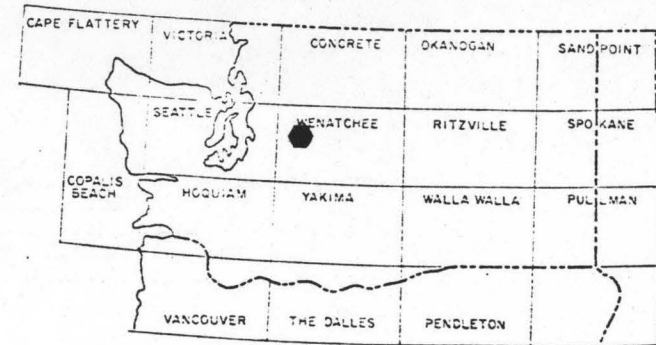
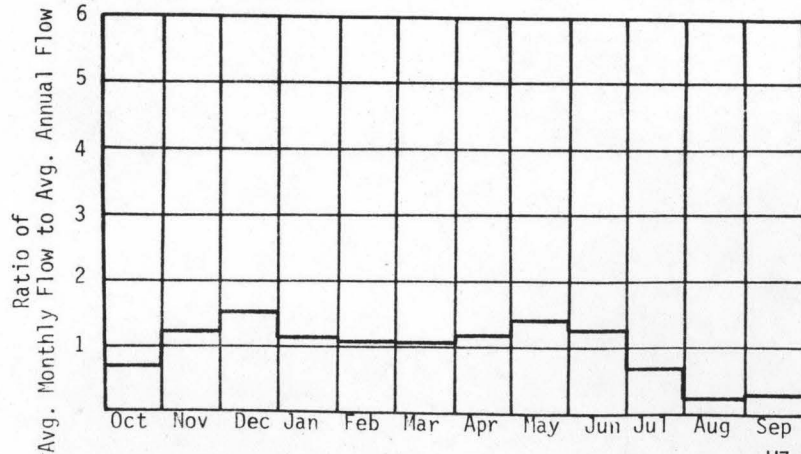
A. Upstream Elevation of Reach 1910 Ft. MSL  
 B. Downstream Elevation of Reach 900 Ft. MSL  
 C. Total Available Head in Reach 1010 Ft.  
 D. Average Slope in Reach 206 Ft./Mi.  
 E. Drainage Area above Reach Mouth 28.8 Sq.Mi.  
 F. Inflow Classification Natural

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

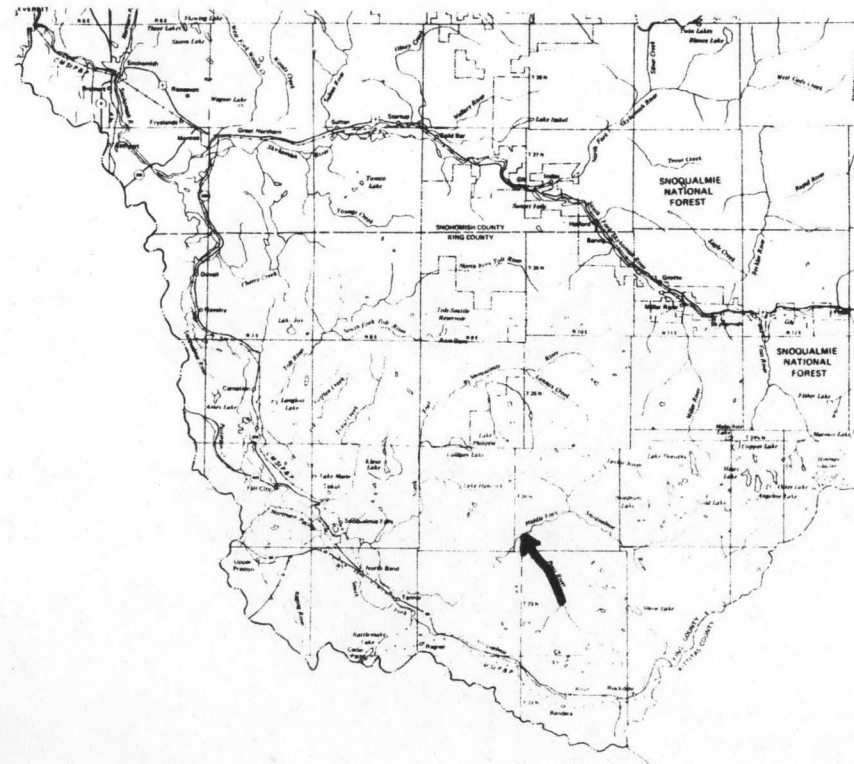
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	35.5	3.04	26.6	1.00
80	69.2	5.91	48.7	0.94
50	135	11.5	80.6	0.80
30	206	17.6	102	0.66
10	380	32.4	125	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 187 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0088

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T23N R10E</u>
D. Latitude, Longitude	<u>47°28' 121°31'</u>
E. Stream Name	<u>Pratt River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>4.9/7.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

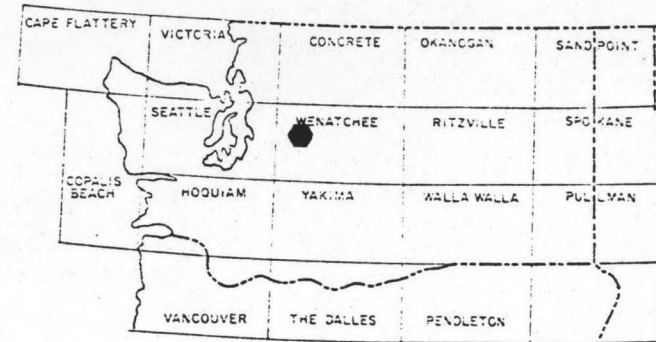
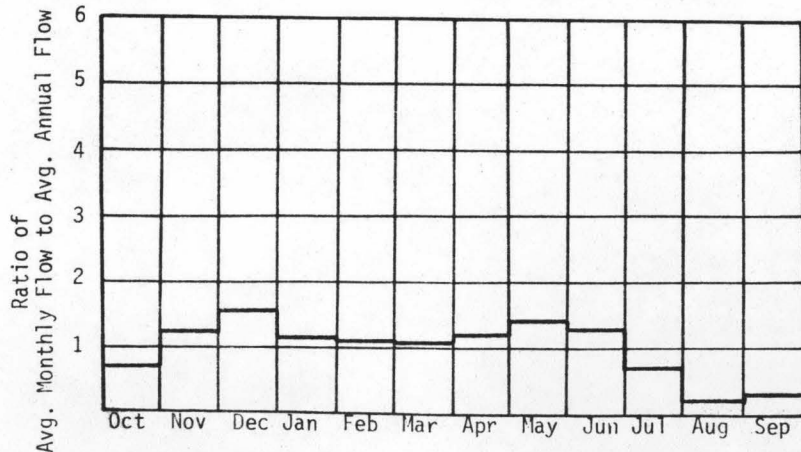
A. Upstream Elevation of Reach	<u>2320</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1910</u>	Ft. MSL
C. Total Available Head in Reach	<u>410 + 66 = 476</u>	Ft.
D. Average Slope in Reach	<u>178</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>13.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

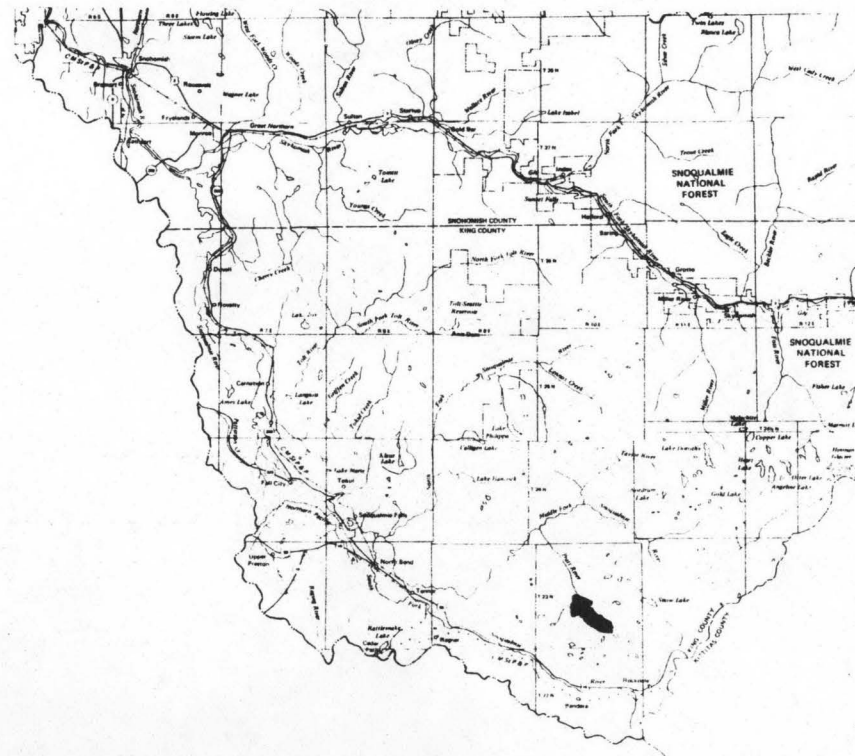
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.3	0.57	5.03	1.00
80	27.8	1.12	9.20	0.94
50	54.0	2.17	15.2	0.80
30	82.5	3.32	19.2	0.66
10	152	6.13	23.6	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 75 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0089

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R10E</u>
D. Latitude, Longitude	<u>47°33' 121°32'</u>
E. Stream Name	<u>Taylor River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/1.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

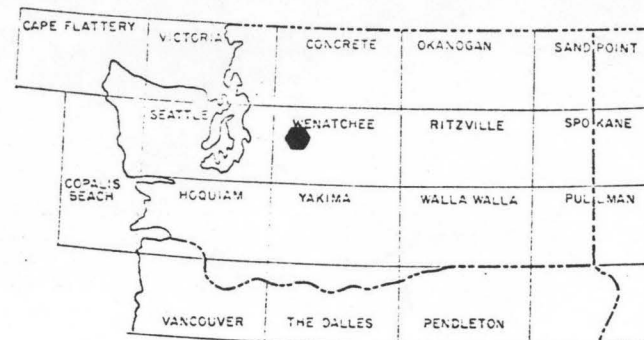
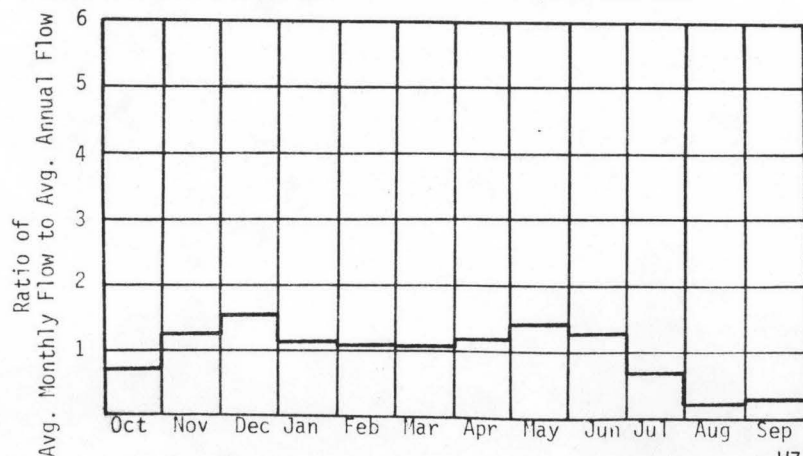
A. Upstream Elevation of Reach	<u>1120</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1015</u>	Ft. MSL
C. Total Available Head in Reach	<u>105</u>	Ft.
D. Average Slope in Reach	<u>95</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>30.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

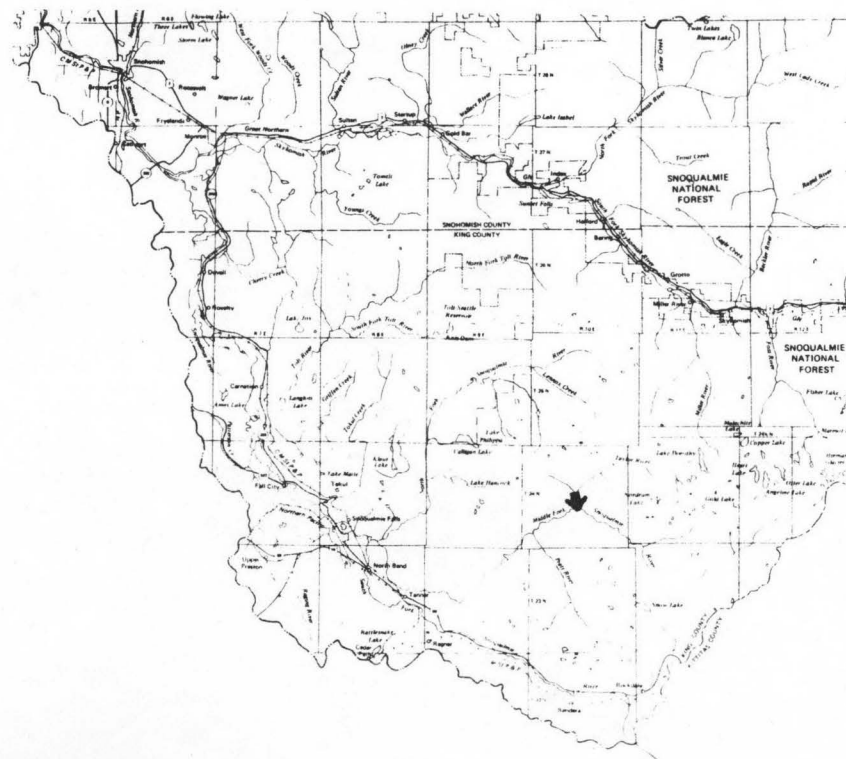
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	51.1	0.45	3.98	1.00
80	99.5	0.88	7.28	0.94
50	194	1.72	12.1	0.80
30	296	2.63	15.2	0.66
10	546	4.85	18.7	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 269 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0090

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R10E</u>
D. Latitude, Longitude	<u>47°35' 122°30'</u>
E. Stream Name	<u>Taylor River</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>1.1/6.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

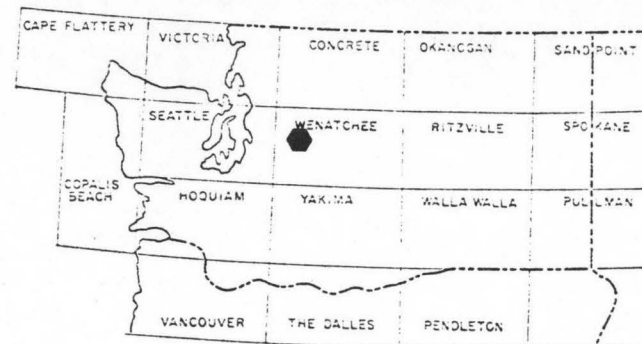
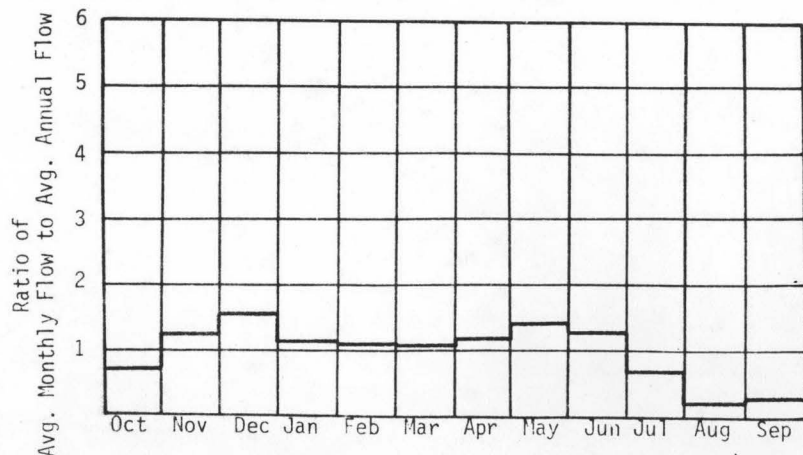
A. Upstream Elevation of Reach	<u>1750</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1120</u>	Ft. MSL
C. Total Available Head in Reach	<u>630 + 66 = 696</u>	Ft.
D. Average Slope in Reach	<u>109</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>24.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

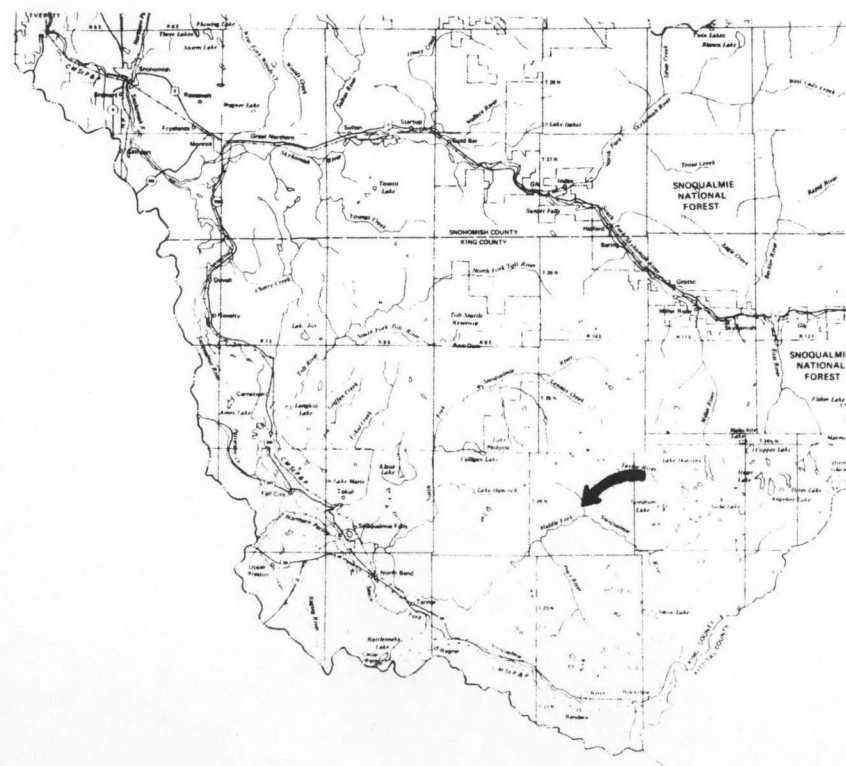
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	30.4	1.79	15.7	1.00
80	59.2	3.49	28.7	0.94
50	115	6.78	47.5	0.80
30	176	10.4	59.9	0.66
10	325	19.1	73.7	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 160 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0091

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T24N R11E</u>
D. Latitude, Longitude	<u>47°32' 121°25'</u>
E. Stream Name	<u>Dingford Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/3.5</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

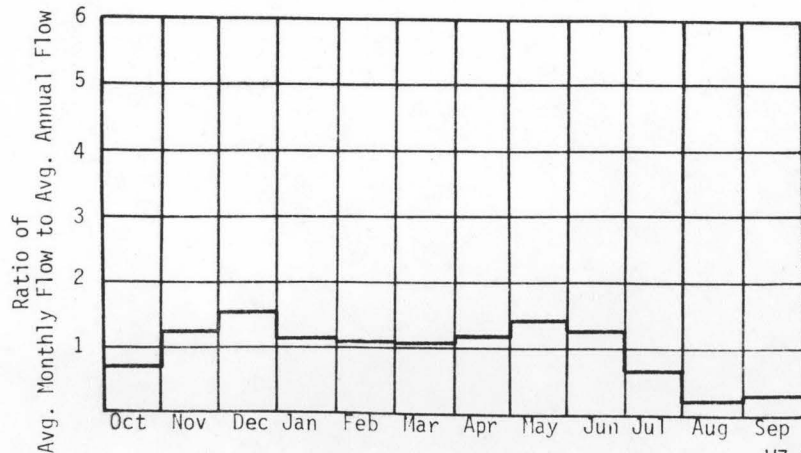
A. Upstream Elevation of Reach	<u>2840</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1285</u>	Ft. MSL
C. Total Available Head in Reach	<u>1555 + 66 = 1621</u>	Ft.
D. Average Slope in Reach	<u>444</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

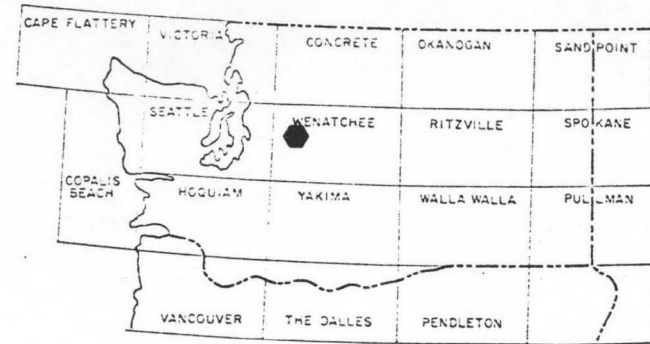
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	15.4	2.11	18.5	1.00
80	30.0	4.11	33.8	0.94
50	58.3	8.00	56.1	0.80
30	89.1	12.2	70.6	0.66
10	164	22.6	86.9	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

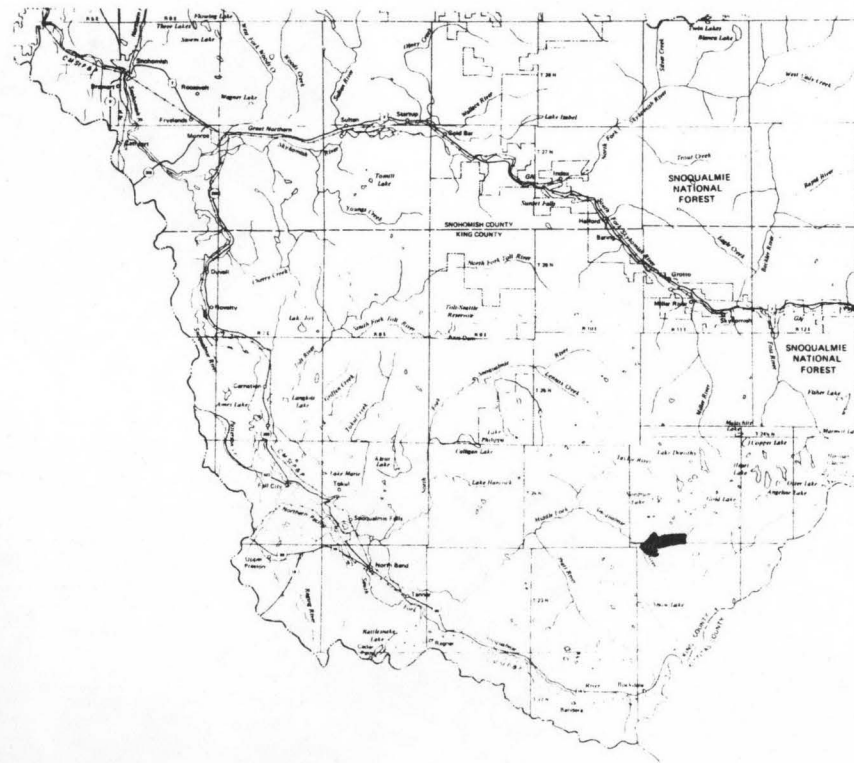
QMR = 81 cfs



W7-364



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-007-000-000-000-R0092

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T23N R11E</u>
D. Latitude, Longitude	<u>47°29' 121°23'</u>
E. Stream Name	<u>Burntboot Creek</u>
F. Major Basin Name	<u>Snohomish</u>
G. River Mile	<u>0/2.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

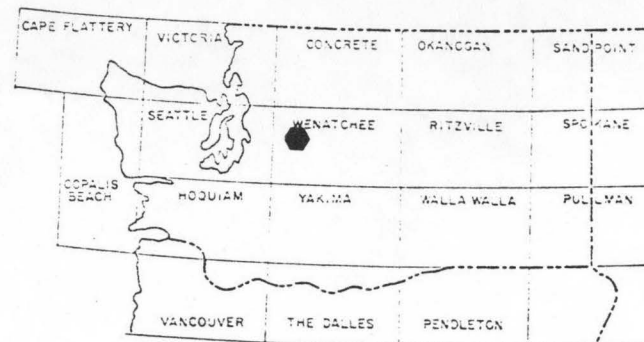
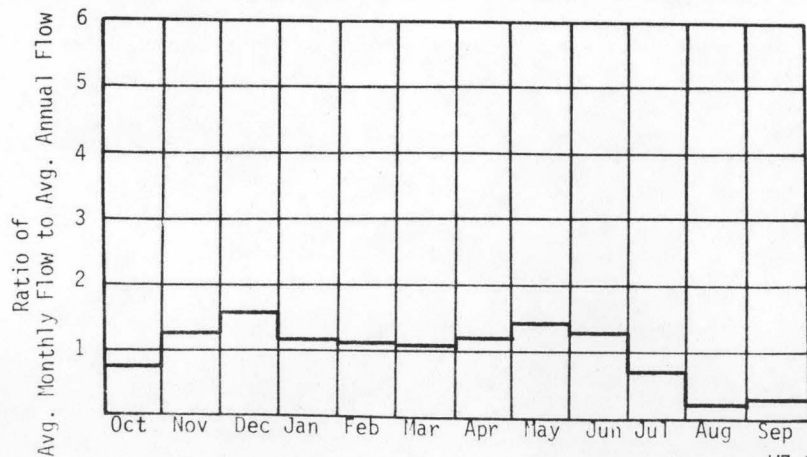
A. Upstream Elevation of Reach	<u>2960</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1680</u>	Ft. MSL
C. Total Available Head in Reach	<u>1280 + 66 = 1346</u>	Ft.
D. Average Slope in Reach	<u>492</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

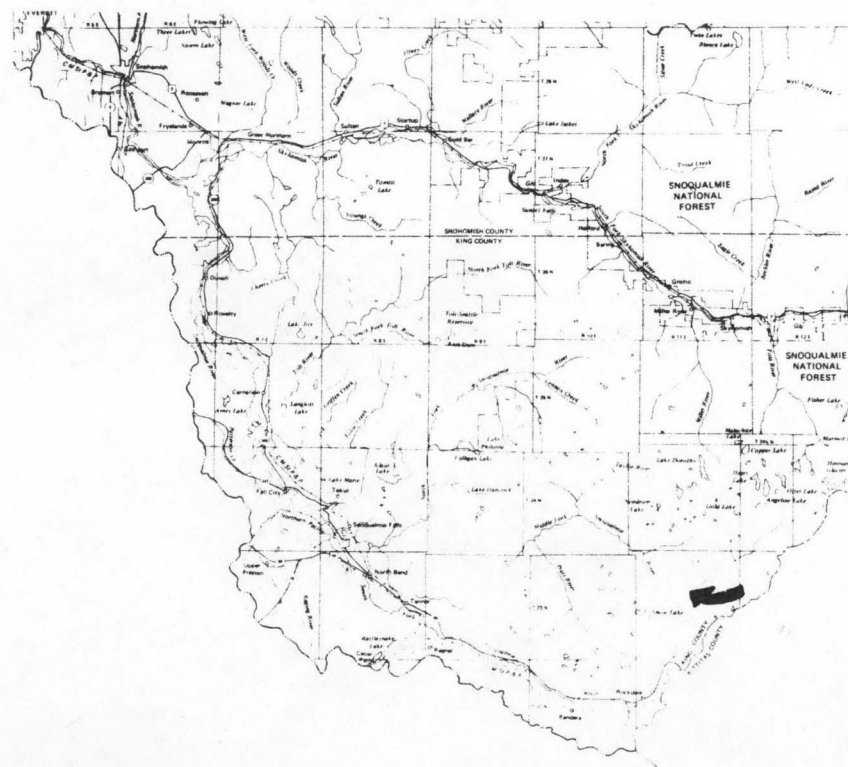
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.6	1.21	10.6	1.00
80	20.7	2.36	19.4	0.94
50	40.3	4.59	32.2	0.80
30	61.6	7.01	40.6	0.66
10	114	12.9	49.9	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 56 cfs



LOCATIONS FOR USGS 250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-020-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R4E</u>
D. Latitude, Longitude	<u>47°45' 122°15'</u>
E. Stream Name	<u>Sammamish</u>
F. Major Basin Name	<u>Sammamish</u>
G. River Mile	<u>0.0/4.7</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

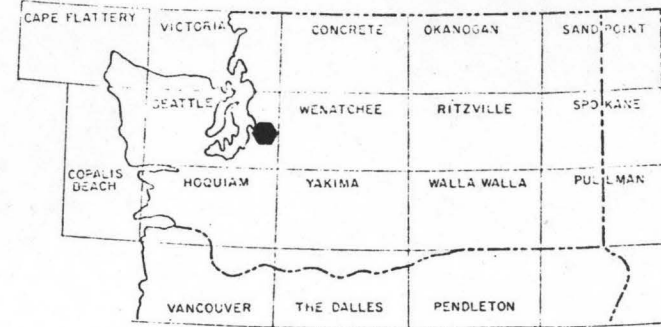
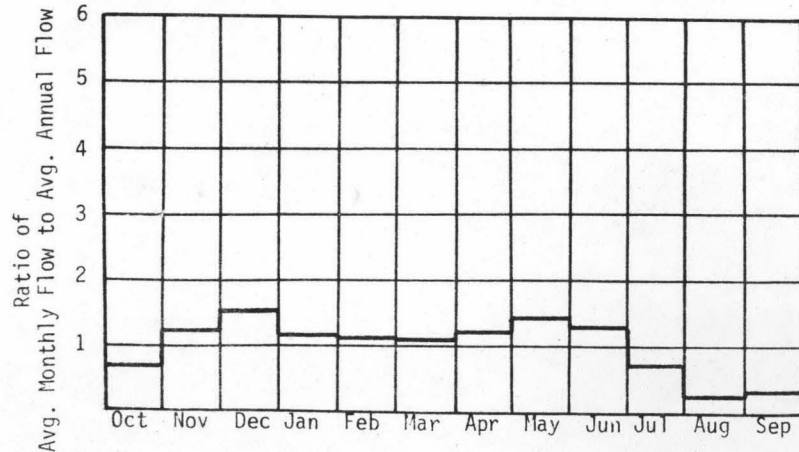
A. Upstream Elevation of Reach	<u>18</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>0</u>	Ft. MSL
C. Total Available Head in Reach	<u>18</u>	Ft.
D. Average Slope in Reach	<u>5</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>241.5</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

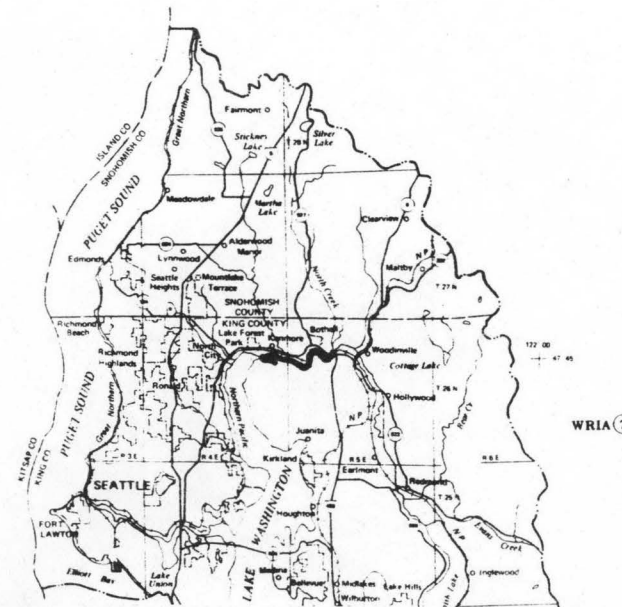
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	83.0	0.13	1.11	1.00
80	118	0.18	1.51	0.96
50	256	0.39	2.70	0.79
30	443	0.67	3.66	0.62
10	720	1.10	4.42	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 346 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-020-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T26N R5E</u>
D. Latitude, Longitude	<u>47°42' 122°07'</u>
E. Stream Name	<u>Sammamish River</u>
F. Major Basin Name	<u>Sammamish</u>
G. River Mile	<u>4.7/14.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

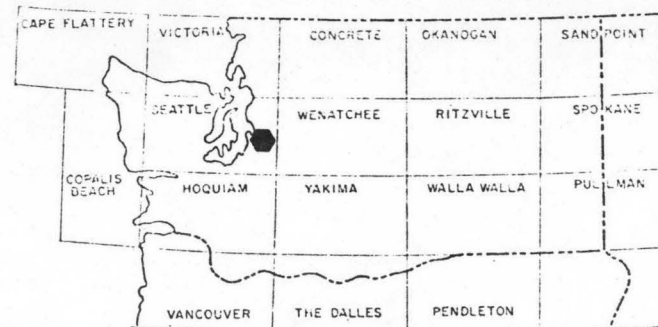
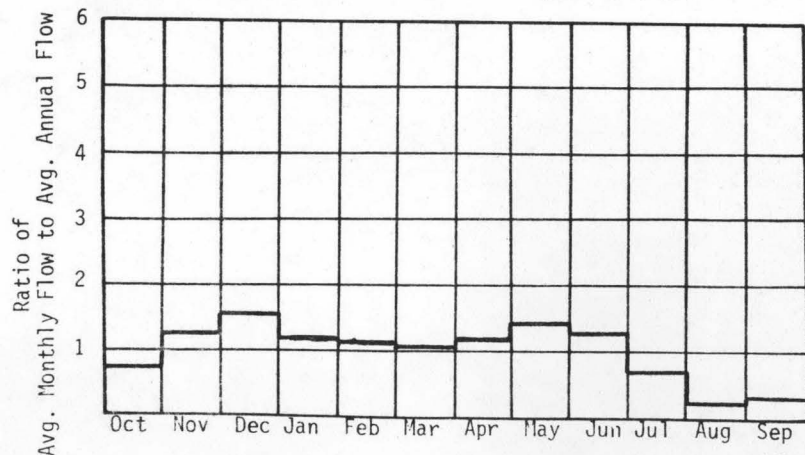
A. Upstream Elevation of Reach	<u>40</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>18</u>	Ft. MSL
C. Total Available Head in Reach	<u>22</u>	Ft.
D. Average Slope in Reach	<u>2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>185.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

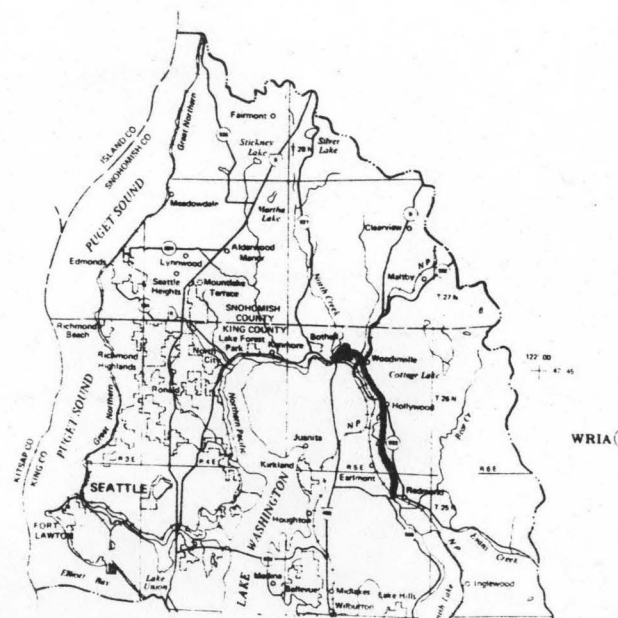
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	52.4	0.10	0.85	1.00
80	71.2	0.14	1.19	0.96
50	174	0.32	2.21	0.78
30	312	0.58	3.10	0.61
10	507	0.94	3.72	0.45

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 238 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-020-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T23N R6E</u>
D. Latitude, Longitude	<u>47°30' 122°07'</u>
E. Stream Name	<u>Sammamish River</u>
F. Major Basin Name	<u>Sammamish</u>
G. River Mile	<u>21.9/29.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

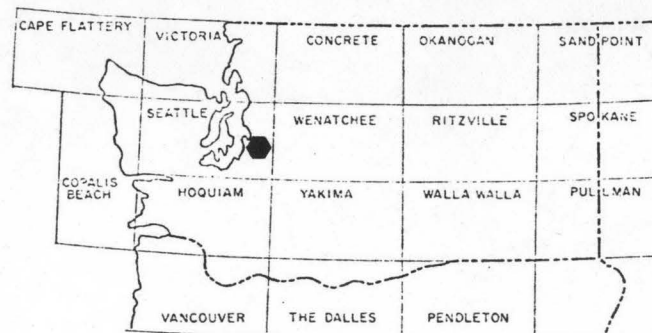
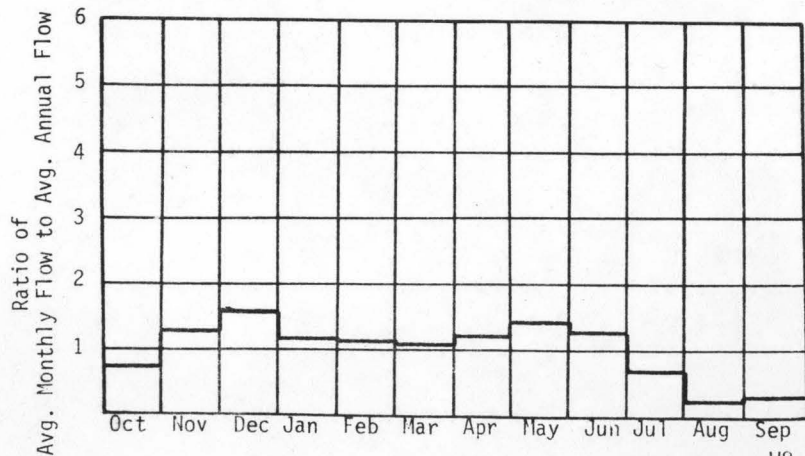
A. Upstream Elevation of Reach	<u>150</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>45</u>	Ft. MSL
C. Total Available Head in Reach	<u>105 + 66 = 171</u>	Ft.
D. Average Slope in Reach	<u>14</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>56.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

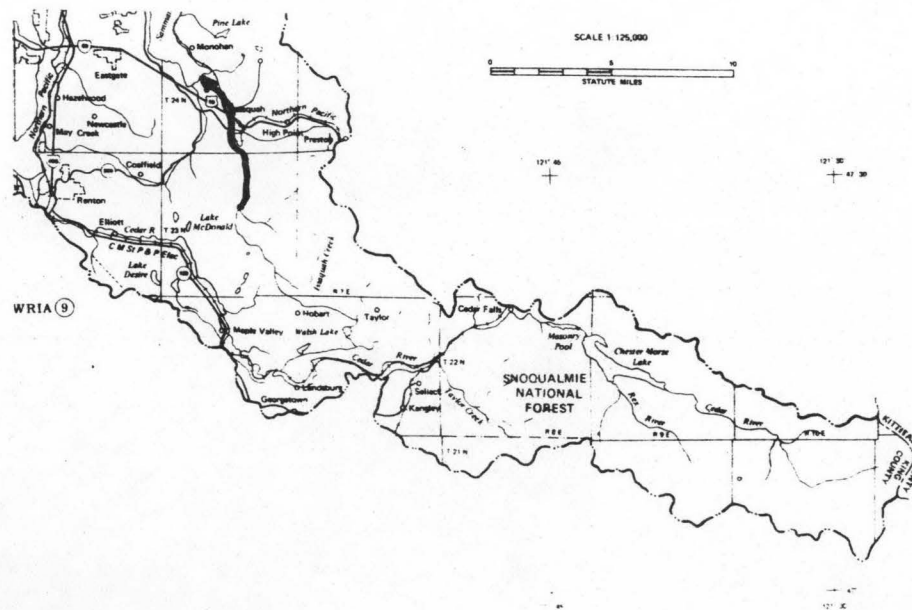
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.2	0.27	2.31	1.00
80	26.9	0.39	3.27	0.96
50	62.4	0.90	6.09	0.77
30	108	1.56	8.45	0.62
10	208	3.01	10.8	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 96 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T23N R6E</u>
D. Latitude, Longitude	<u>47°27' 122°03'</u>
E. Stream Name	<u>Cedar River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>0.0/13.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

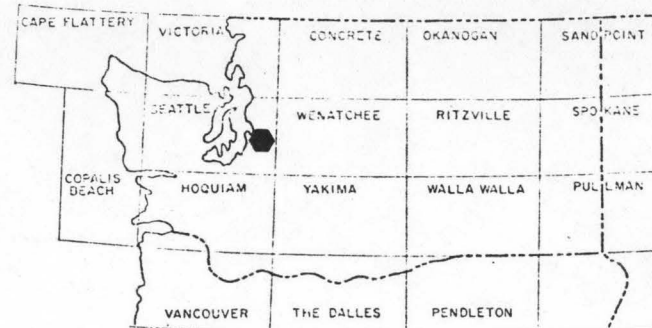
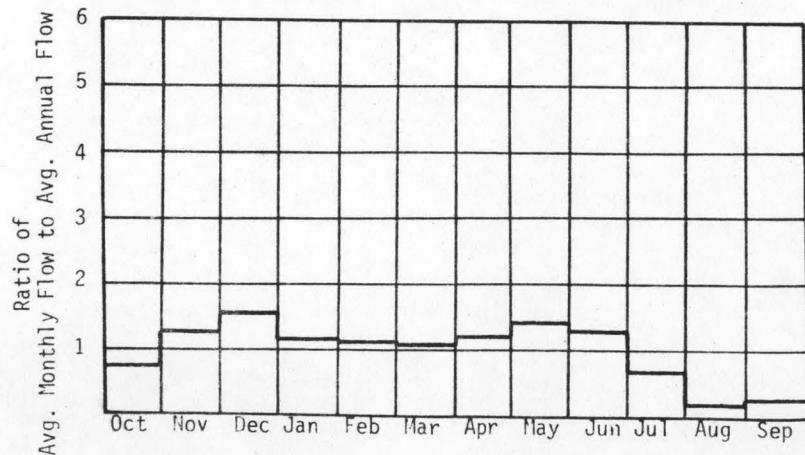
A. Upstream Elevation of Reach	<u>270</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>0.0</u>	Ft. MSL
C. Total Available Head in Reach	<u>270</u>	Ft.
D. Average Slope in Reach	<u>43</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>191.6</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

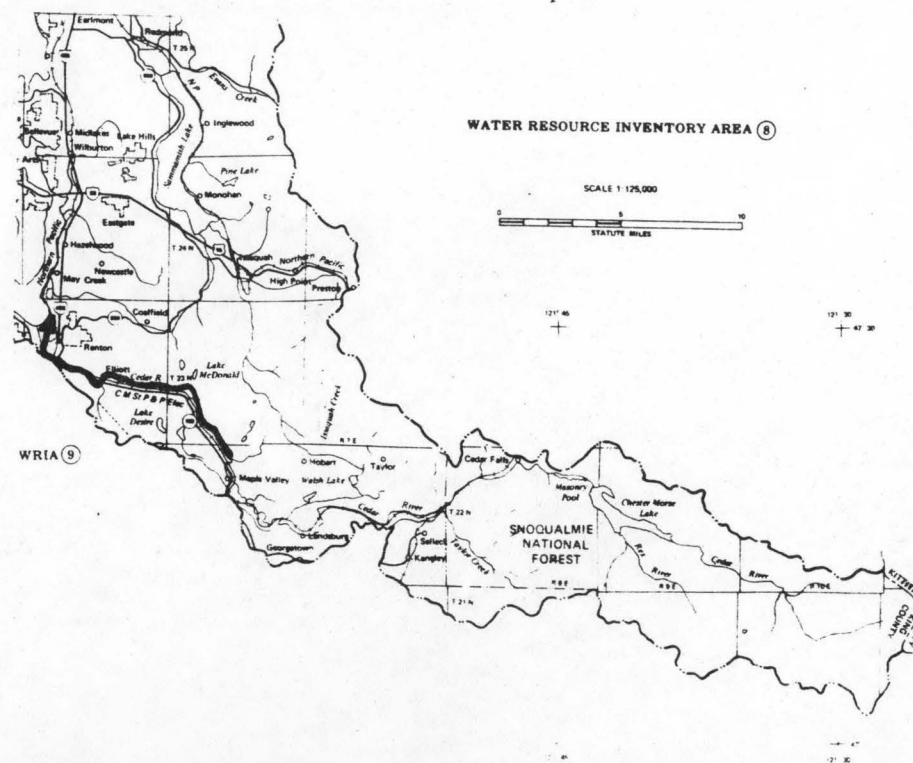
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	78.2	1.79	15.6	1.00
80	195	4.47	36.4	0.93
50	491	11.2	73.8	0.75
30	715	16.3	91.6	0.64
10	1090	25.0	107.4	0.49

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 558 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R6E</u>
D. Latitude, Longitude	<u>47°22' 122°00'</u>
E. Stream Name	<u>Cedar River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>13.9/23.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

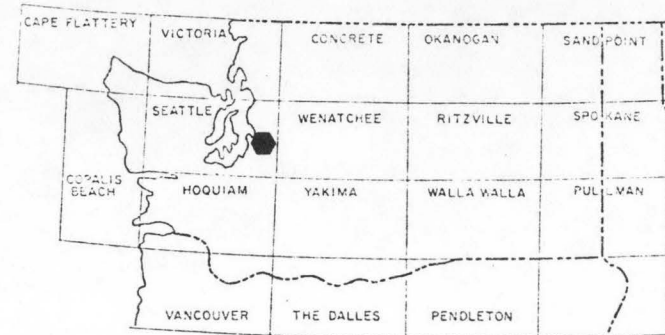
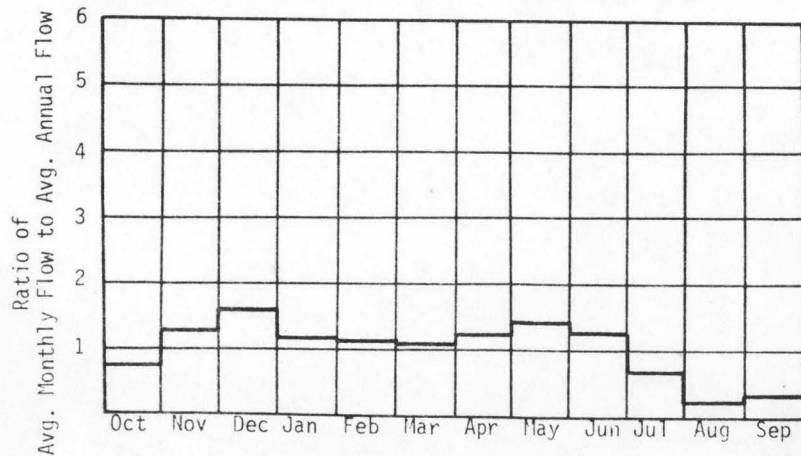
A. Upstream Elevation of Reach	<u>570</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>270</u>	Ft. MSL
C. Total Available Head in Reach	<u>300</u>	Ft.
D. Average Slope in Reach	<u>30</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>152.5</u>	Sq. Mi.
F. Inflow Classification	<u>Regulated</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	173	4.4	38.5	1.00
80	236	5.98	50.8	0.97
50	418	10.6	76.3	0.82
30	563	14.3	90.1	0.72
10	822	20.9	101	0.55

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 481 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R7E</u>
D. Latitude, Longitude	<u>47°22' 121°52'</u>
E. Stream Name	<u>Cedar River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>23.8/29.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

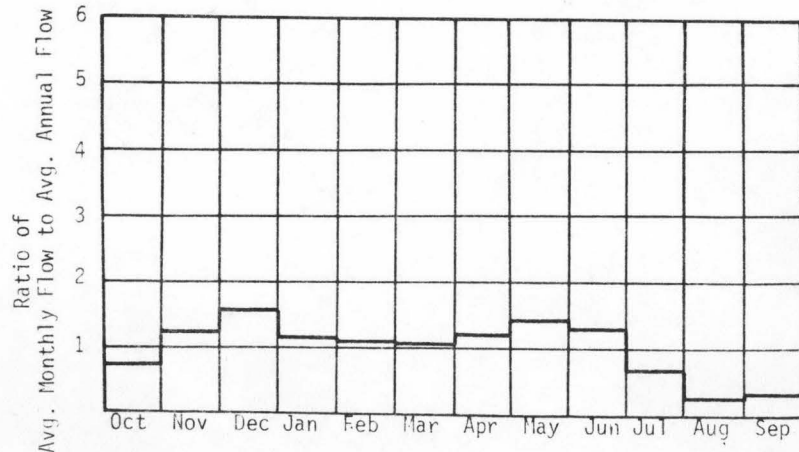
A. Upstream Elevation of Reach	<u>780</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>570</u>	Ft. MSL
C. Total Available Head in Reach	<u>210</u>	Ft.
D. Average Slope in Reach	<u>35</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>124</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

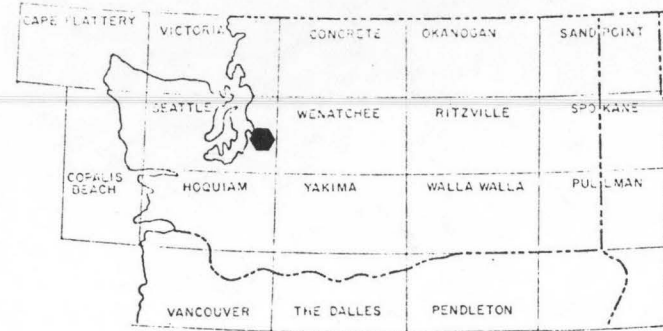
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	154	2.74	24.0	1.00
80	210	3.73	31.7	0.97
50	372	6.62	47.5	0.82
30	500	8.90	56.1	0.72
10	732	13.0	62.7	0.55

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 428 cfs



W8-371



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R8E</u>
D. Latitude, Longitude	<u>47°24' 121°50'</u>
E. Stream Name	<u>Cedar River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>29.8/33.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

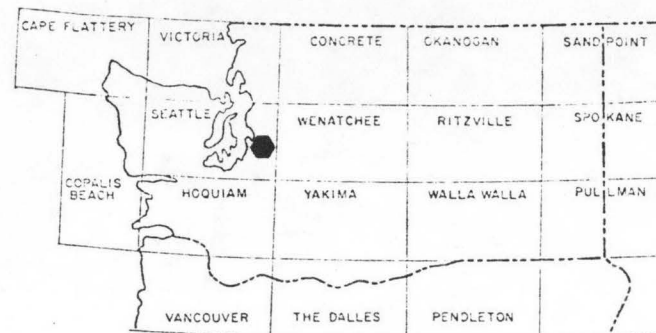
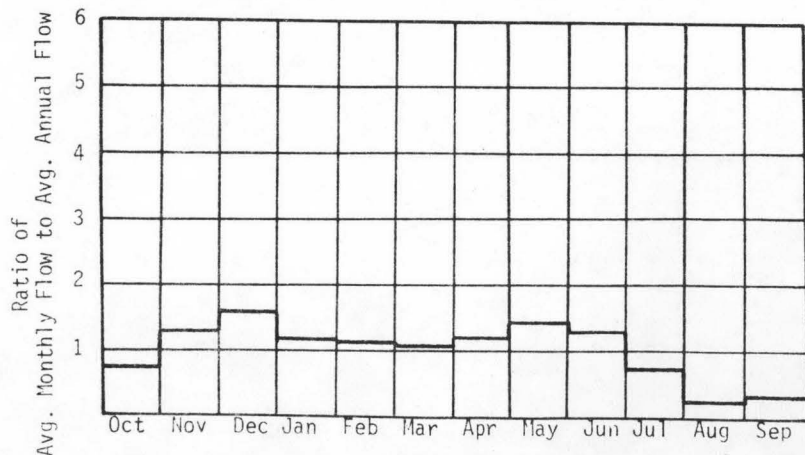
A. Upstream Elevation of Reach	<u>910</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>780</u>	Ft. MSL
C. Total Available Head in Reach	<u>130</u>	Ft.
D. Average Slope in Reach	<u>34</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>96.1</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	41.7	0.46	4.02	1.00
80	89.9	0.99	8.05	0.93
50	247	2.72	17.6	0.74
30	398	4.38	23.4	0.61
10	681	7.48	28.8	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 321 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T21N R10E</u>
D. Latitude, Longitude	<u>47°20' 121°35'</u>
E. Stream Name	<u>Cedar River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>43.5/51.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

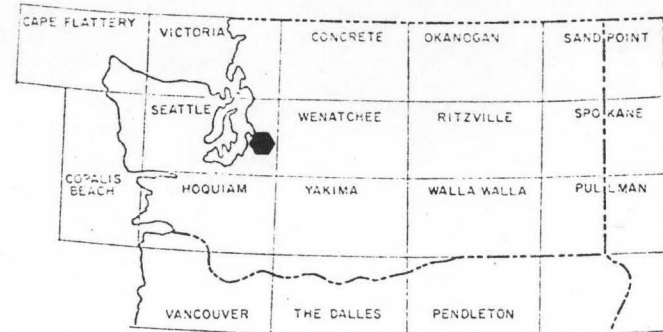
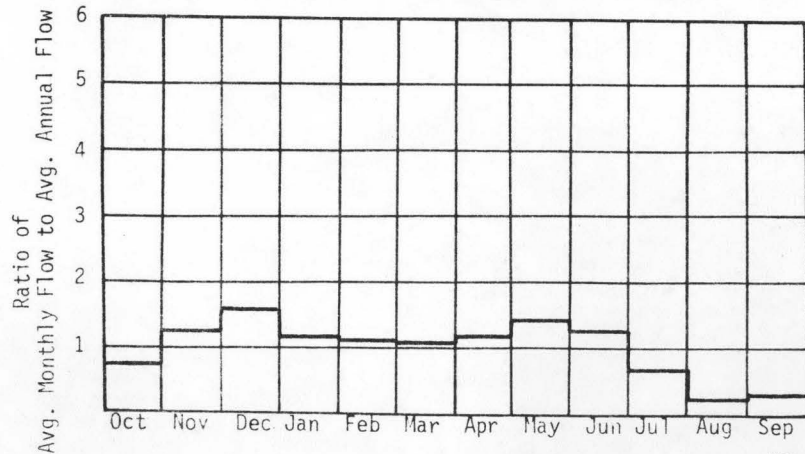
A. Upstream Elevation of Reach	<u>2150</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1570</u>	Ft. MSL
C. Total Available Head in Reach	<u>580 + 66 = 646</u>	Ft.
D. Average Slope in Reach	<u>70</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>41.1</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	20.9	1.14	10.0	1.00
80	45.1	2.46	20.1	0.93
50	116	6.34	41.6	0.75
30	188	10.3	55.9	0.62
10	343	18.8	70.6	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 161 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0006

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R8E</u>
D. Latitude, Longitude	<u>47°22' 121°50'</u>
E. Stream Name	<u>Taylor Creek</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>0.0/3.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

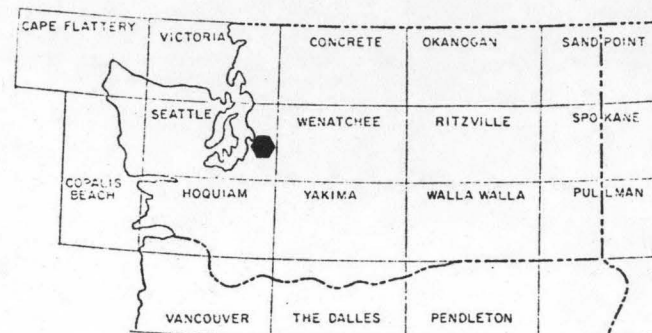
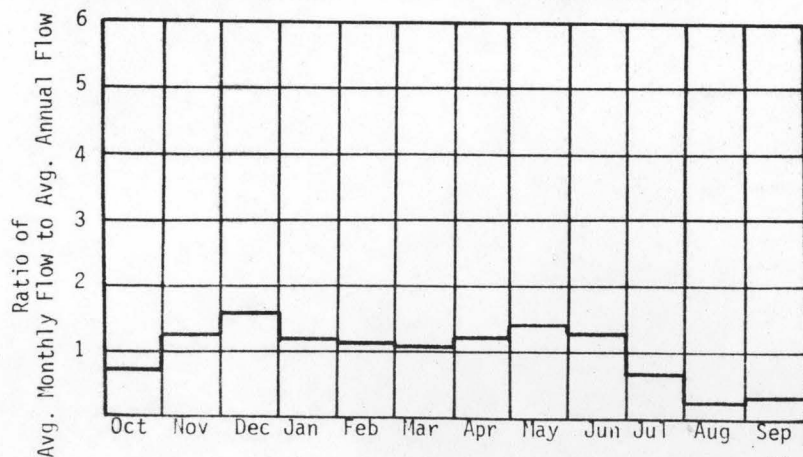
A. Upstream Elevation of Reach	<u>1260</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>760</u>	Ft. MSL
C. Total Available Head in Reach	<u>500 + 66 = 566</u>	Ft.
D. Average Slope in Reach	<u>171</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>17.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	6.8	0.33	2.85	1.00
80	18.9	0.9	7.29	0.92
50	56.6	2.71	17.6	0.74
30	88.3	4.23	22.9	0.62
10	160	7.67	28.9	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

OMR = 75 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0007

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R9E</u>
D. Latitude, Longitude	<u>47°20' 121°40'</u>
E. Stream Name	<u>Rex River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>0.0/4.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

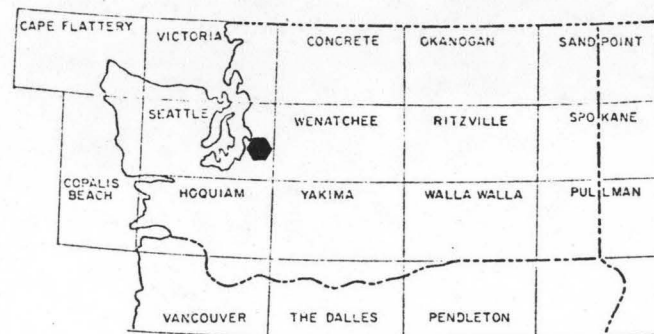
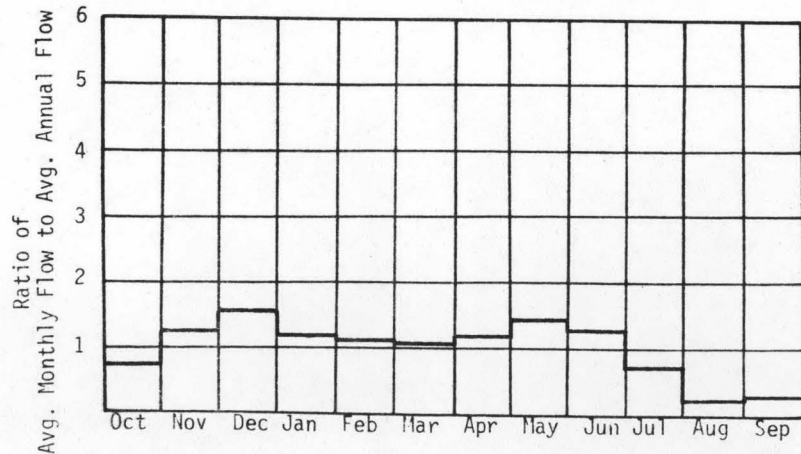
A. Upstream Elevation of Reach	<u>1740</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1540</u>	Ft. MSL
C. Total Available Head in Reach	<u>200</u>	Ft.
D. Average Slope in Reach	<u>42</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>25</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	9.09	0.15	1.35	1.00
80	24.2	0.41	3.31	0.92
50	68.7	1.16	7.54	0.74
30	118	2.00	10.5	0.60
10	217	3.68	13.2	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 101 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-021-000-000-000-R0008

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R9E</u>
D. Latitude, Longitude	<u>47°20' 121°40'</u>
E. Stream Name	<u>Rex River</u>
F. Major Basin Name	<u>Cedar</u>
G. River Mile	<u>3.3/4.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

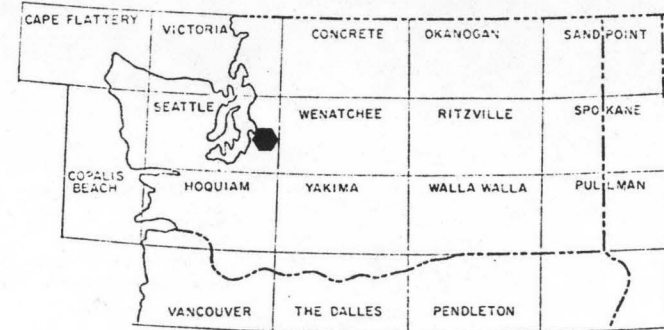
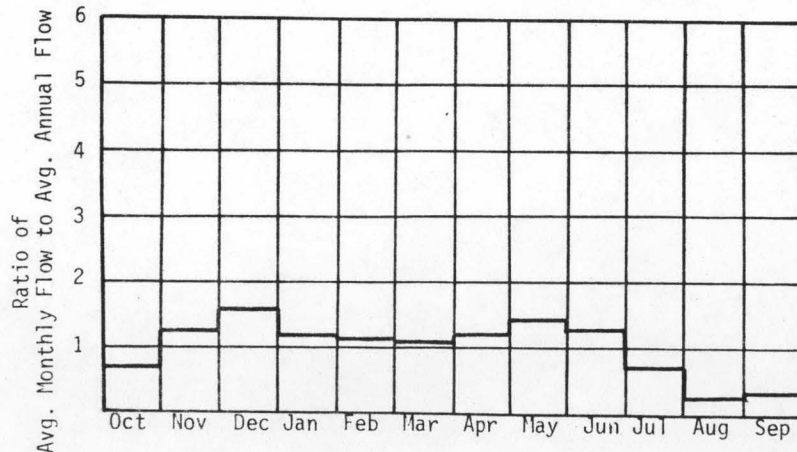
A. Upstream Elevation of Reach	<u>2000</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1740</u>	Ft. MSL
C. Total Available Head in Reach	<u>260 + 66 = 326</u>	Ft.
D. Average Slope in Reach	<u>173</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>9.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.3	0.29	2.5	1.00
80	27.6	0.76	6.14	0.92
50	78.2	2.16	14.0	0.74
30	135	3.71	19.5	0.60
10	247	6.82	24.5	0.41

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 115 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0001

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T22N R4E</u>
D. Latitude, Longitude	<u>47°24' 122°17'</u>
E. Stream Name	<u>Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>0.0/32.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

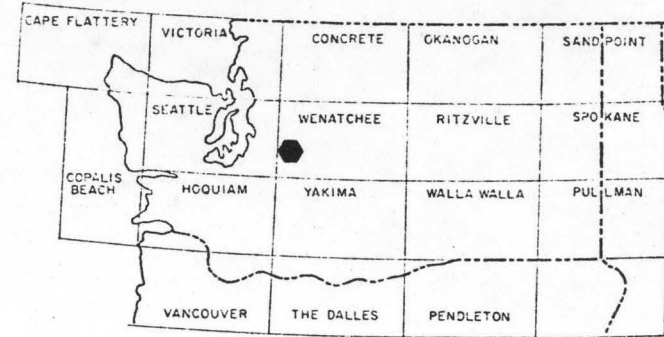
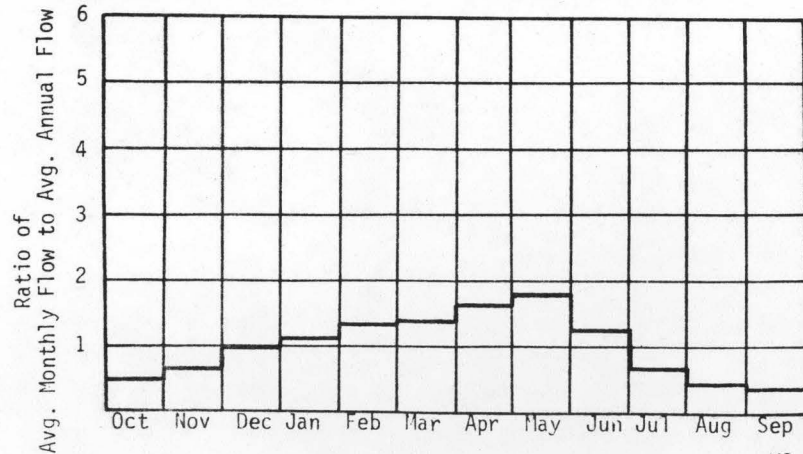
A. Upstream Elevation of Reach	<u>0</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>60</u>	Ft. MSL
C. Total Available Head in Reach	<u>60</u>	Ft.
D. Average Slope in Reach	<u>1.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>474.4</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

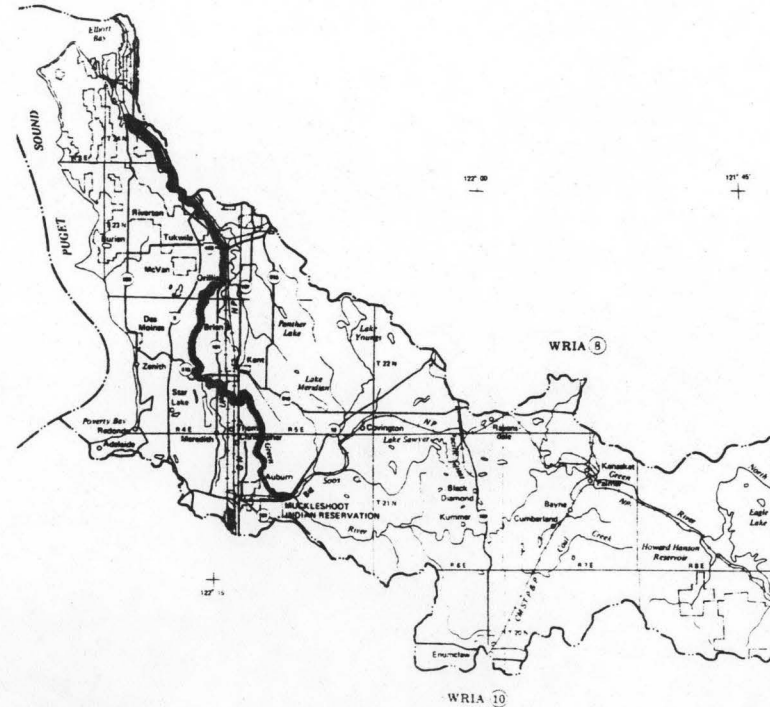
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	225	1.14	9.99	1.00
80	362	1.84	15.3	0.95
50	935	4.75	31.6	0.76
30	1460	7.41	40.9	0.63
10	2580	13.1	50.3	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1247 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0002

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T21N R5E</u>
D. Latitude, Longitude	<u>47°16' 122°07'</u>
E. Stream Name	<u>Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>32.6/39.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

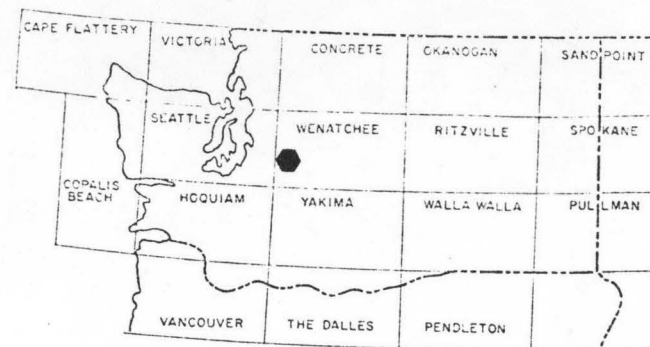
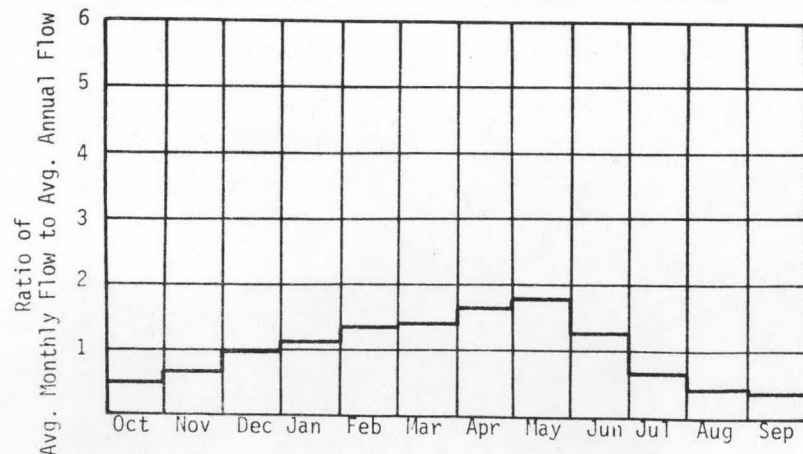
A. Upstream Elevation of Reach	<u>170</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>60</u>	Ft. MSL
C. Total Available Head in Reach	<u>110</u>	Ft.
D. Average Slope in Reach	<u>16.2</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>321.6</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	116	1.08	9.46	1.00
80	232	2.16	17.8	0.94
50	769	7.16	45.8	0.73
30	1280	11.9	62.4	0.60
10	2300	21.4	78.7	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 1054 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0003

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T21N R7E</u>
D. Latitude, Longitude	<u>47°19' 121°56'</u>
E. Stream Name	<u>Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>39.4/61.9</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

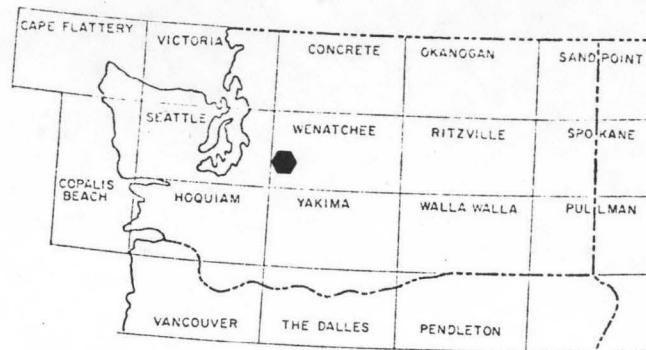
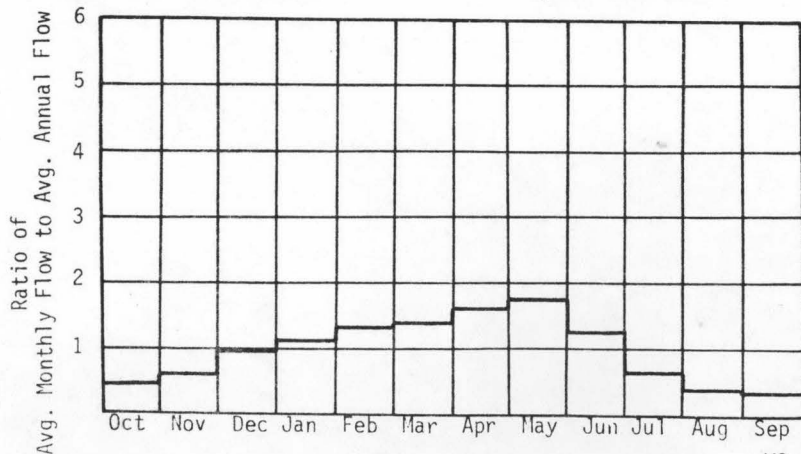
A. Upstream Elevation of Reach	<u>965</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>170</u>	Ft. MSL
C. Total Available Head in Reach	<u>795</u>	Ft.
D. Average Slope in Reach	<u>35.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>281.5</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	179	12.1	106	1.00
80	264	17.8	150	0.96
50	642	43.2	291	0.77
30	1040	69.9	386	0.63
10	1980	133	491	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 944 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T21N R8E</u>
D. Latitude, Longitude	<u>47°17' 121°48'</u>
E. Stream Name	<u>Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>61.9/63.3</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

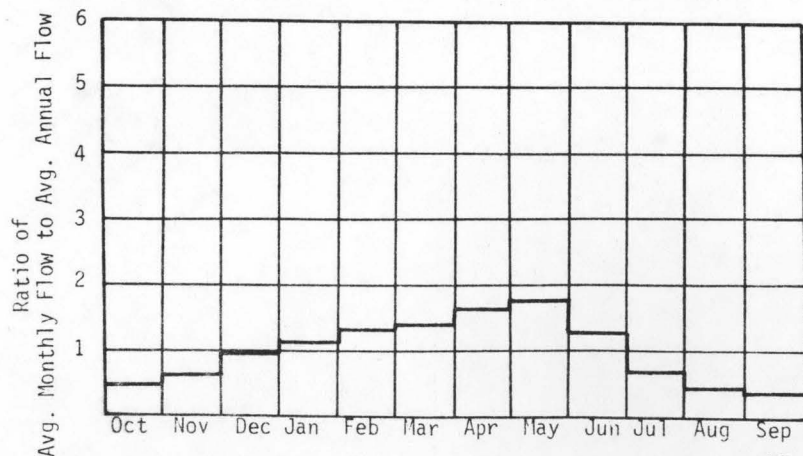
A. Upstream Elevation of Reach	<u>1140</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>965</u>	Ft. MSL
C. Total Available Head in Reach	<u>175</u>	Ft.
D. Average Slope in Reach	<u>125.0</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>222.8</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated</u>	

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

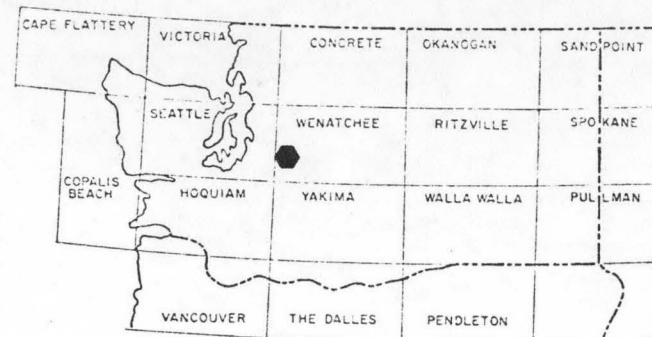
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	168	2.49	21.8	1.00
80	247	3.66	30.8	0.96
50	600	8.89	60.0	0.77
30	971	14.4	79.4	0.63
10	1850	27.5	101	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 883 cfs



W9-380



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0005

### I. LOCATION

A. State Washington  
 B. County King  
 C. Township, Range T20N R9E  
 D. Latitude, Longitude 47°44' 121°39'  
 E. Stream Name Green River  
 F. Major Basin Name Green  
 G. River Mile 70.1/75.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

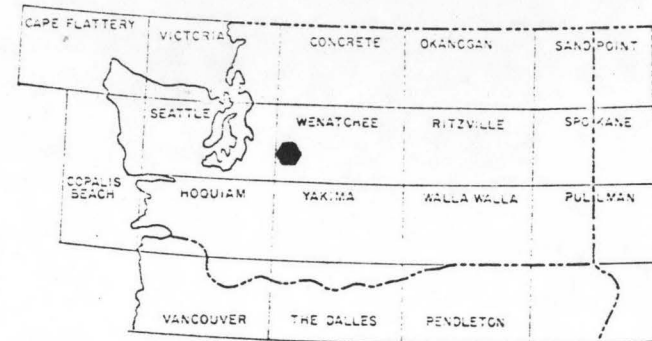
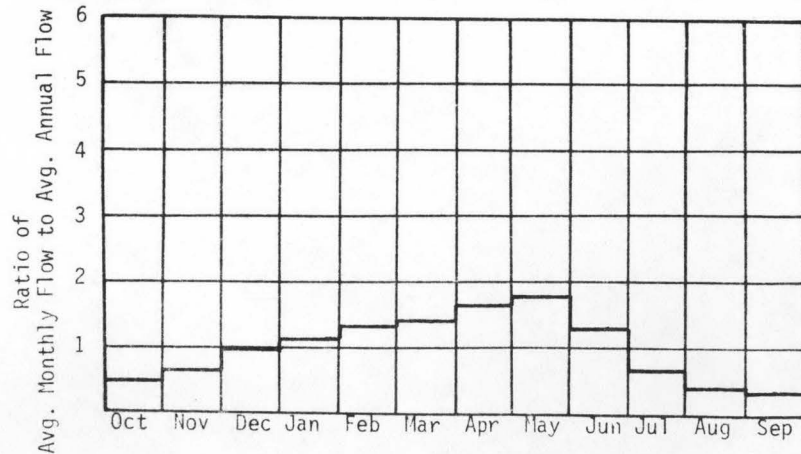
A. Upstream Elevation of Reach 1350 Ft. MSL  
 B. Downstream Elevation of Reach 1200 Ft. MSL  
 C. Total Available Head in Reach 150 Ft.  
 D. Average Slope in Reach 27.8 Ft./Mi.  
 E. Drainage Area above Reach Mouth 157.6 Sq.Mi.  
 F. Inflow Classification Natural

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

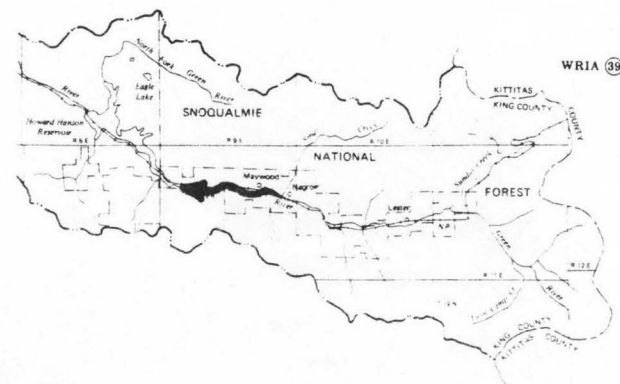
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	53.6	0.68	5.96	1.00
80	107	1.36	11.2	0.94
50	348	4.42	28.3	0.73
30	594	7.55	39.6	0.60
10	1230	15.6	53.2	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 535.5 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0006

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T20N R10E</u>
D. Latitude, Longitude	<u>47°13' 121°35'</u>
E. Stream Name	<u>Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>75.5/80.0</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

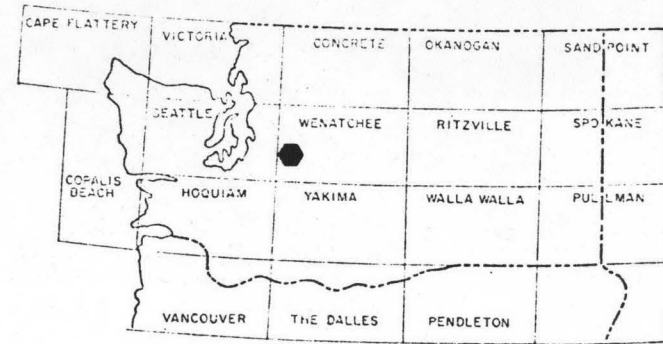
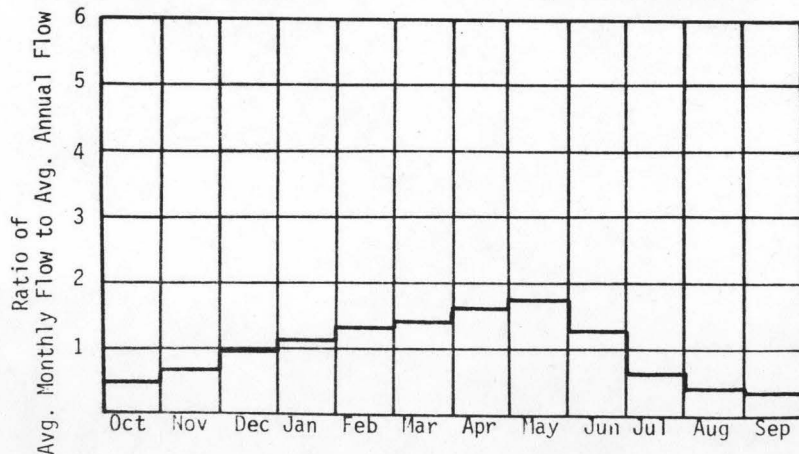
A. Upstream Elevation of Reach	<u>1510</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1350</u>	Ft. MSL
C. Total Available Head in Reach	<u>160</u>	Ft.
D. Average Slope in Reach	<u>35.6</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>113.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	36.4	0.49	4.32	1.00
80	72.8	0.99	8.12	0.94
50	236	3.20	20.5	0.73
30	404	54.7	288	0.60
10	834	11.3	386	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

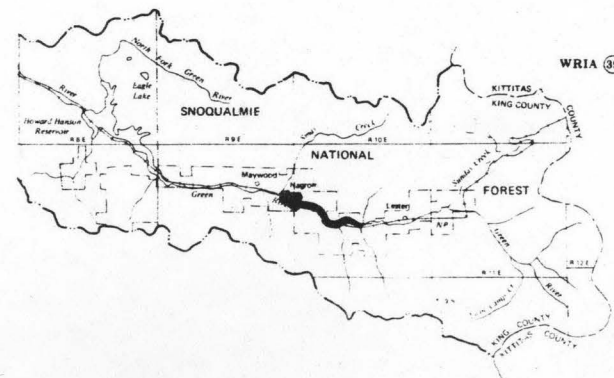
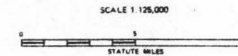
QMR = 364 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



WATER RESOURCE INVENTORY AREA 39



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0007

### I. LOCATION

A. State	Washington
B. County	King
C. Township, Range	T20N R10E
D. Latitude, Longitude	47°13' 121°30'
E. Stream Name	Green River
F. Major Basin Name	Green
G. River Mile	80.0/83.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

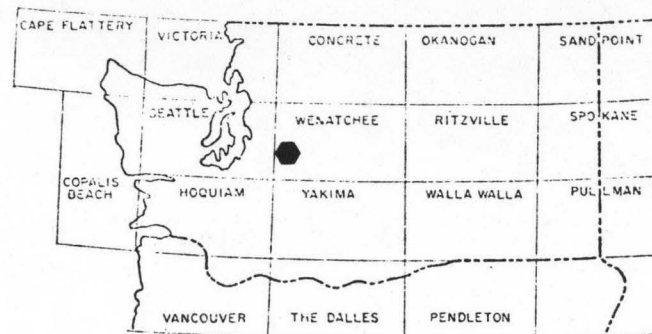
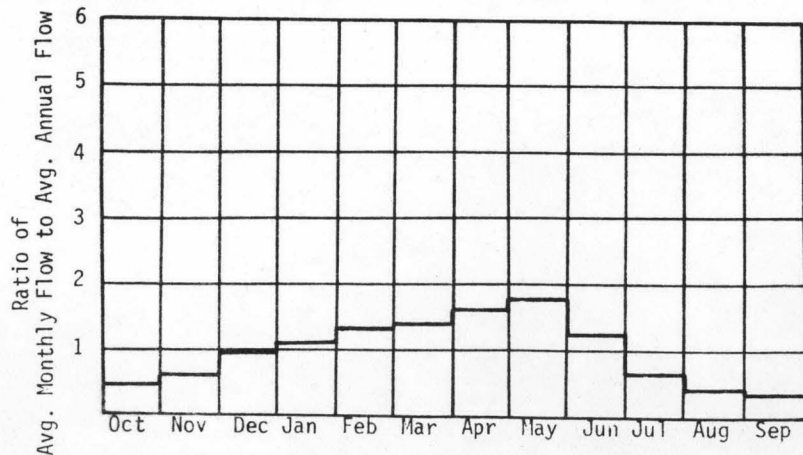
A. Upstream Elevation of Reach	1650	Ft. MSL
B. Downstream Elevation of Reach	1510	Ft. MSL
C. Total Available Head in Reach	140	Ft.
D. Average Slope in Reach	36.8	Ft./Mi.
E. Drainage Area above Reach Mouth	87.8	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	28.7	0.340	2.97	1.00
80	57.3	0.680	5.59	0.94
50	186	2.21	14.1	0.73
30	318	3.77	19.8	0.60
10	656	7.77	26.6	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 286.5 cfs

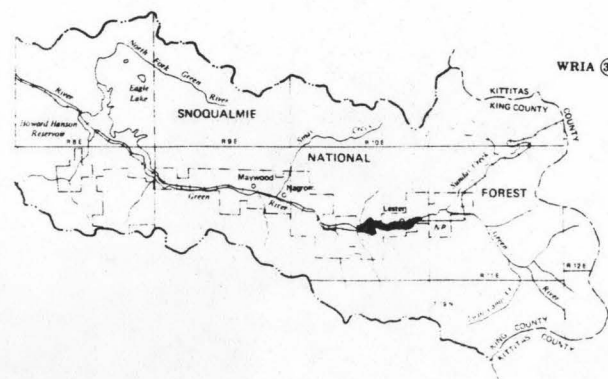


LOCATIONS FOR USGS 1:250,000 MAP SERIES

121° 45'                      121° 30'

WATER RESOURCE INVENTORY AREA 9

SCALE 1:125,000



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0008

### I. LOCATION

A. State	Washington
B. County	King
C. Township, Range	T20N R11E
D. Latitude, Longitude	47°13' 121°27'
E. Stream Name	Green River
F. Major Basin Name	Green
G. River Mile	83.8/84.9

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

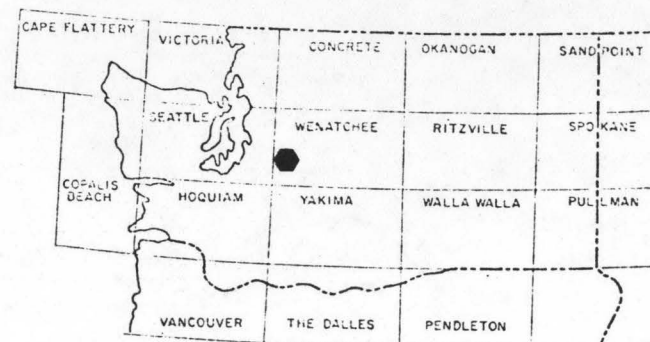
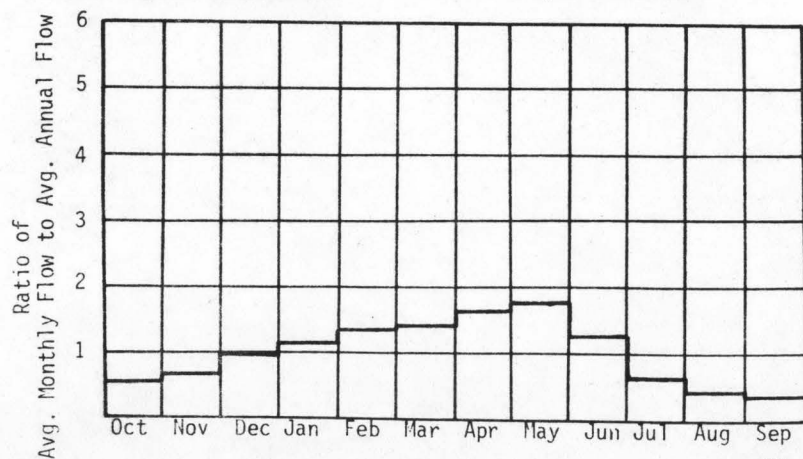
A. Upstream Elevation of Reach	1700	Ft. MSL
B. Downstream Elevation of Reach	1650	Ft. MSL
C. Total Available Head in Reach	50	Ft.
D. Average Slope in Reach	45.5	Ft./Mi.
E. Drainage Area above Reach Mouth	75.6	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	24.2	0.100	0.900	1.00
80	48.4	0.200	1.69	0.94
50	157	0.670	4.26	0.73
30	269	1.14	5.98	0.60
10	554	2.35	8.01	0.39

### IV. TYPICAL ANNUAL HYDROGRAPH

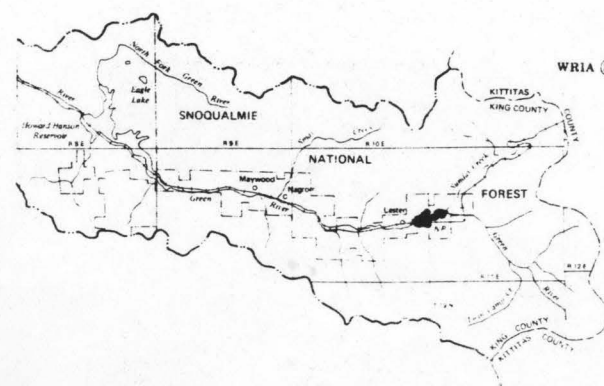
QMR = 242 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



WATER RESOURCE INVENTORY AREA 39



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0009

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T20N R11E</u>
D. Latitude, Longitude	<u>47°12' 121°25'</u>
E. Stream Name	<u>Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>84.9/89.2</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

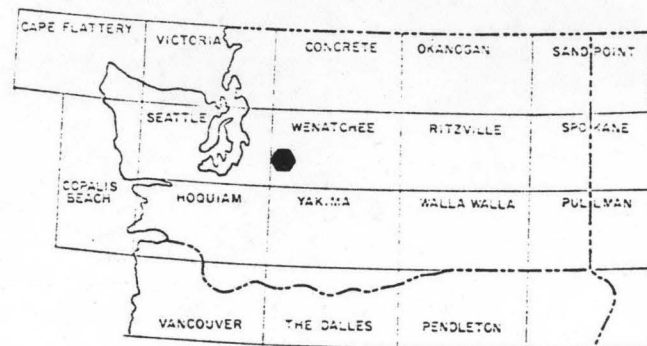
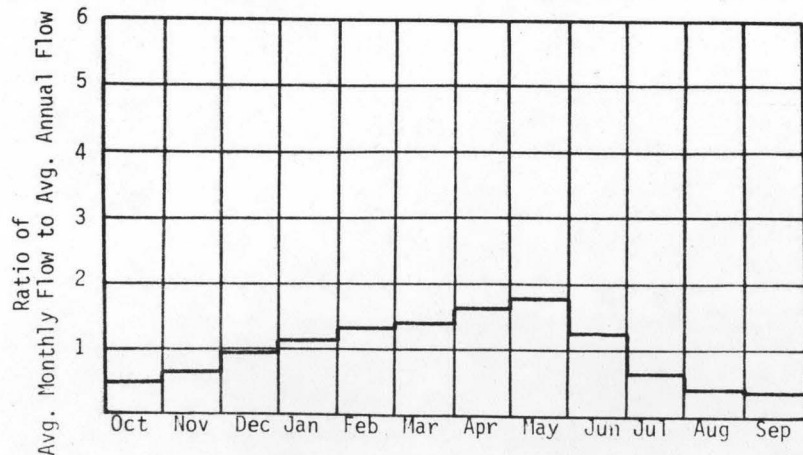
A. Upstream Elevation of Reach	<u>2060</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1700</u>	Ft. MSL
C. Total Available Head in Reach	<u>360 + 66 = 426</u>	Ft.
D. Average Slope in Reach	<u>83.7</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>36.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.5	0.38	3.30	1.00
80	20.0	0.72	5.92	0.94
50	58.0	2.09	13.5	0.74
30	104	3.73	19.3	0.59
10	229	8.25	26.7	0.37

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 95 cfs



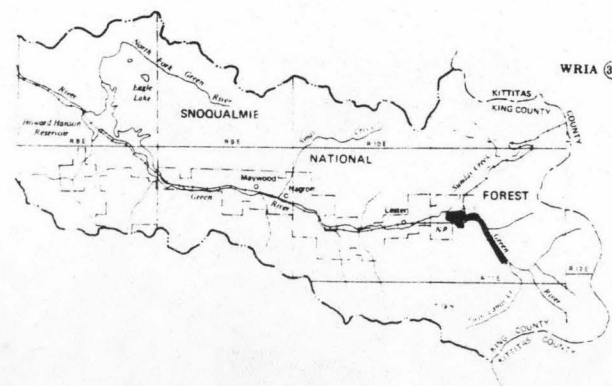
LOCATIONS FOR USGS 1:250,000 MAP SERIES

121° 40'      121° 30'

WATER RESOURCE INVENTORY AREA ⑨

SCALE 1:125,000

0 5 10  
STATUTE MILES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0010

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T21N R5E</u>
D. Latitude, Longitude	<u>47°18' 122°09'</u>
E. Stream Name	<u>Big Soos Creek</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>0.0/3.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

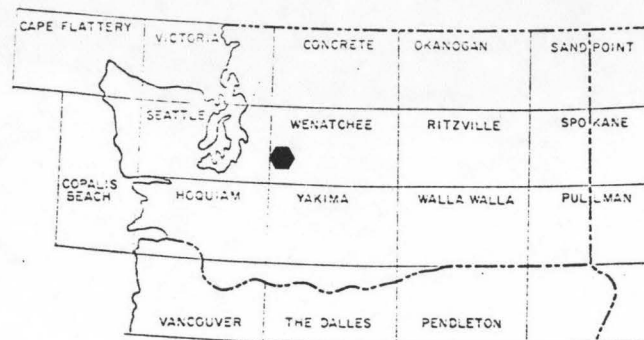
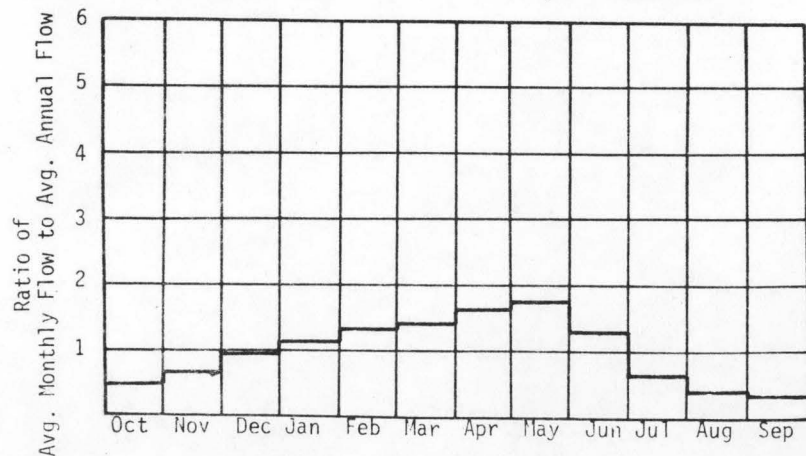
A. Upstream Elevation of Reach	<u>175</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>50</u>	Ft. MSL
C. Total Available Head in Reach	<u>125 + 66 = 191</u>	Ft.
D. Average Slope in Reach	<u>40.3</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>68.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

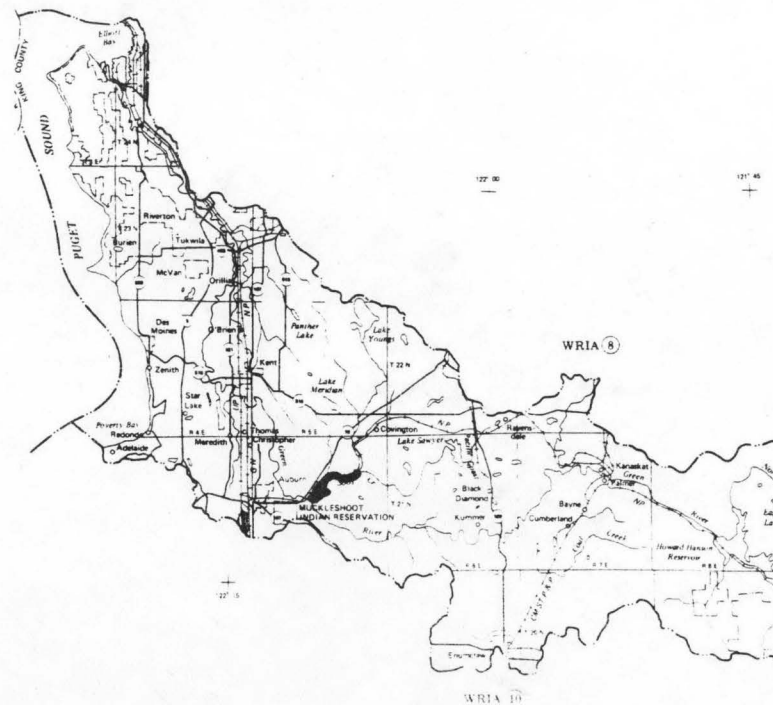
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.2	0.360	3.14	1.00
80	29.9	0.480	4.11	0.97
50	69.5	1.12	7.58	0.77
30	120	1.93	10.5	0.62
10	270	3.34	12.9	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 96.5 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0011

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T21N R8E</u>
D. Latitude, Longitude	<u>47°19' 121°45'</u>
E. Stream Name	<u>N.F. Green River</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>0.0/6.4</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

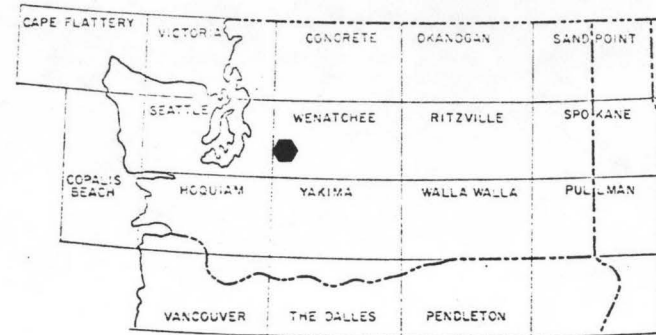
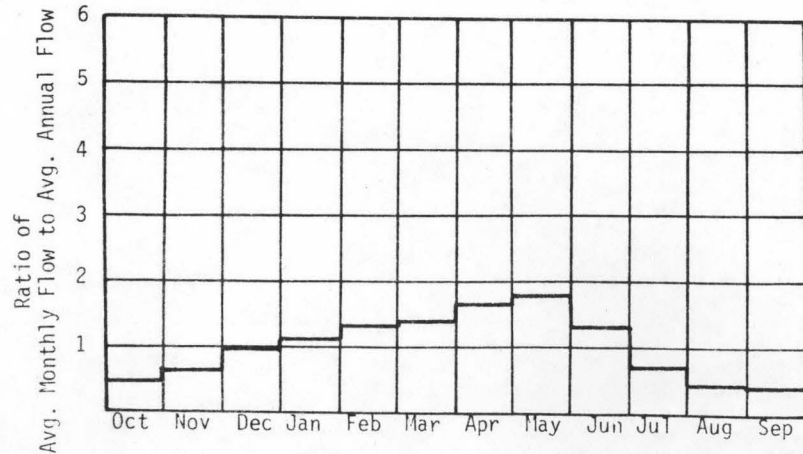
A. Upstream Elevation of Reach	<u>2070</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1140</u>	Ft. MSL
C. Total Available Head in Reach	<u>930 + 66 = 996</u>	Ft.
D. Average Slope in Reach	<u>143.8</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>28.0</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	7.24	0.61	5.34	1.00
80	21.7	1.83	14.8	0.92
50	67.0	5.64	36.1	0.73
30	105	8.85	47.3	0.61
10	190	16.0	58.9	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 90.5 cfs

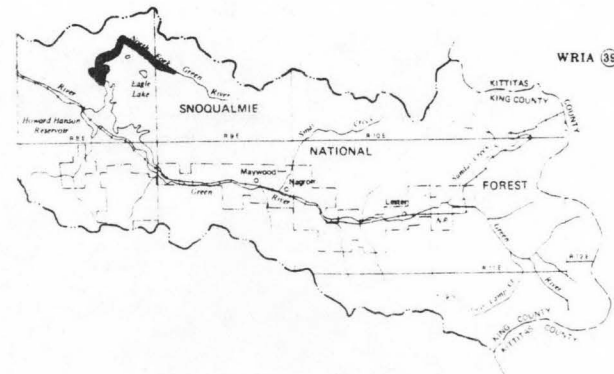


LOCATIONS FOR USGS 1:250,000 MAP SERIES

121° 45'      121° 30'

WATER RESOURCE INVENTORY AREA ⑨

SCALE 1:125,000



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0012

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T20N R8E</u>
D. Latitude, Longitude	<u>47°15' 121°47'</u>
E. Stream Name	<u>Charley Creek</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>0.0/2.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

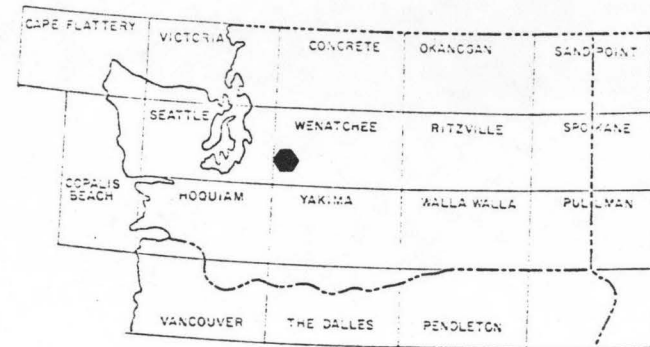
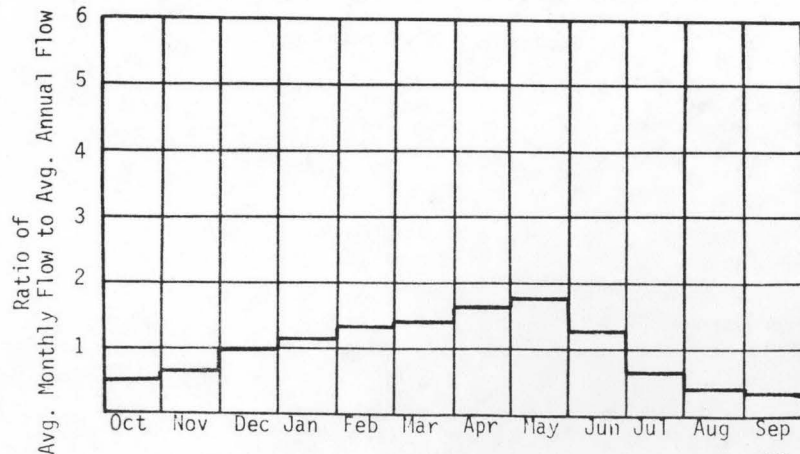
A. Upstream Elevation of Reach	<u>1600</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1140</u>	Ft. MSL
C. Total Available Head in Reach	<u>460 + 66 = 526</u>	Ft.
D. Average Slope in Reach	<u>177</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>12.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.9	0.530	4.64	1.00
80	21.7	0.970	7.96	0.94
50	50.4	2.24	15.1	0.77
30	82.6	3.68	20.3	0.63
10	144	6.45	24.9	0.44

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 70 cfs

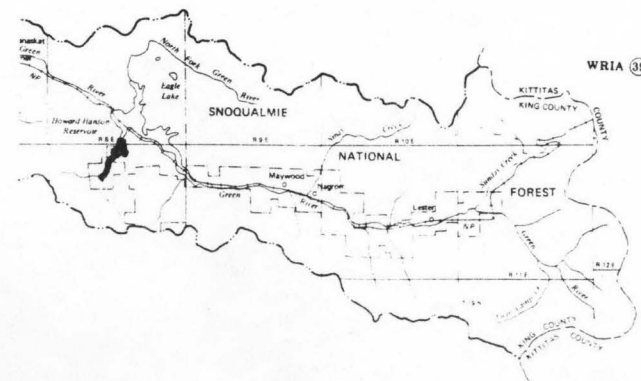


LOCATIONS FOR USGS 1:250,000 MAP SERIES

121° 45'      121° 30'

WATER RESOURCE INVENTORY AREA ⑨

SCALE 1:125,000





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0013

### I. LOCATION

A. State	Washington
B. County	King
C. Township, Range	T20N R10E
D. Latitude, Longitude	47°15' 121°35'
E. Stream Name	Smay Creek
F. Major Basin Name	Green
G. River Mile	0.0/3.7

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

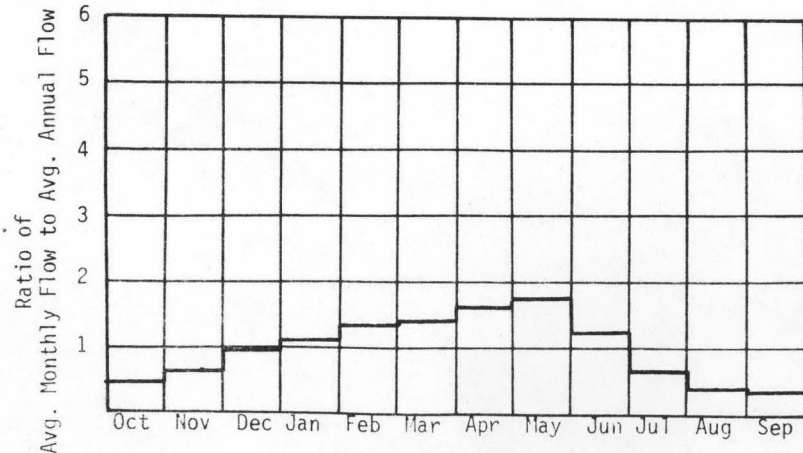
A. Upstream Elevation of Reach	2080	Ft. MSL
B. Downstream Elevation of Reach	1350	Ft. MSL
C. Total Available Head in Reach	730 + 66 = 796	Ft.
D. Average Slope in Reach	197.3	Ft./Mi.
E. Drainage Area above Reach Mouth	23.0	Sq.Mi.
F. Inflow Classification	Natural	

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

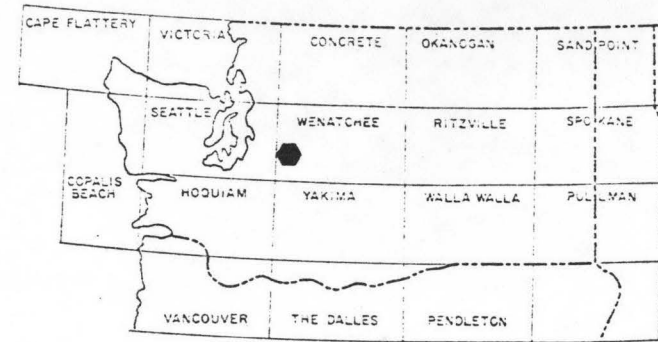
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	11.8	0.79	6.94	1.00
80	22.1	1.49	12.2	0.94
50	54.4	3.66	24.4	0.76
30	85.3	5.74	31.7	0.63
10	159	10.7	40.3	0.43

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 73.5 cfs



W9-389

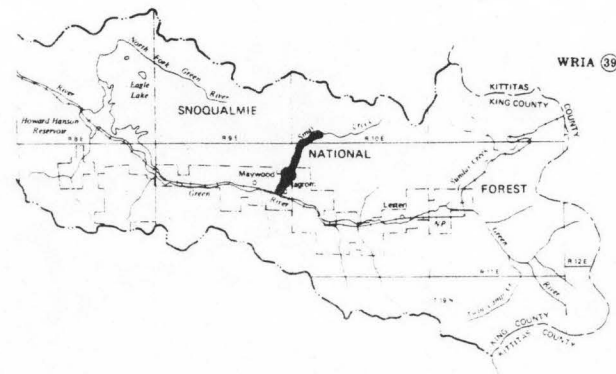


LOCATIONS FOR USGS 1:250,000 MAP SERIES

121° 45'                      121° 30'

WATER RESOURCE INVENTORY AREA ⑨

SCALE 1:125,000



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-028-000-000-000-R0014

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>King</u>
C. Township, Range	<u>T20N R11E</u>
D. Latitude, Longitude	<u>47°14' 121°25'</u>
E. Stream Name	<u>Sunday Creek</u>
F. Major Basin Name	<u>Green</u>
G. River Mile	<u>0.0/3.8</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

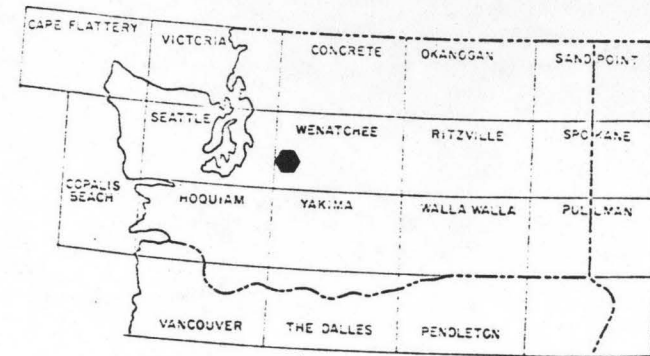
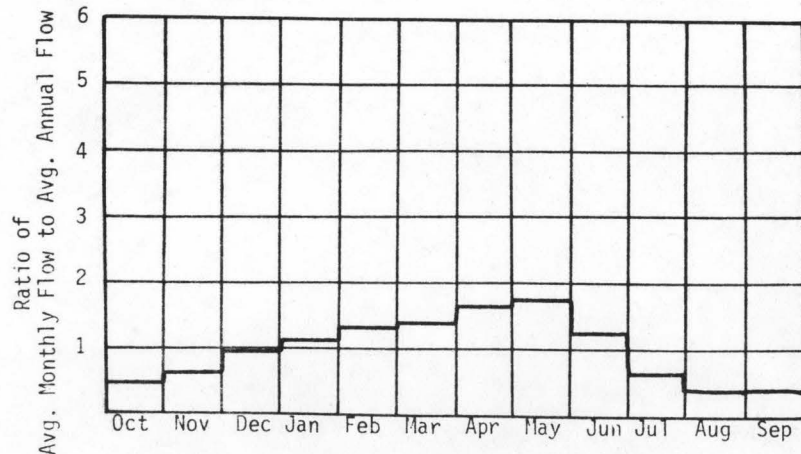
A. Upstream Elevation of Reach	<u>1920</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1700</u>	Ft. MSL
C. Total Available Head in Reach	<u>220 + 66 = 266</u>	Ft.
D. Average Slope in Reach	<u>57.9</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>24.6</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	9.75	0.240	2.07	1.00
80	19.5	0.470	3.85	0.93
50	59.5	1.44	9.21	0.73
30	111	2.69	13.7	0.58
10	226	5.48	18.2	0.38

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 97.5 cfs



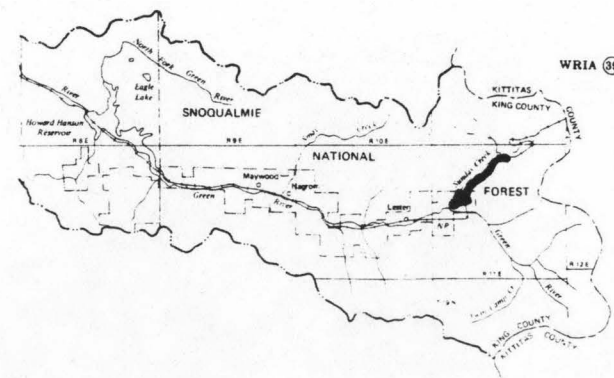
LOCATIONS FOR USGS 1:250,000 MAP SERIES

121° 45'                      121° 30'

WATER RESOURCE INVENTORY AREA 39

SCALE 1:125,000

0 5 10  
STATUTE MILES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0001

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T20N-R4E
D. Latitude, Longitude	47° 13' - 122° 20'
E. Stream Name	Puyallup
F. Major Basin Name	Puyallup
G. River Mile	0/10.3

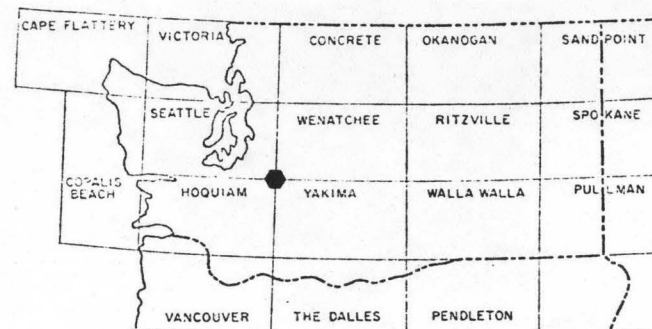
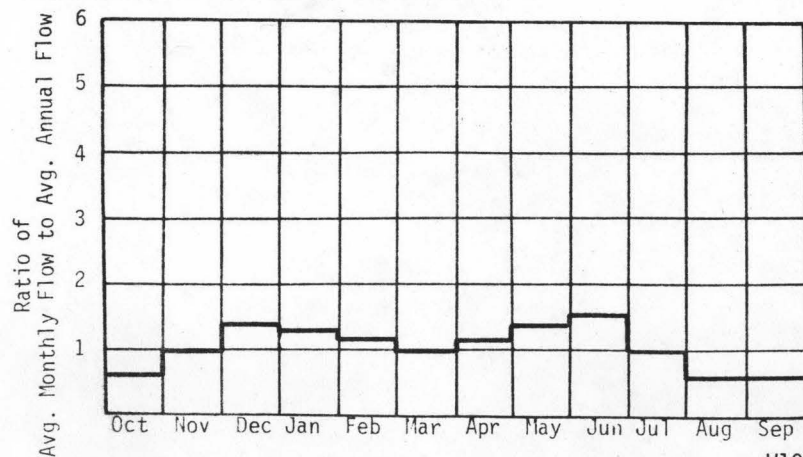
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	30	Ft. MSL
B. Downstream Elevation of Reach	0	Ft. MSL
C. Total Available Head in Reach	30	Ft.
D. Average Slope in Reach	2.9	Ft./Mi.
E. Drainage Area above Reach Mouth	948	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	1150	2.92	25.6	1.00
80	1740	4.42	37.1	0.96
50	2690	6.83	50.9	0.85
30	3580	9.08	58.9	0.74
10	5580	14.2	67.0	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 3282 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0002

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T19N-R4E
D. Latitude, Longitude	47° 10' - 122° 13'
E. Stream Name	Puyallup
F. Major Basin Name	Puyallup
G. River Mile	10.3/17.5

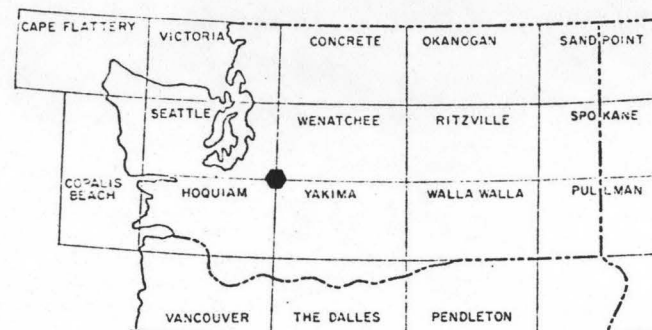
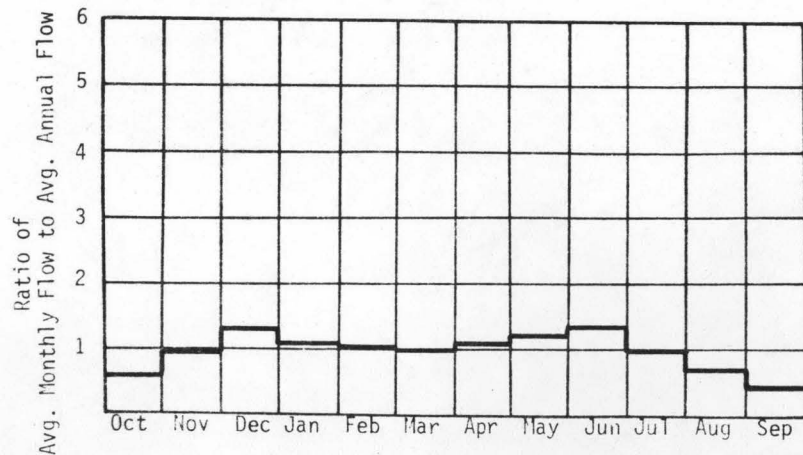
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	100	Ft. MSL
B. Downstream Elevation of Reach	30	Ft. MSL
C. Total Available Head in Reach	70	Ft.
D. Average Slope in Reach	9.7	Ft./Mi.
E. Drainage Area above Reach Mouth	430	Sq.Mi.
F. Inflow Classification	Natural	

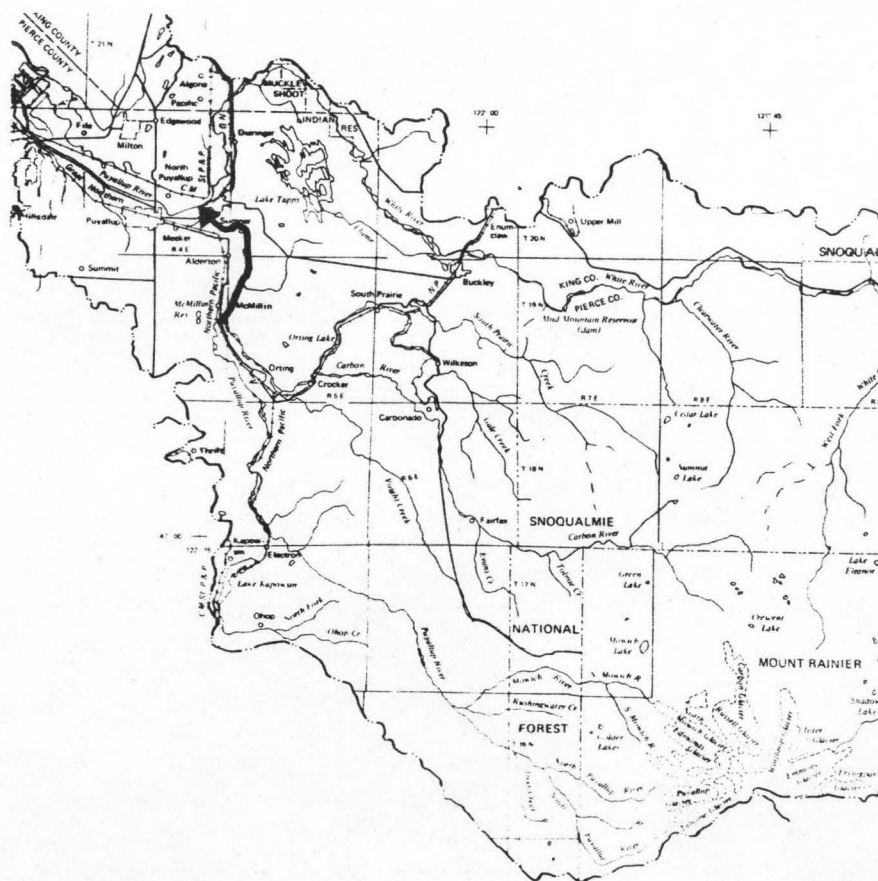
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	838	4.96	43.5	1.00
80	1270	7.51	63.2	0.96
50	1960	11.6	59.1	0.85
30	2610	15.5	100	0.74
10	4070	24.1	114	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 2393 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0003

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T18N - R5E
D. Latitude, Longitude	47° 04' - 122° 12'
E. Stream Name	Puyallup
F. Major Basin Name	Puyallup
G. River Mile	17.5/31.8

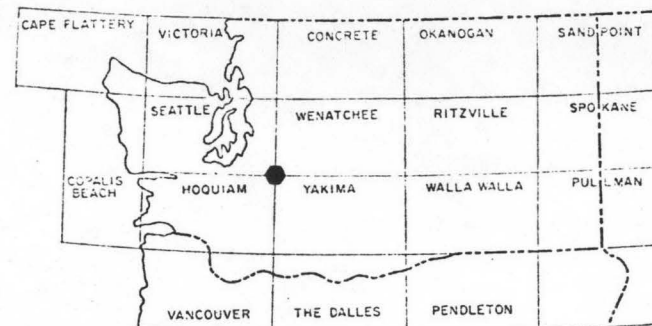
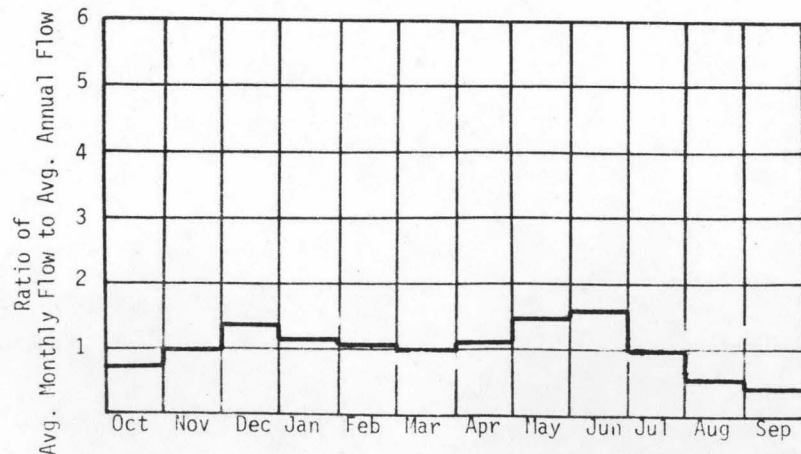
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	640	Ft. MSL
B. Downstream Elevation of Reach	110	Ft. MSL
C. Total Available Head in Reach	530	Ft.
D. Average Slope in Reach	37	Ft./Mi.
E. Drainage Area above Reach Mouth	410	Sq.Mi.
F. Inflow Classification	Natural	

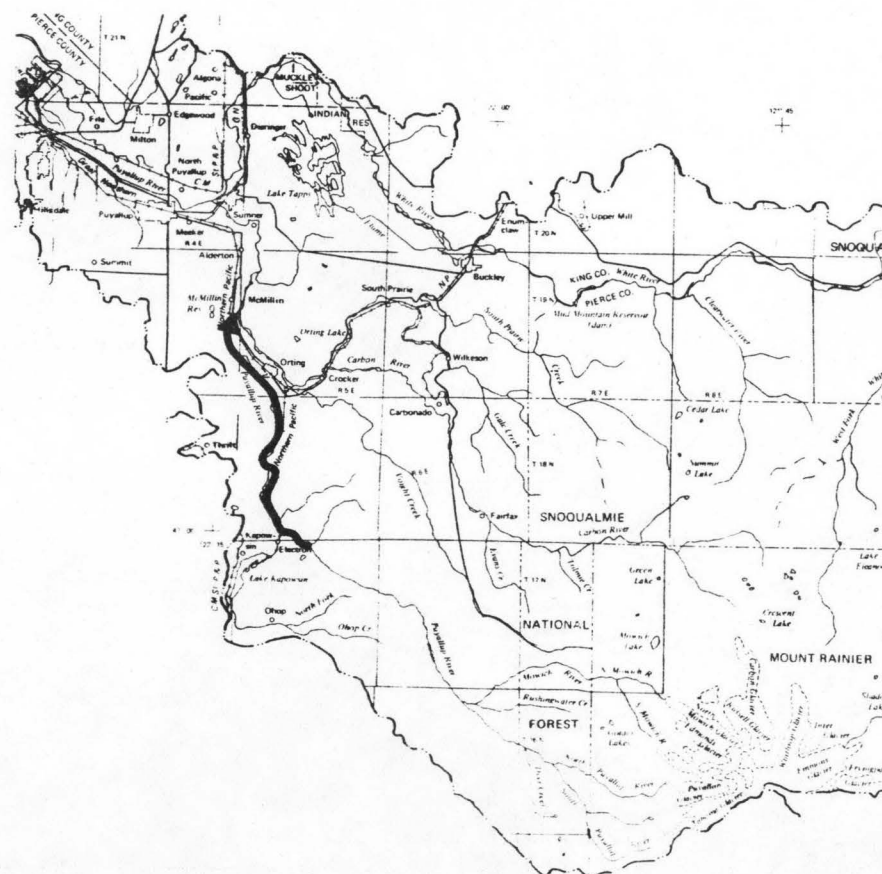
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	386	17.3	152	1.00
80	579	26.0	218	0.96
50	879	39.4	297	0.86
30	1170	52.4	340	0.74
10	1780	80.3	387	0.55

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 1072 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0004

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T17N - R6E</u>
D. Latitude, Longitude	<u>46° 57' - 122° 04'</u>
E. Stream Name	<u>Puyallup</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>31.8/41.6</u>

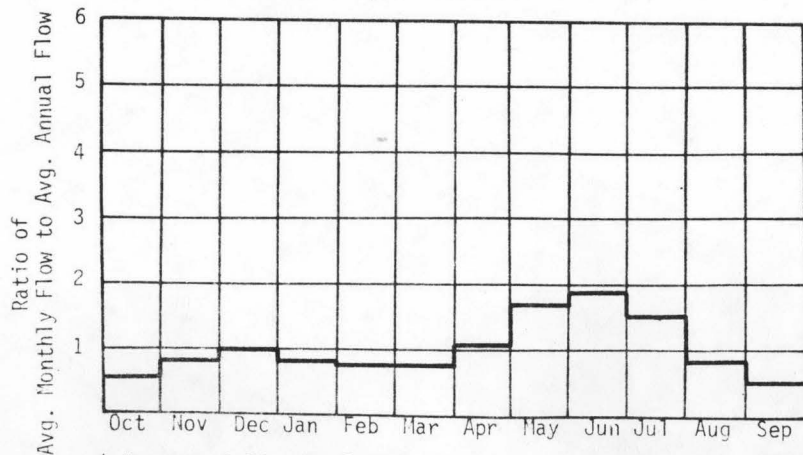
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>1620</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>640</u>	Ft. MSL
C. Total Available Head in Reach	<u>980</u>	Ft.
D. Average Slope in Reach	<u>100</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>132.6</u>	Sq.Mi.
F. Inflow Classification	<u>Regulated by Diversion*</u>	

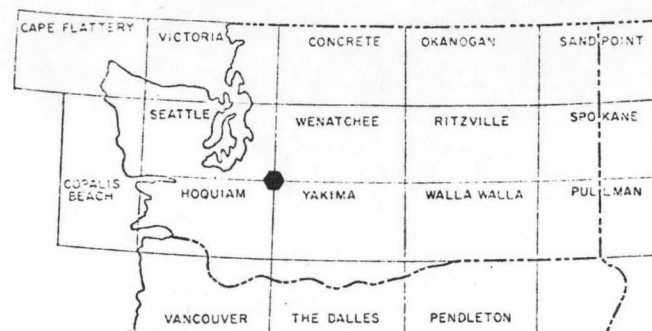
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	194	16.1	141	1.00
80	281	23.3	196	0.96
50	454	37.6	277	0.84
30	616	51.1	322	0.72
10	940	77.9	369	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 540 cfs



\* Now partially developed.



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0005

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T16N - R6E</u>
D. Latitude, Longitude	<u>46° 53' - 121° 59'</u>
E. Stream Name	<u>Puyallup</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>42.2/45.5</u>

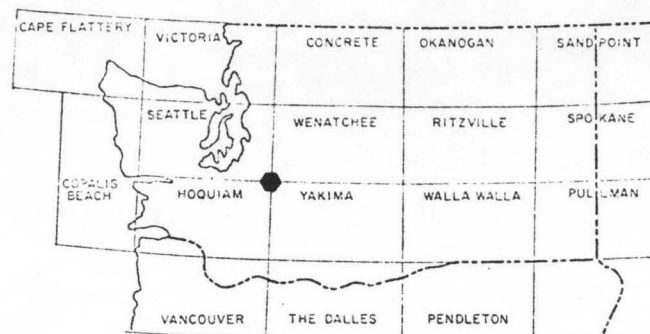
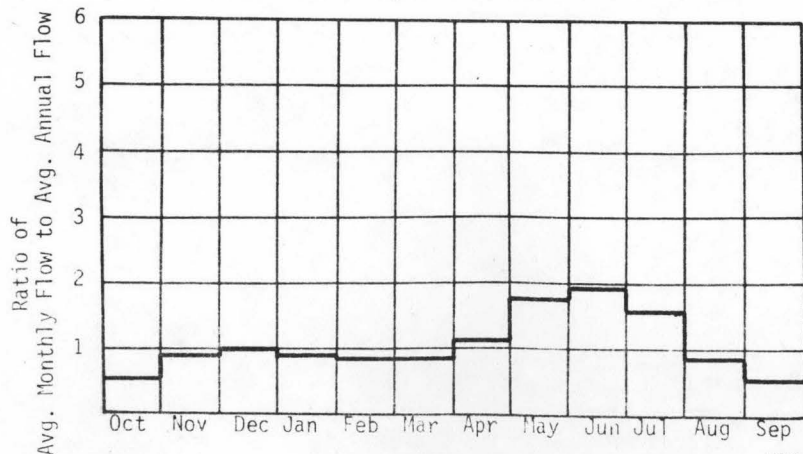
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>2050</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1678</u>	Ft. MSL
C. Total Available Head in Reach	<u>372</u>	Ft.
D. Average Slope in Reach	<u>113</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>51.5</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

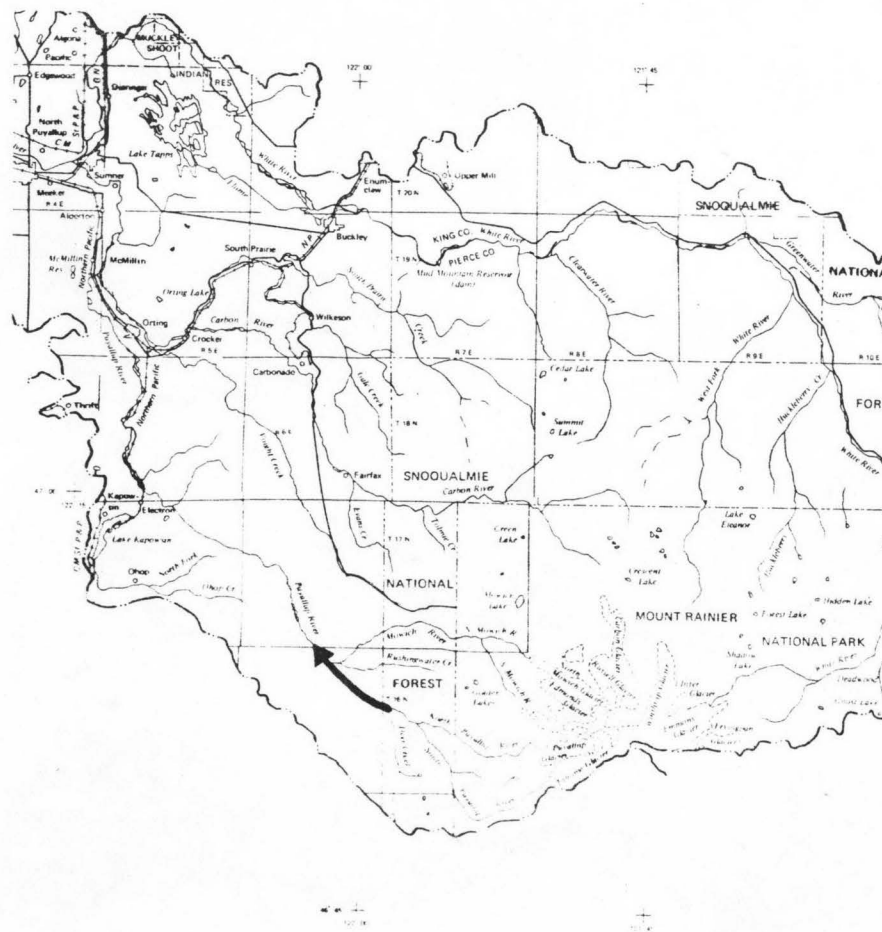
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	78.1	2.46	21.5	1.00
80	113	3.55	29.9	0.96
50	182	5.74	42.2	0.84
30	247	7.79	49.1	0.72
10	378	11.9	56.2	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 217 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0006

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T16N - R7E
D. Latitude, Longitude	46° 52' - 121° 58'
E. Stream Name	Puyallup
F. Major Basin Name	Puyallup
G. River Mile	45.5/46.8

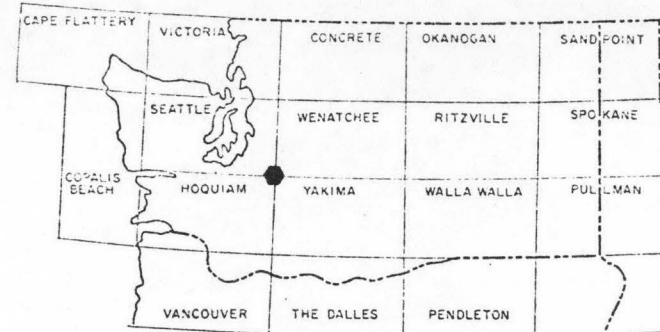
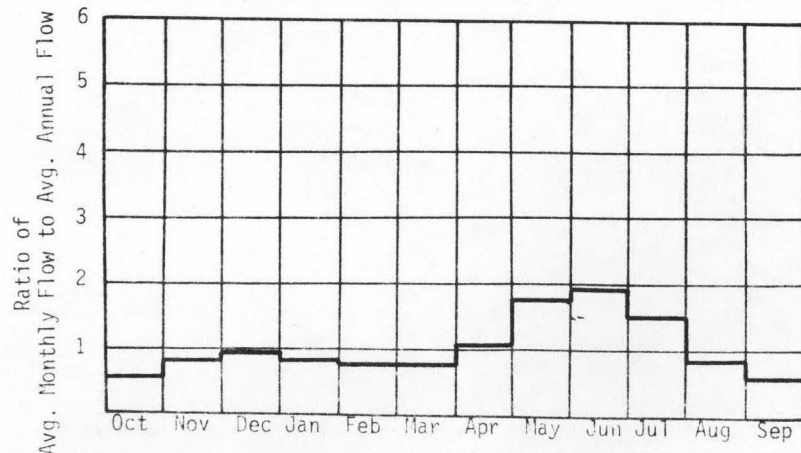
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2250	Ft. MSL
B. Downstream Elevation of Reach	2050	Ft. MSL
C. Total Available Head in Reach	200	Ft.
D. Average Slope in Reach	154	Ft./Mi.
E. Drainage Area above Reach Mouth	45.9	Sq.Mi.
F. Inflow Classification	Natural	

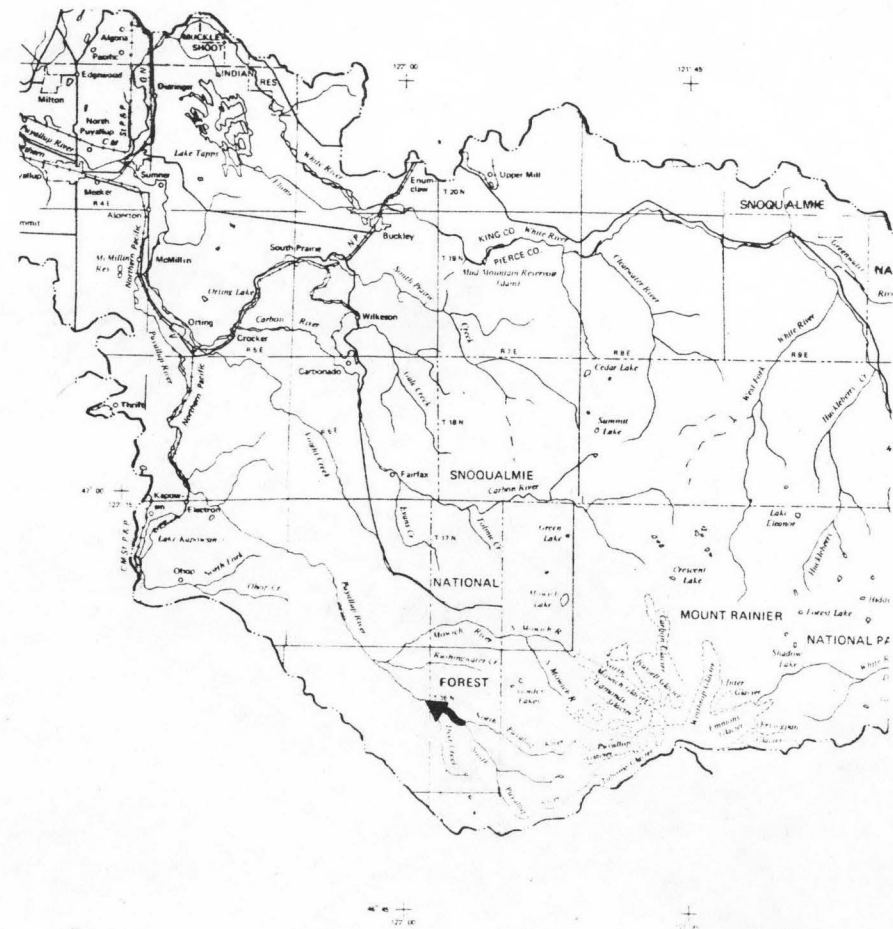
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	62.6	1.06	9.29	1.00
80	90.5	1.53	12.9	0.96
50	146	2.47	18.2	0.84
30	198	3.36	21.2	0.72
10	303	5.13	24.2	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH      QMR = 174 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0007

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T20N - R4E
D. Latitude, Longitude	47° 13' - 122° 14'
E. Stream Name	White
F. Major Basin Name	Puyallup
G. River Mile	0/3.8

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

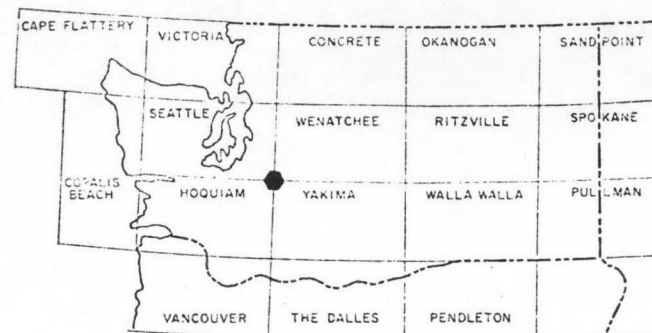
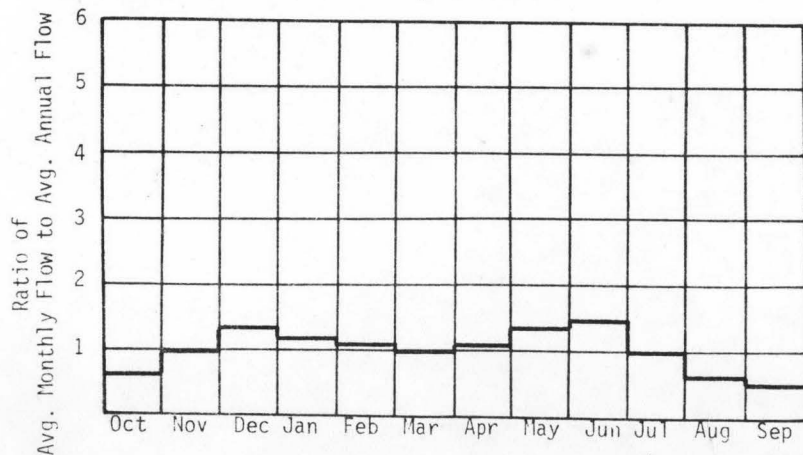
A. Upstream Elevation of Reach	60	Ft. MSL
B. Downstream Elevation of Reach	30	Ft. MSL
C. Total Available Head in Reach	30	Ft.
D. Average Slope in Reach	8	Ft./Mi.
E. Drainage Area above Reach Mouth	494	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	587	1.49	13.1	1.00
80	889	2.26	19.0	0.96
50	1380	3.49	26.0	0.85
30	1828	4.64	30.1	0.74
10	2850	7.24	34.2	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR=1677 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0008

### I. LOCATION

A. State	Washington
B. County	Pierce and King
C. Township, Range	T20N - R5E
D. Latitude, Longitude	47° 13' - 122° 07'
E. Stream Name	White
F. Major Basin Name	Puyallup
G. River Mile	3.8/24.0

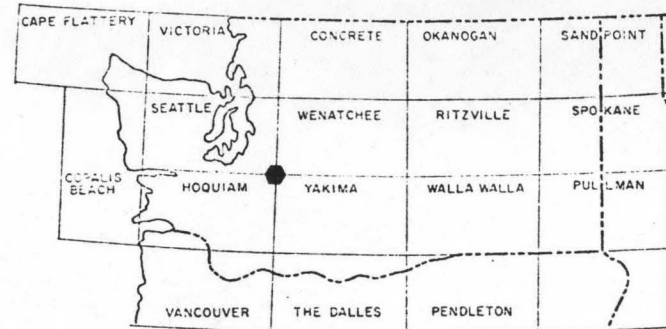
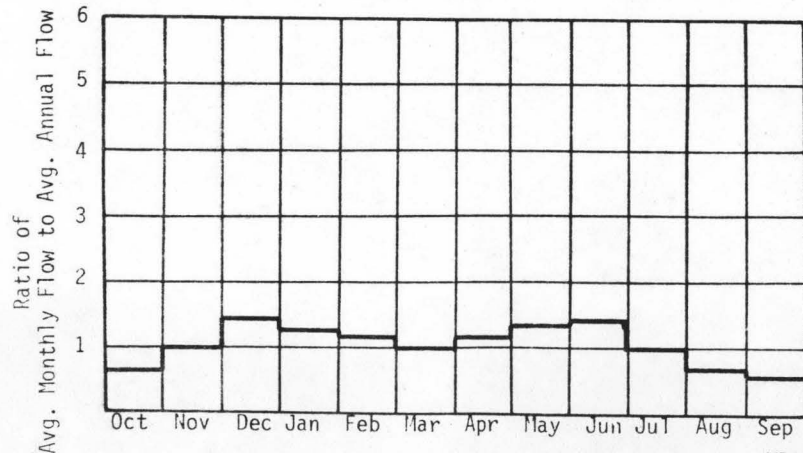
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	660	Ft. MSL
B. Downstream Elevation of Reach	60	Ft. MSL
C. Total Available Head in Reach	600	Ft.
D. Average Slope in Reach	30	Ft./Mi.
E. Drainage Area above Reach Mouth	470	Sq.Mi.
F. Inflow Classification	Regulated by Diversion	

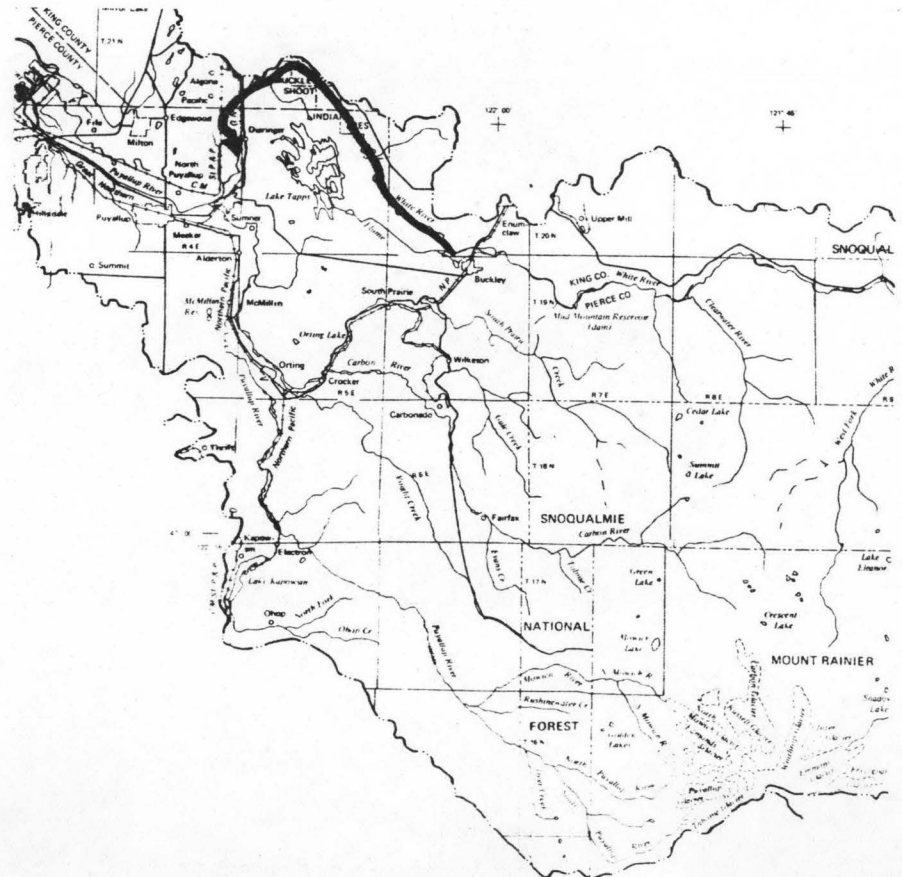
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	521	26.5	232	1.00
80	758	38.5	324	0.96
50	1300	65.8	478	0.83
30	1810	92.5	566	0.70
10	3000	152.0	668	0.50

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 1580 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0009

### I. LOCATION

A. State	Washington
B. County	Pierce and King
C. Township, Range	T19 - R6E
D. Latitude, Longitude	47° 10' - 121° 59'
E. Stream Name	White River
F. Major Basin Name	Puyallup
G. River Mile	24.0/28.0

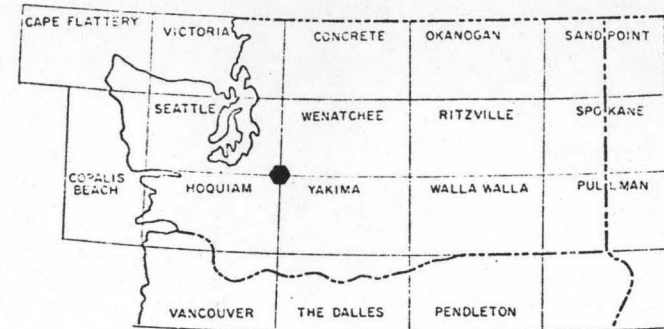
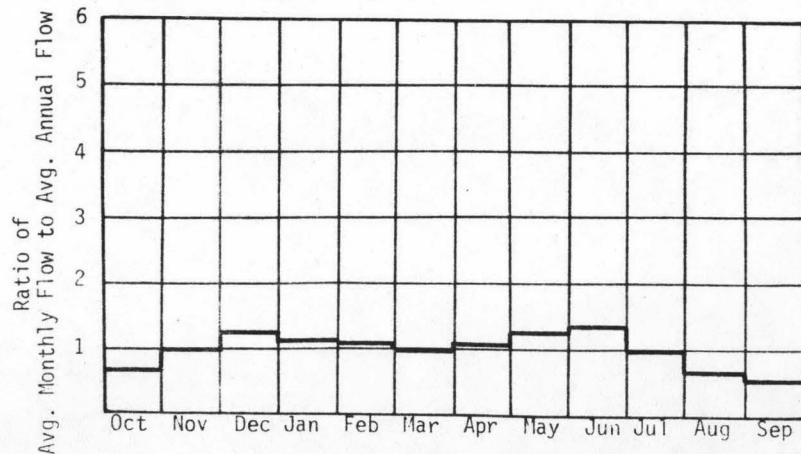
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	800	Ft. MSL
B. Downstream Elevation of Reach	660	Ft. MSL
C. Total Available Head in Reach	140	Ft.
D. Average Slope in Reach	35	Ft./Mi.
E. Drainage Area above Reach Mouth	426	Sq.Mi.
F. Inflow Classification	Natural	

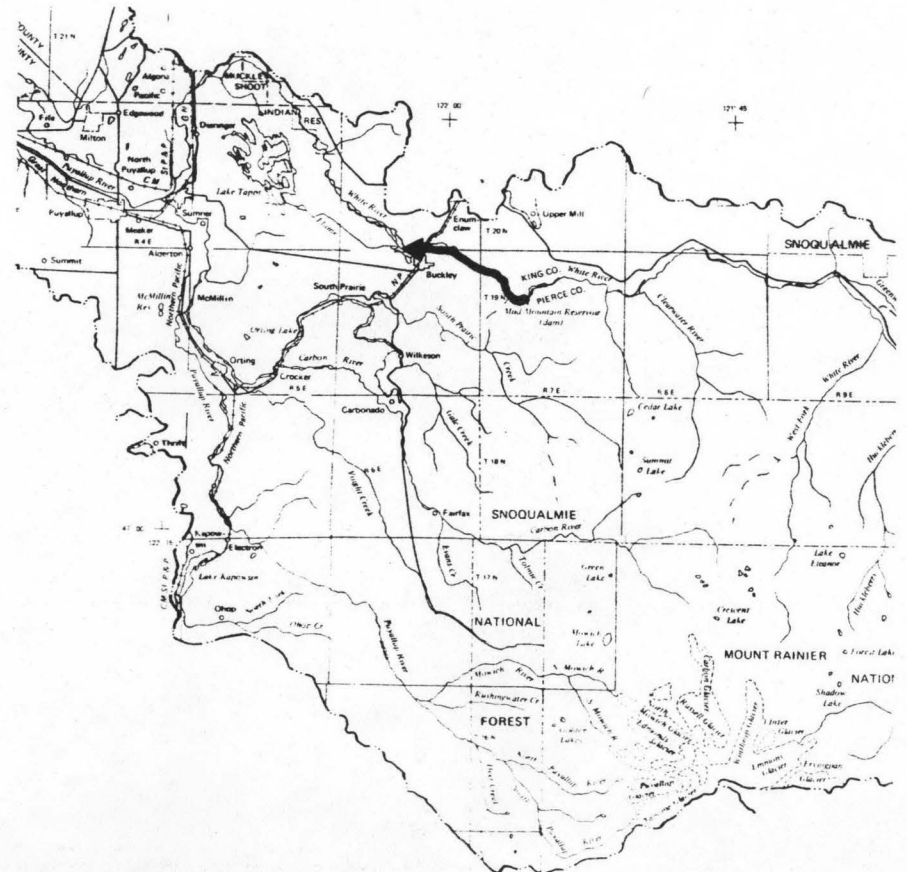
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	488	5.78	51	1.00
80	709	8.41	71	0.96
50	1210	14.4	104	0.83
30	1700	20.1	124	0.70
10	2810	33.3	146	0.50

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 1478 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0010

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce and King</u>
C. Township, Range	<u>T19N - R8E</u>
D. Latitude, Longitude	<u>47° 09' - 121° 44'</u>
E. Stream Name	<u>White River</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>35.7/46.5</u>

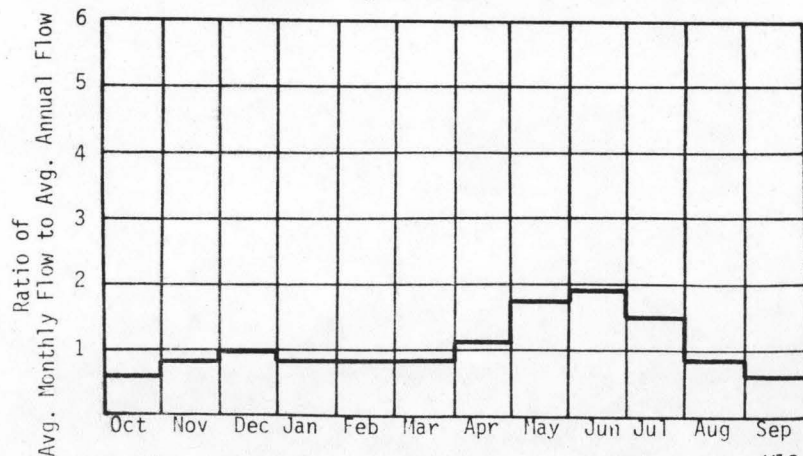
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>1700</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1200</u>	Ft. MSL
C. Total Available Head in Reach	<u>560</u>	Ft.
D. Average Slope in Reach	<u>46</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>334</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

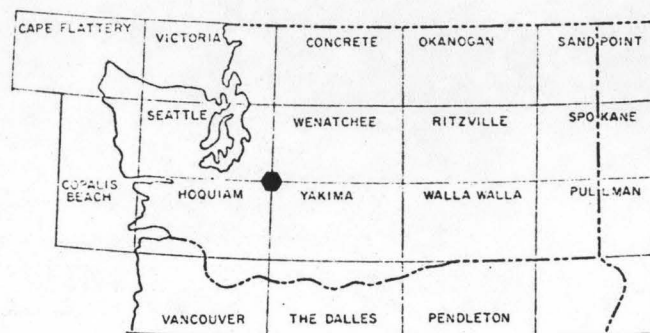
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	385	18.2	160	1.00
80	560	26.5	223	0.96
50	956	45.3	330	0.83
30	1340	63.6	390	0.70
10	2220	105	460	0.50

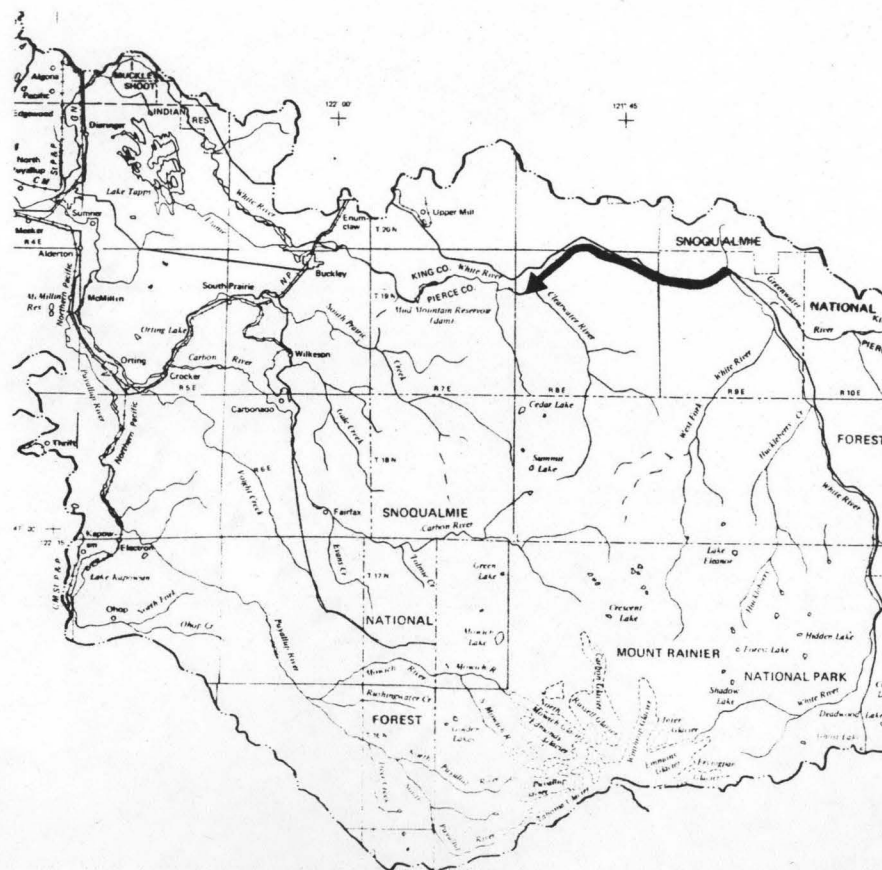
### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 1166 cfs



W10-400



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0011

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T19N - R9E</u>
D. Latitude, Longitude	<u>47° 08' - 121° 38'</u>
E. Stream Name	<u>White River</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>46.5/49.6</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

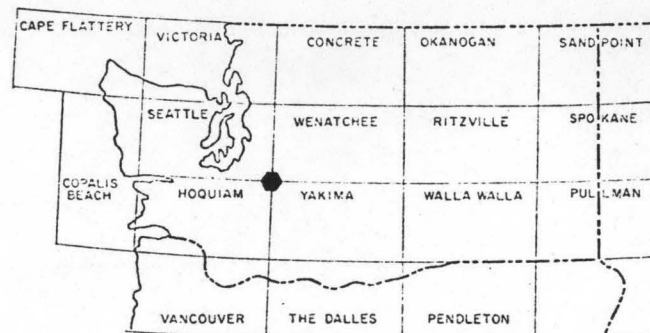
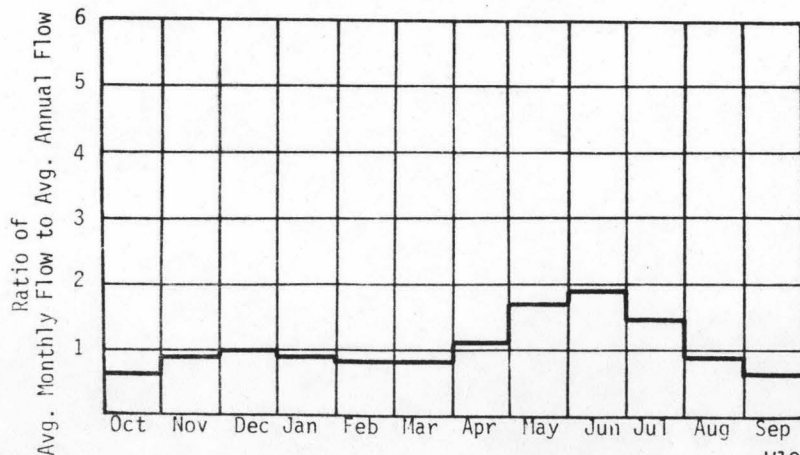
A. Upstream Elevation of Reach	<u>1840</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1700</u>	Ft. MSL
C. Total Available Head in Reach	<u>140</u>	Ft.
D. Average Slope in Reach	<u>45</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>216</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	286	3.39	29.7	1.00
80	413	4.89	41.1	0.96
50	674	7.98	59.0	0.84
30	943	11.2	69.5	0.71
10	1560	18.5	82.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 842 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0012

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T19N - R9E
D. Latitude, Longitude	47° 07' - 121° 36'
E. Stream Name	White River
F. Major Basin Name	Puyallup
G. River Mile	49.2/52.8

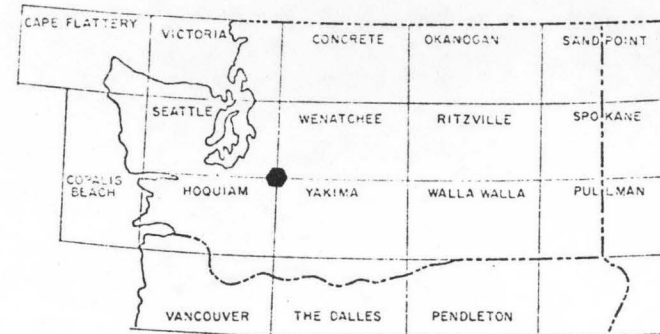
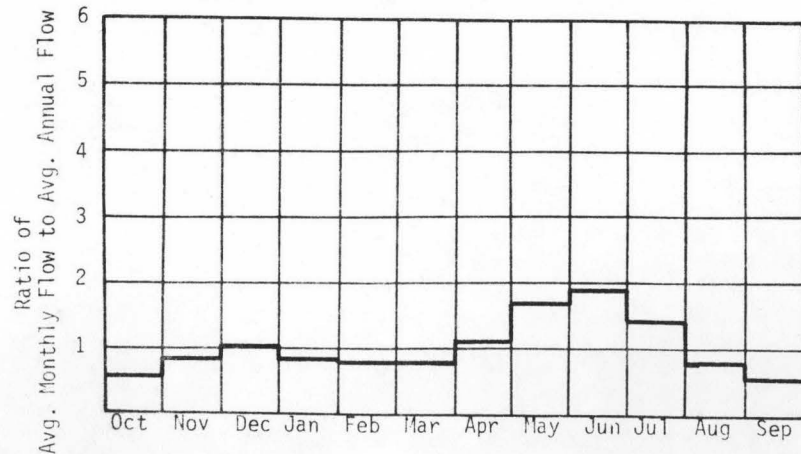
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2070	Ft. MSL
B. Downstream Elevation of Reach	1840	Ft. MSL
C. Total Available Head in Reach	230	Ft.
D. Average Slope in Reach	64	Ft./Mi.
E. Drainage Area above Reach Mouth	147.6	Sq. Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	187	3.64	31.9	1.00
80	270	5.25	44.1	0.96
50	440	8.57	63.0	0.84
30	616	12.0	74.6	0.71
10	1020	19.8	88.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 550 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000- R0013

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T18N - R10E</u>
D. Latitude, Longitude	<u>47° 03' - 121° 34'</u>
E. Stream Name	<u>White River</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>52.8/59.9</u>

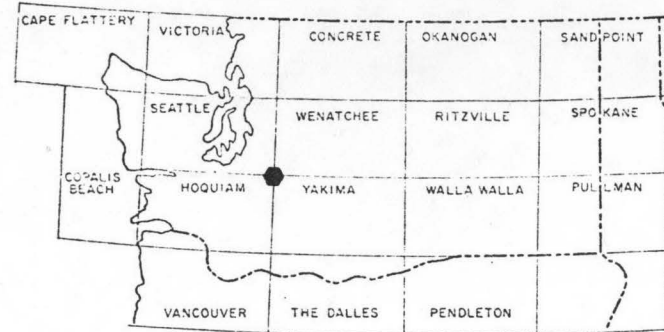
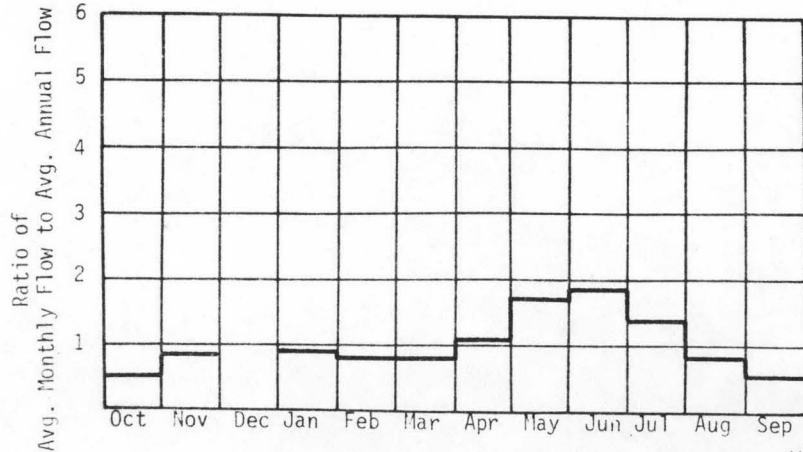
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>2580</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2070</u>	Ft. MSL
C. Total Available Head in Reach	<u>510</u>	Ft.
D. Average Slope in Reach	<u>72</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>102.1</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	118	5.11	44.7	1.00
80	171	7.36	61.9	0.96
50	278	12.0	88.4	0.84
30	390	16.8	105	0.71
10	644	27.8	124	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 348 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0014

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T17N - R10E
D. Latitude, Longitude	46° 57' - 121° 32'
E. Stream Name	White River
F. Major Basin Name	Puyallup
G. River Mile	59.9/68.9

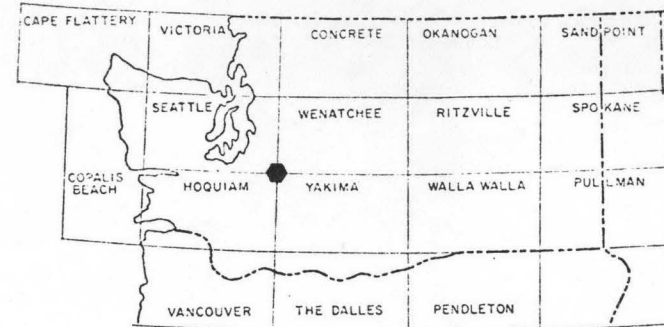
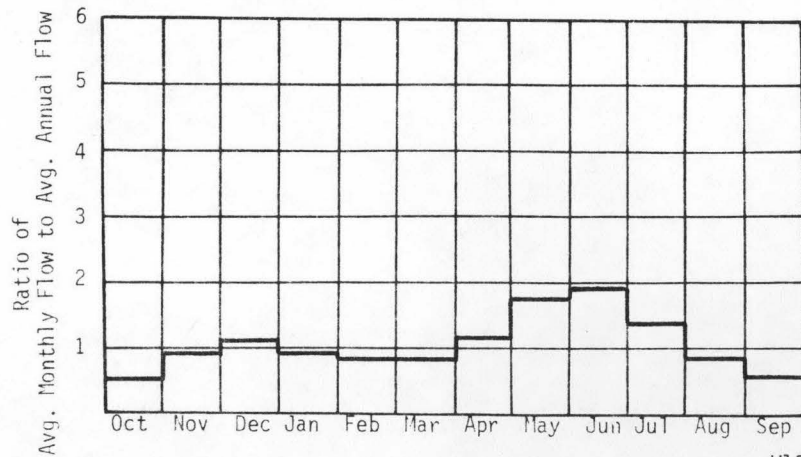
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3700	Ft. MSL
B. Downstream Elevation of Reach	2590	Ft. MSL
C. Total Available Head in Reach	1110	Ft.
D. Average Slope in Reach	123	Ft./Mi.
E. Drainage Area above Reach Mouth	59.8	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	64.9	6.10	53.5	1.00
80	9.36	8.79	73.9	0.96
50	153	14.4	106	0.84
30	214	20.1	125	0.71
10	353	33.2	148	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 191 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0015

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T19N - R8E
D. Latitude, Longitude	47° 07' - 121° 47'
E. Stream Name	Clearwater
F. Major Basin Name	Puyallup
G. River Mile	0/7.5

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

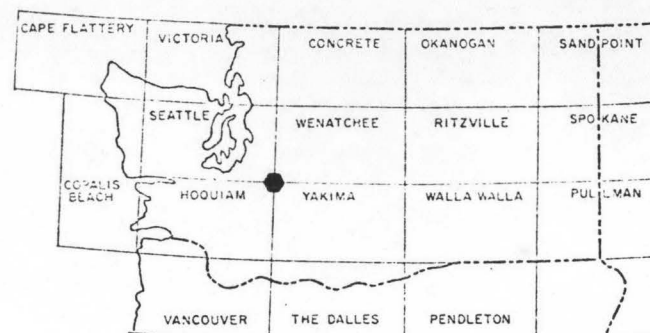
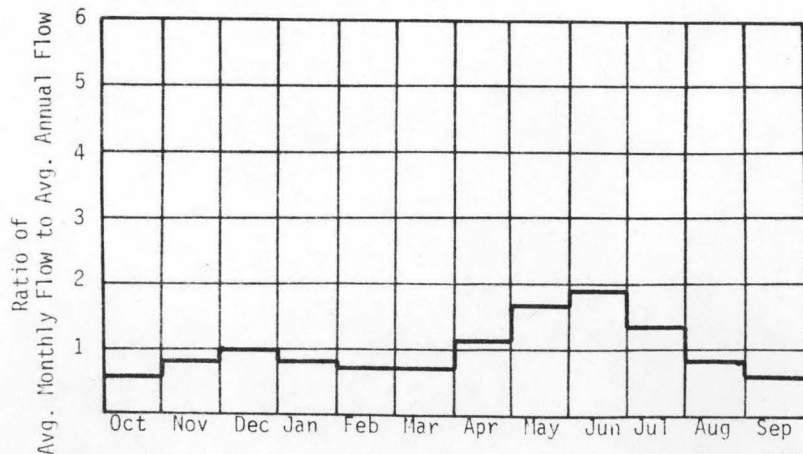
A. Upstream Elevation of Reach	2055	Ft. MSL
B. Downstream Elevation of Reach	1200	Ft. MSL
C. Total Available Head in Reach	855	Ft.
D. Average Slope in Reach	114	Ft./Mi.
E. Drainage Area above Reach Mouth	37.7	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	27.5	1.99	17.5	1.00
80	39.7	2.87	24.1	0.96
50	65.0	4.69	34.5	0.84
30	91.0	6.57	40.8	0.71
10	150.0	10.8	48.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 81 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0016

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce and King</u>
C. Township, Range	<u>T19N - R10E</u>
D. Latitude, Longitude	<u>47° 07' - 121° 33'</u>
E. Stream Name	<u>Greenwater</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/18.1</u>

### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

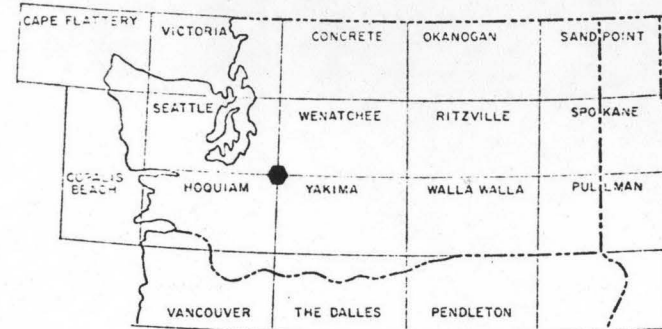
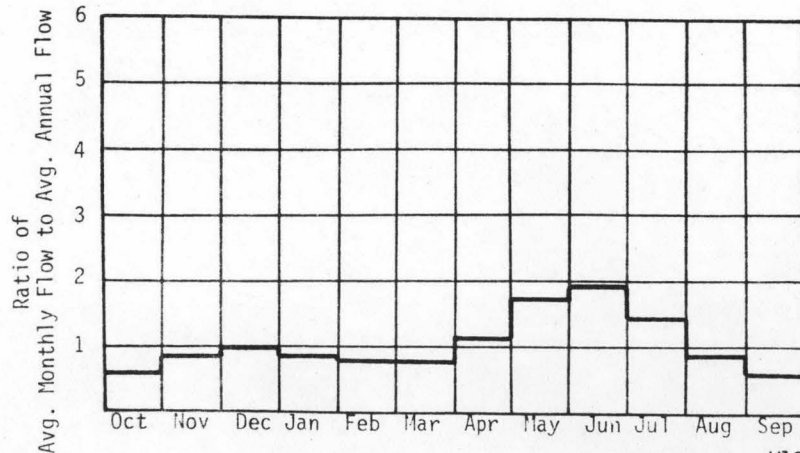
A. Upstream Elevation of Reach	<u>3884</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2159</u>	Ft. MSL
C. Total Available Head in Reach	<u>1725</u>	Ft.
D. Average Slope in Reach	<u>95</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>75.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

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

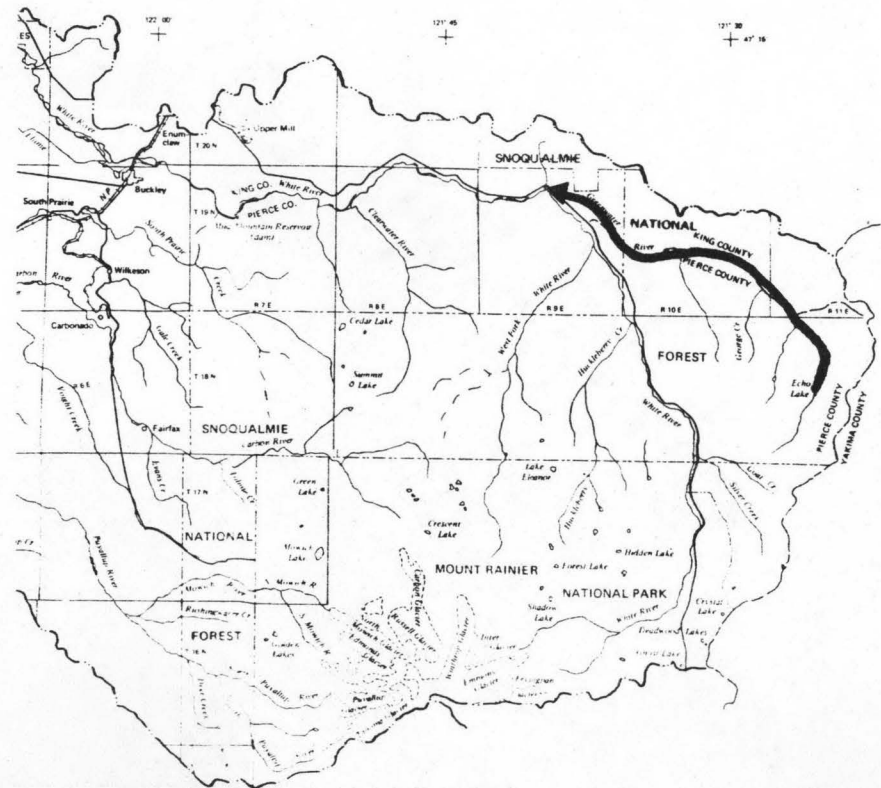
Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.1	3.08	27.0	1.00
80	36.0	5.25	43.7	0.95
50	86.8	12.7	85.5	0.76
30	145	21.2	115	0.62
10	274	40.0	147	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH

QMR = 124 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0017

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T18N - R9E</u>
D. Latitude, Longitude	<u>47° 02' - 121° 42'</u>
E. Stream Name	<u>West Fork White River</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/16.7</u>

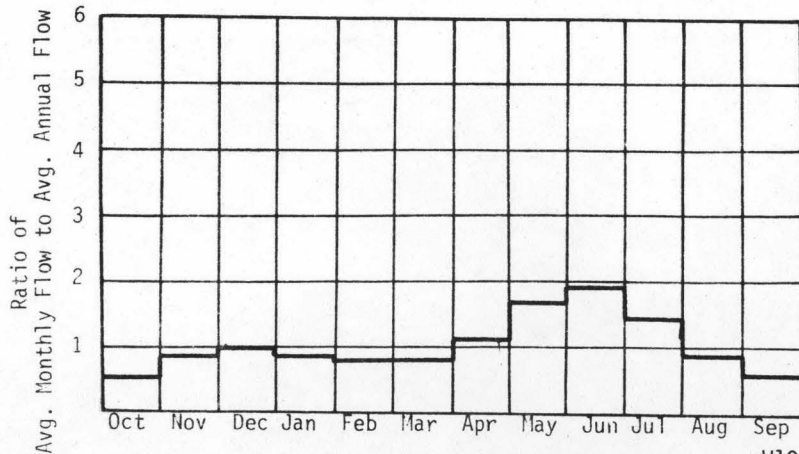
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>4085</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>1840</u>	Ft. MSL
C. Total Available Head in Reach	<u>2245</u>	Ft.
D. Average Slope in Reach	<u>134</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>63.2</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

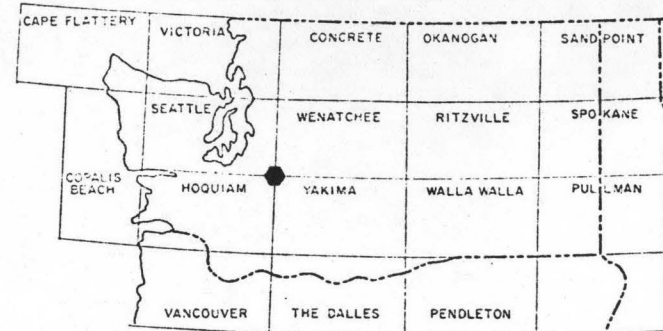
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	58.8	11.2	97.9	1.00
80	84.8	16.1	135	0.96
50	138	26.3	194	0.84
30	194	36.8	229	0.71
10	320	60.8	272	0.51

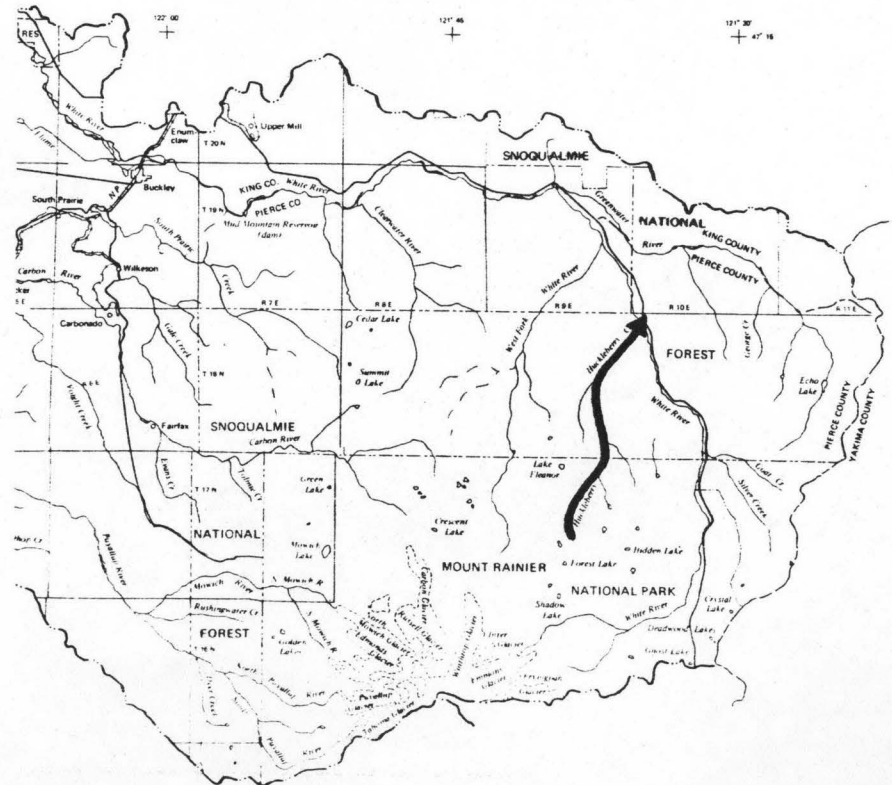
### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 173 cfs



W10-407



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0018

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T18N - R9E
D. Latitude, Longitude	47° 02' - 121° 37'
E. Stream Name	Huckleberry Creek
F. Major Basin Name	Puyallup
G. River Mile	0/9.5

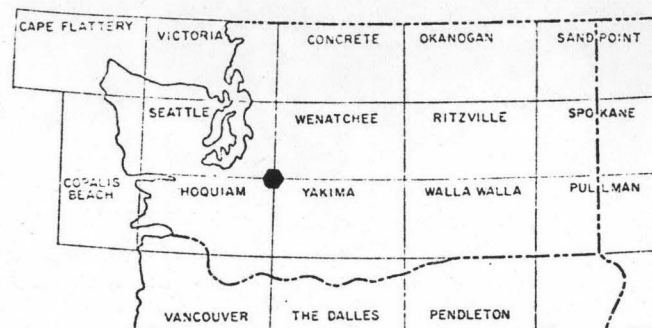
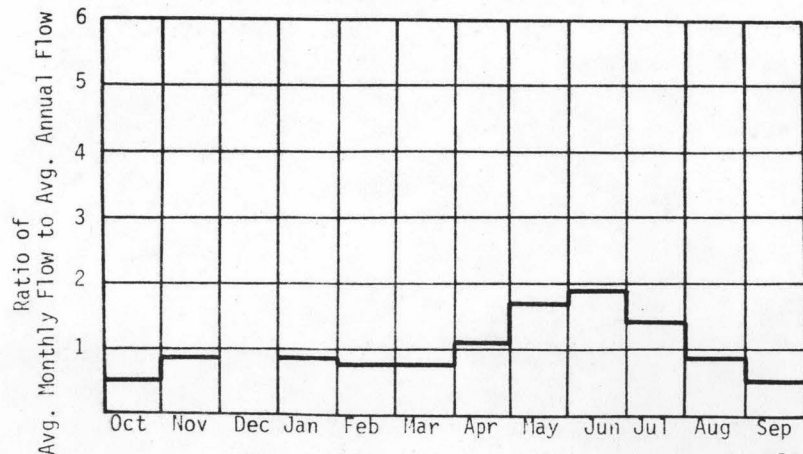
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4165	Ft. MSL
B. Downstream Elevation of Reach	2078	Ft. MSL
C. Total Available Head in Reach	2087	Ft.
D. Average Slope in Reach	220	Ft./Mi.
E. Drainage Area above Reach Mouth	36	Sq.Mi.
F. Inflow Classification	Natural	

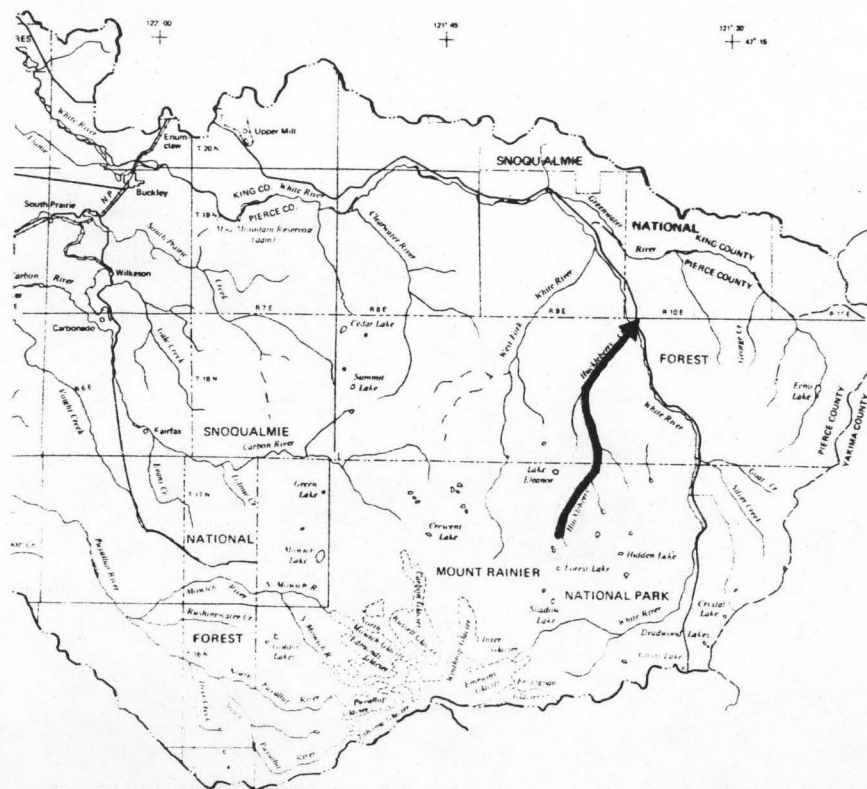
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	32.3	5.71	50.0	1.00
80	46.6	8.22	69.2	0.96
50	76.0	13.4	98.8	0.84
30	106	18.8	117	0.71
10	176	31.1	139	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 95 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0019

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T17N - R10E</u>
D. Latitude, Longitude	<u>46° 59' - 121° 31'</u>
E. Stream Name	<u>Silver</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/1.9</u>

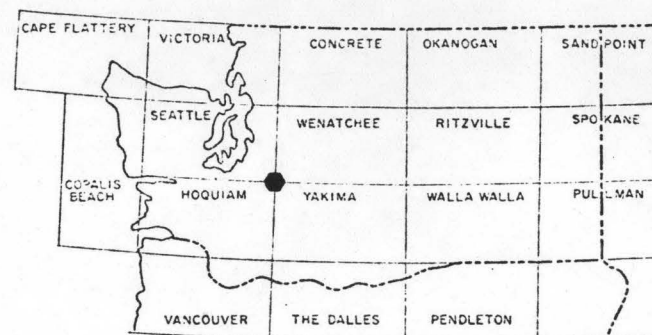
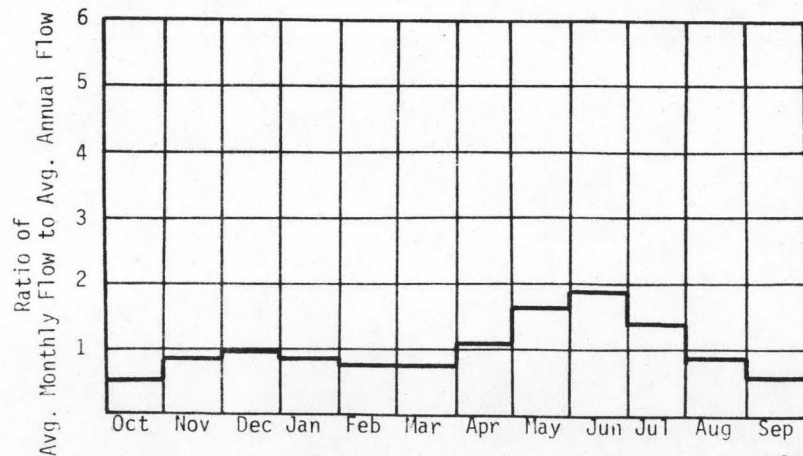
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>3265</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2585</u>	Ft. MSL
C. Total Available Head in Reach	<u>680</u>	Ft.
D. Average Slope in Reach	<u>358</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>15.4</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

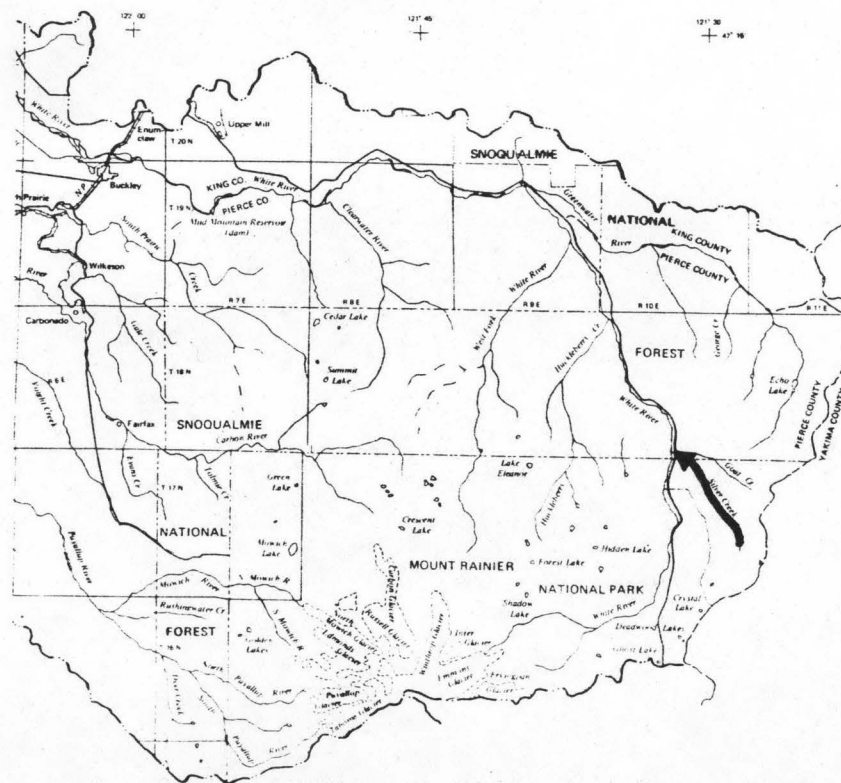
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.9	0.80	7.03	1.00
80	20.1	1.16	9.72	0.96
50	32.8	1.89	13.9	0.84
30	45.9	2.64	16.4	0.71
10	75.9	4.37	19.5	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 41 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0020

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T16N - R10E</u>
D. Latitude, Longitude	<u>46° 53' - 121° 37'</u>
E. Stream Name	<u>Frying Pan</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/2.0</u>

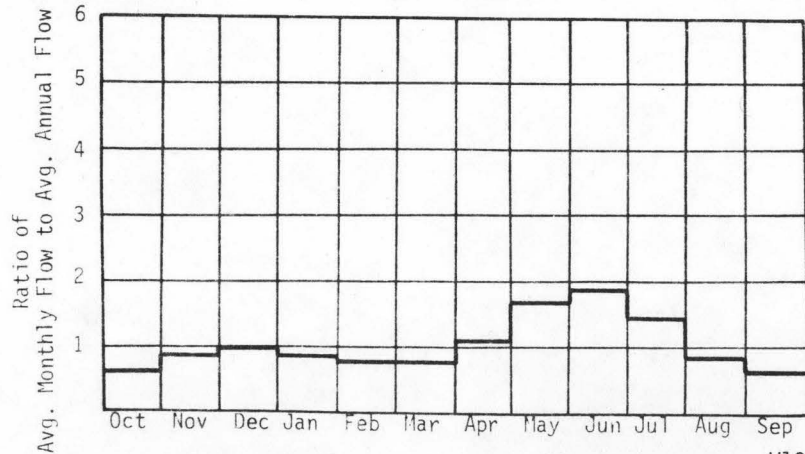
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>4065</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>3700</u>	Ft. MSL
C. Total Available Head in Reach	<u>365</u>	Ft.
D. Average Slope in Reach	<u>183</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>8.7</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

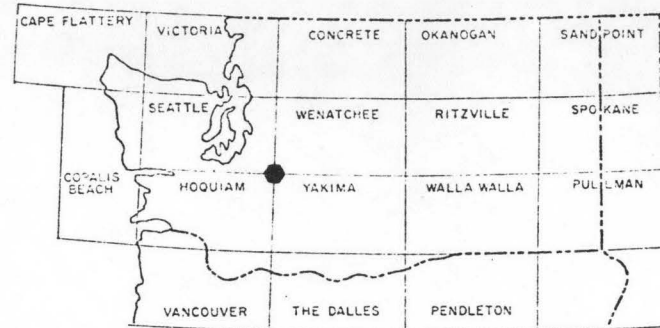
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	13.6	0.42	3.68	1.00
80	19.6	0.61	5.09	0.96
50	32.0	0.99	6.93	0.80
30	44.8	1.38	8.61	0.71
10	74.0	2.29	10.2	0.51

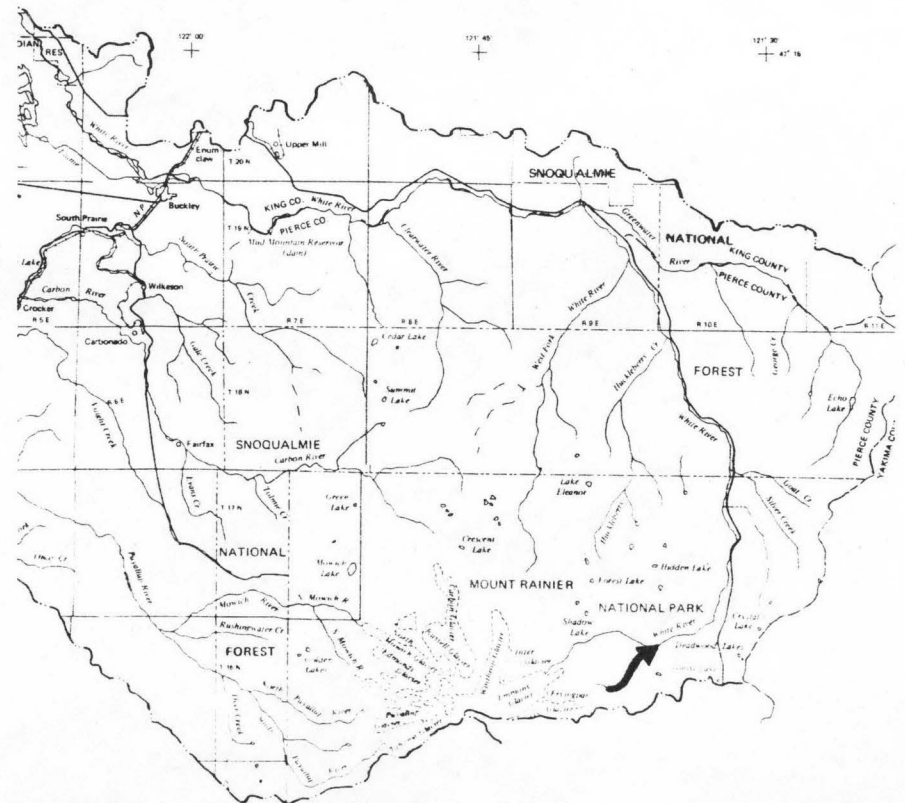
### IV. TYPICAL ANNUAL HYDROGRAPH      QMR = 40 cfs



W10-410



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0021

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T16N - R9E
D. Latitude, Longitude	46° 54' - 121° 38'
E. Stream Name	Interfork
F. Major Basin Name	Puyallup
G. River Mile	0/2.7

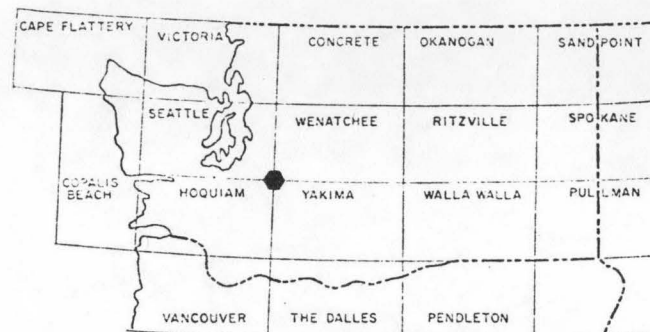
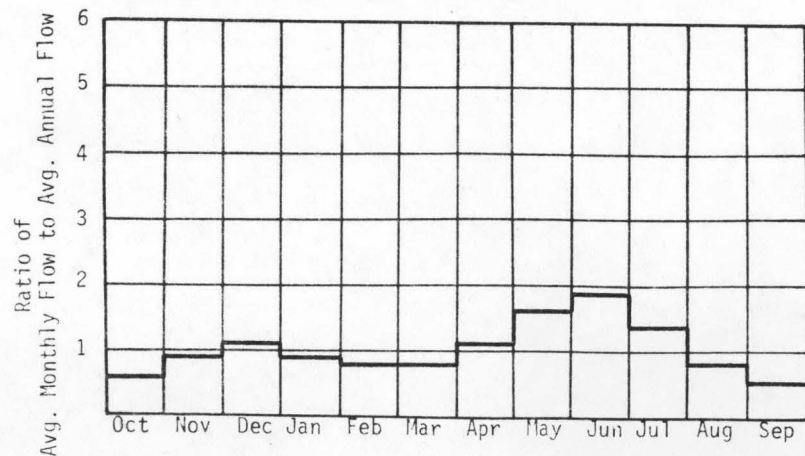
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4365	Ft. MSL
B. Downstream Elevation of Reach	3700	Ft. MSL
C. Total Available Head in Reach	665	Ft.
D. Average Slope in Reach	246	Ft./Mi.
E. Drainage Area above Reach Mouth	16.7	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.7	1.22	10.7	1.00
80	31.4	1.76	14.8	0.96
50	51.2	2.87	21.1	0.84
30	71.7	4.02	25.0	0.71
10	118.0	6.64	29.7	0.51

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 64 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES







## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0023

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T19N - R5E
D. Latitude, Longitude	47° 06' - 122° 10'
E. Stream Name	Carbon River
F. Major Basin Name	Puyallup
G. River Mile	3.9/5.8

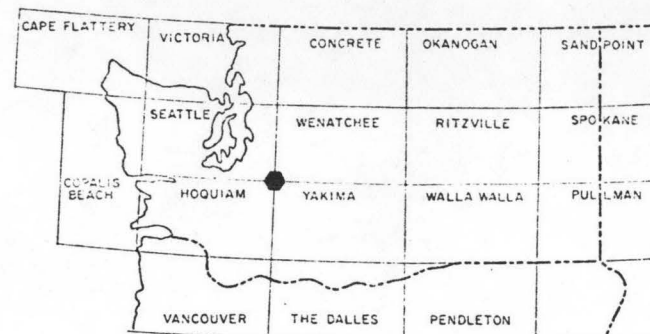
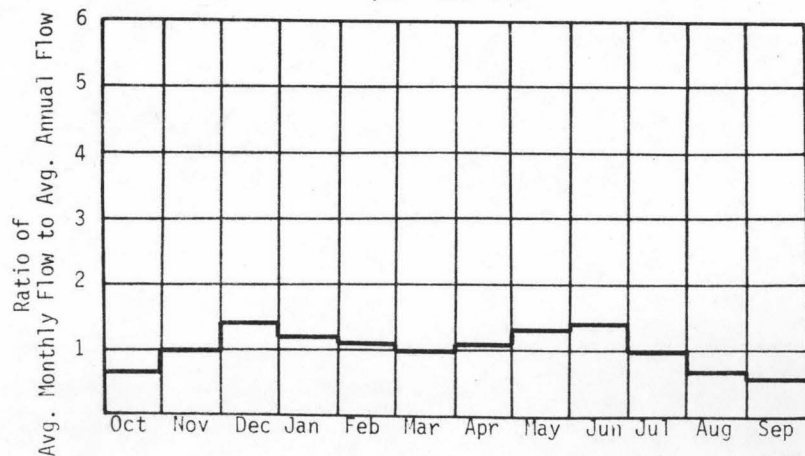
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	290	Ft. MSL
B. Downstream Elevation of Reach	210	Ft. MSL
C. Total Available Head in Reach	80	Ft.
D. Average Slope in Reach	42	Ft./Mi.
E. Drainage Area above Reach Mouth	186	Sq.Mi.
F. Inflow Classification	Natural	

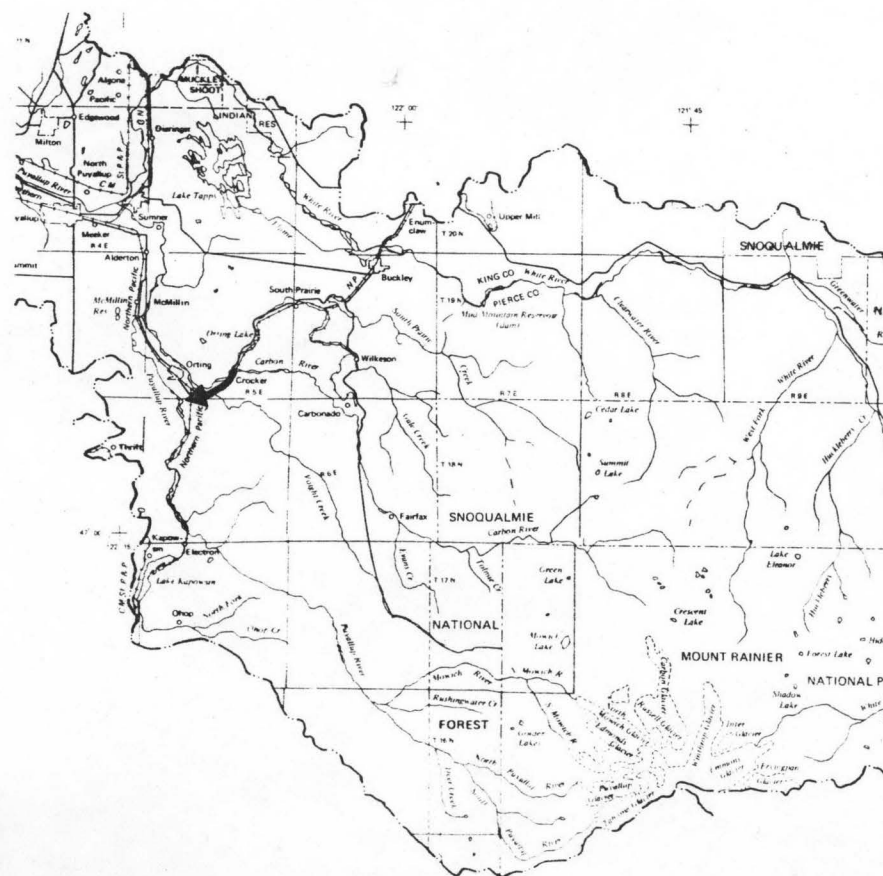
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	103	0.69	6.08	1.00
80	199	1.35	11.0	0.93
50	470	3.18	21.5	0.77
30	669	4.53	26.2	0.66
10	1160	7.88	31.8	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 603 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0024

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T18N - R6E</u>
D. Latitude, Longitude	<u>47° 02' - 122° 03'</u>
E. Stream Name	<u>Carbon River</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>5.8/27.2</u>

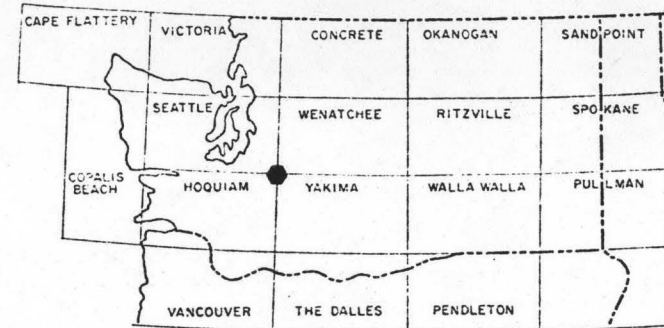
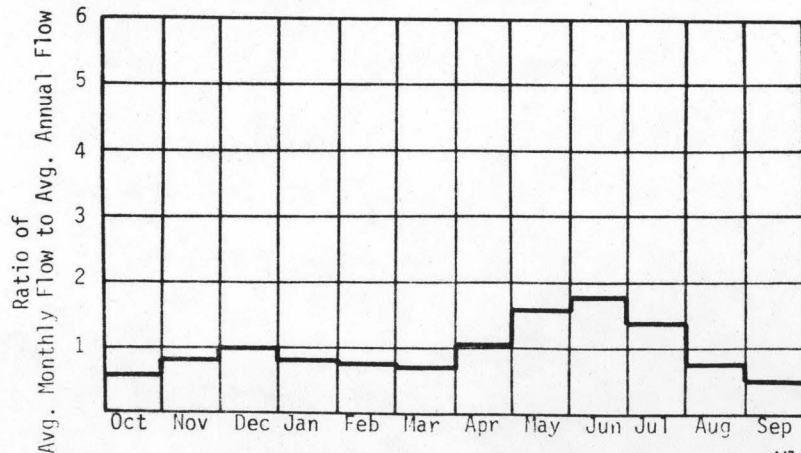
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>2100</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>290</u>	Ft. MSL
C. Total Available Head in Reach	<u>1810</u>	Ft.
D. Average Slope in Reach	<u>85</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>96</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

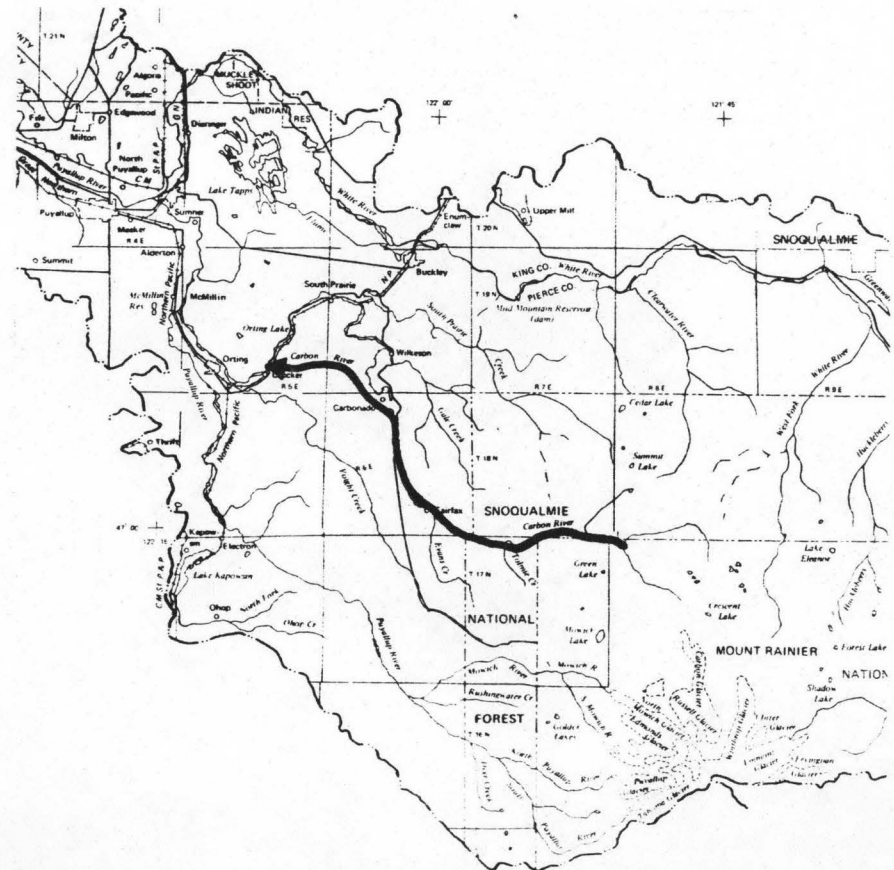
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	107	16.4	144	1.00
80	163	24.9	210	0.96
50	277	42.4	308	0.83
30	391	59.9	367	0.70
10	619	94.9	432	0.52

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 346 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-R0025

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T17N - R8E</u>
D. Latitude, Longitude	<u>46° 58' - 121° 49'</u>
E. Stream Name	<u>Carbon</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>27.2/32.2</u>

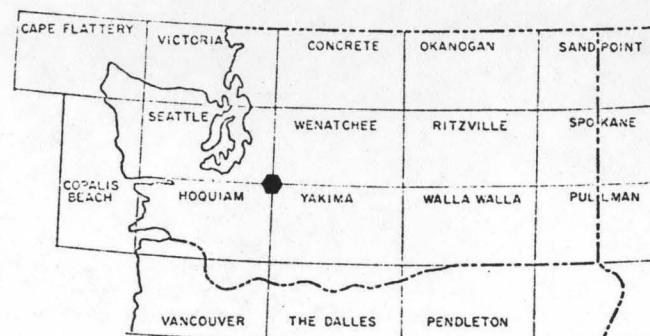
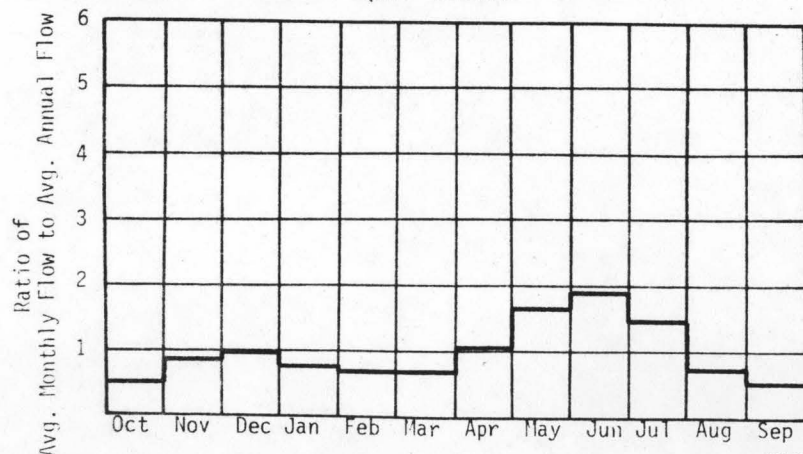
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>3465</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2100</u>	Ft. MSL
C. Total Available Head in Reach	<u>1365</u>	Ft.
D. Average Slope in Reach	<u>273</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>26</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

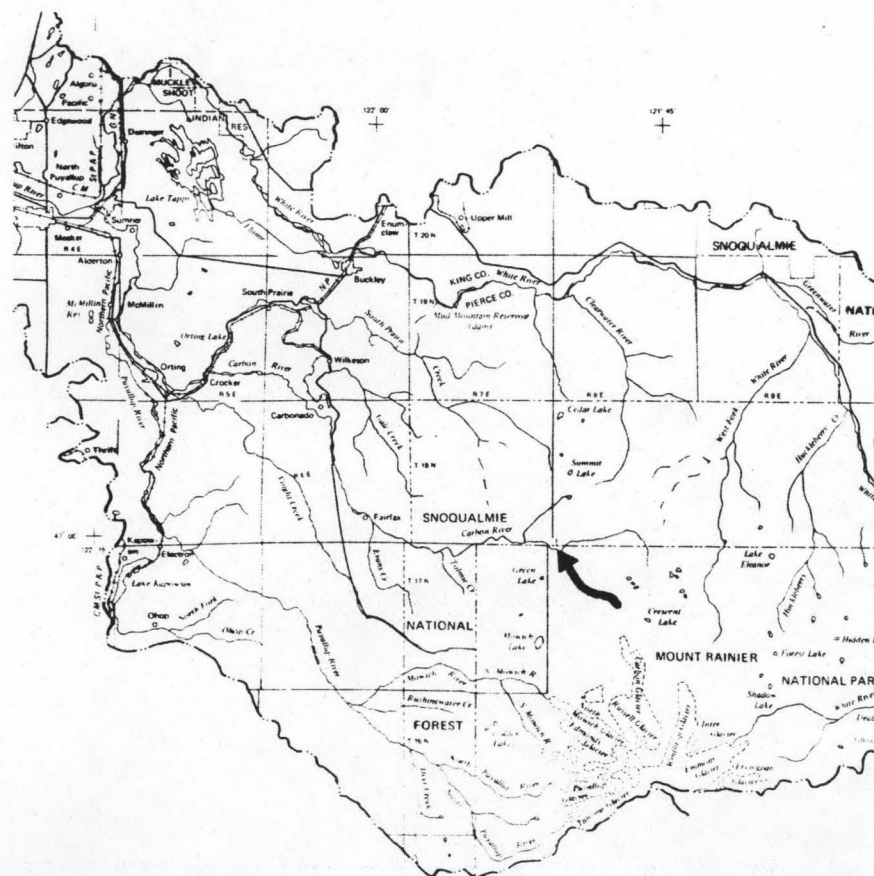
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	37.8	4.37	38.3	1.00
80	57.3	6.62	55.7	0.96
50	97.6	11.3	82.0	0.83
30	138	15.9	97.7	0.70
10	218	25.2	115	0.52

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 122 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0026

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T18N - R6E</u>
D. Latitude, Longitude	<u>47° 02' - 122° 05'</u>
E. Stream Name	<u>Voight Creek</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/13.2</u>

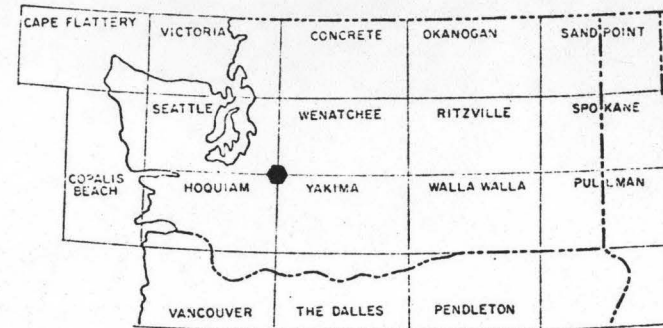
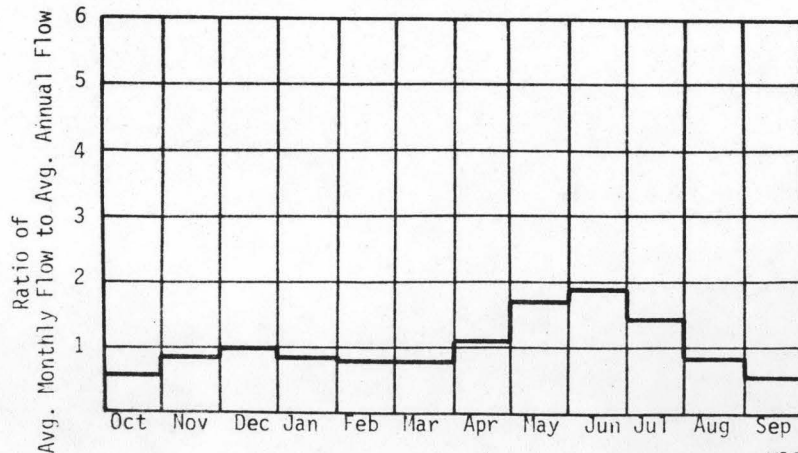
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>1785</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>210</u>	Ft. MSL
C. Total Available Head in Reach	<u>1575</u>	Ft.
D. Average Slope in Reach	<u>119</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>33.3</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

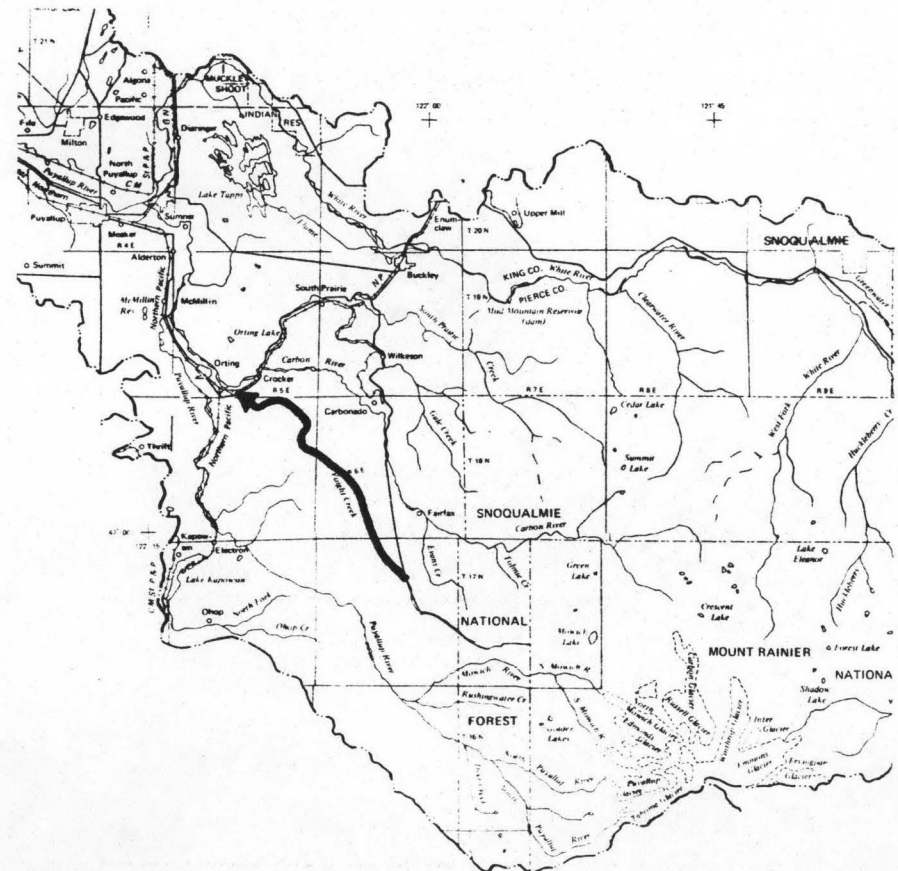
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	21.1	2.81	24.6	1.00
80	32.0	4.26	35.8	0.96
50	54.4	7.25	61.0	0.83
30	76.8	10.2	62.8	0.70
10	122	16.2	73.9	0.52

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 68 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0027

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T19N - R5E
D. Latitude, Longitude	47° 08' - 122° 07'
E. Stream Name	South Prairie Creek
F. Major Basin Name	Puyallup
G. River Mile	0/7.0

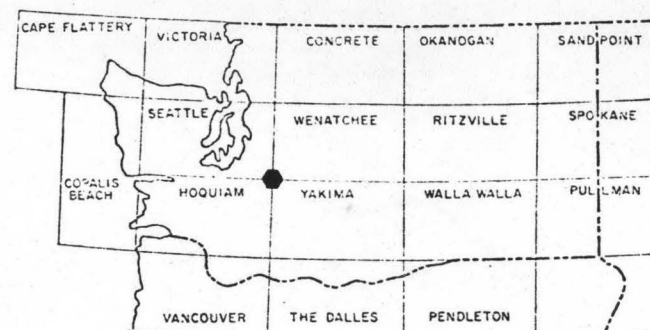
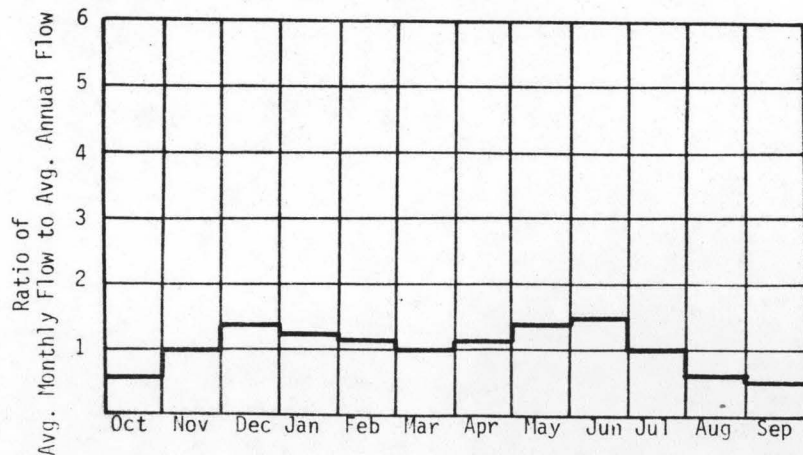
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	460	Ft. MSL
B. Downstream Elevation of Reach	290	Ft. MSL
C. Total Available Head in Reach	170	Ft.
D. Average Slope in Reach	24	Ft./Mi.
E. Drainage Area above Reach Mouth	88.1	Sq.Mi.
F. Inflow Classification	Natural	

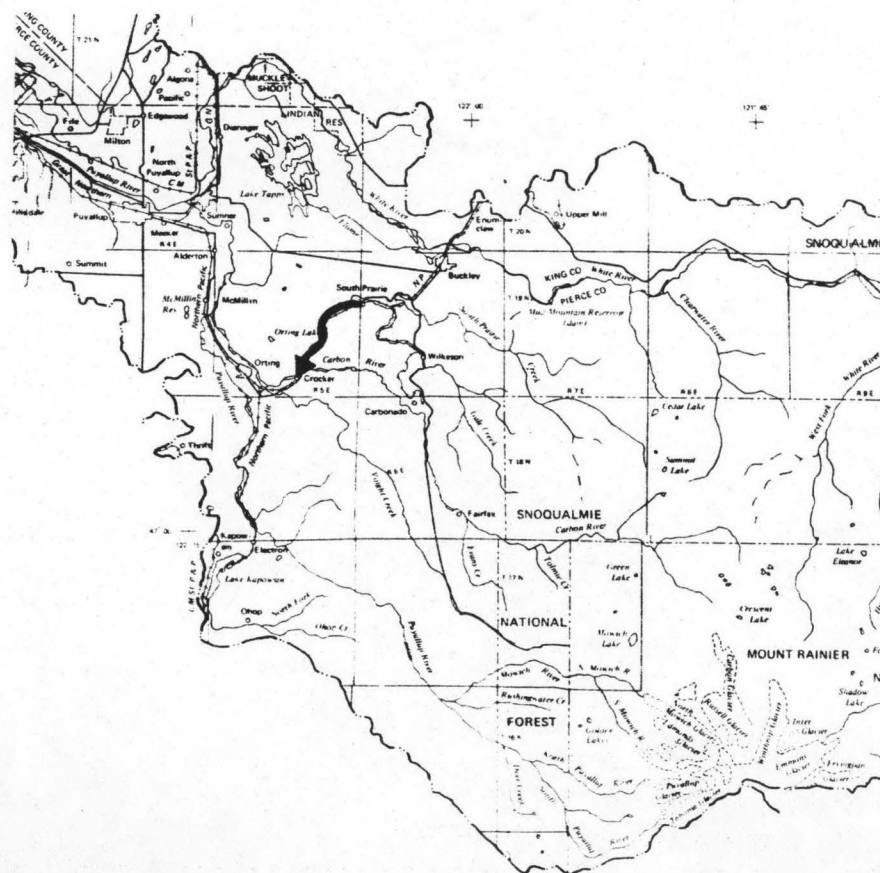
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	43.2	0.62	5.44	1.00
80	83.8	1.21	9.83	0.93
50	198	2.85	19.2	0.77
30	282	4.06	23.5	0.66
10	490	7.05	28.4	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 254 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0028

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T19N - R6E
D. Latitude, Longitude	47° 07' - 122° 00'
E. Stream Name	So. Prairie Creek
F. Major Basin Name	Puyallup
G. River Mile	7.0/17.9

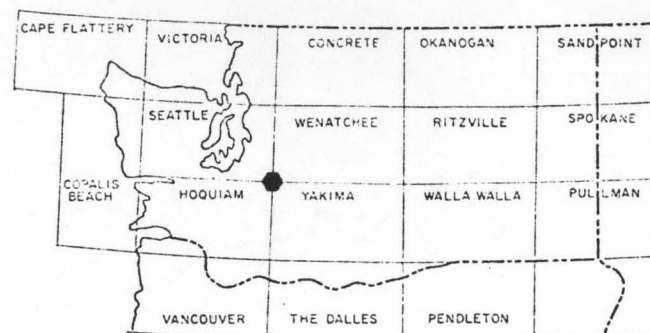
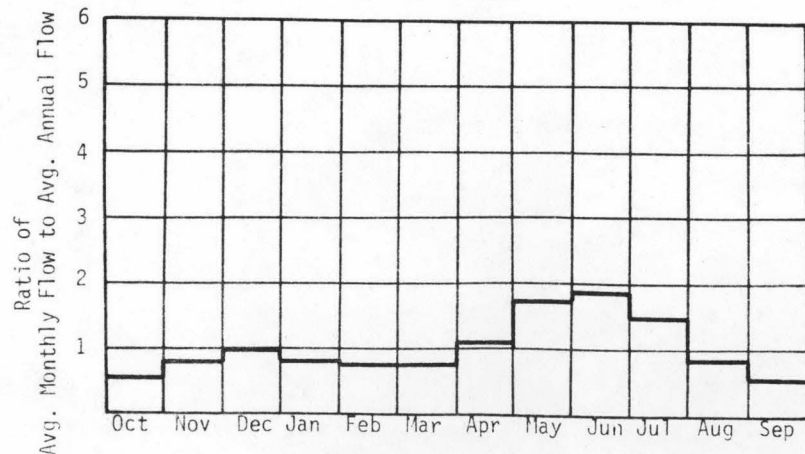
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	1675	Ft. MSL
B. Downstream Elevation of Reach	460	Ft. MSL
C. Total Available Head in Reach	1215	Ft.
D. Average Slope in Reach	68	Ft./Mi.
E. Drainage Area above Reach Mouth	47.8	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	19.9	2.05	17.9	1.00
80	38.6	3.97	32.3	0.93
50	91.3	9.38	63.3	0.77
30	130	13.4	77.2	0.66
10	226	23.2	93.6	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 117 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0029

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T19N - R6E</u>
D. Latitude, Longitude	<u>47° 06' - 122° 01'</u>
E. Stream Name	<u>Wilkeson Creek</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>6.4:0.0/7.2</u>

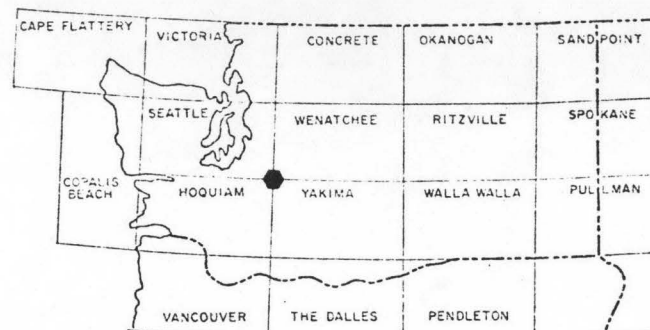
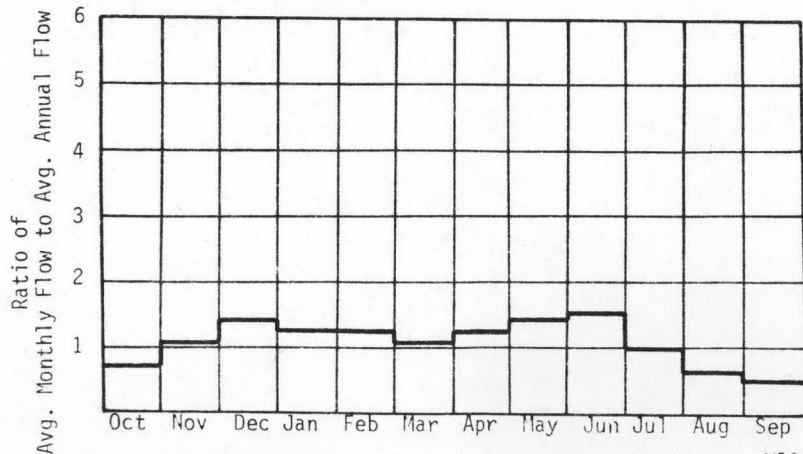
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>1185</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>455</u>	Ft. MSL
C. Total Available Head in Reach	<u>730</u>	Ft.
D. Average Slope in Reach	<u>101</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>29.8</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

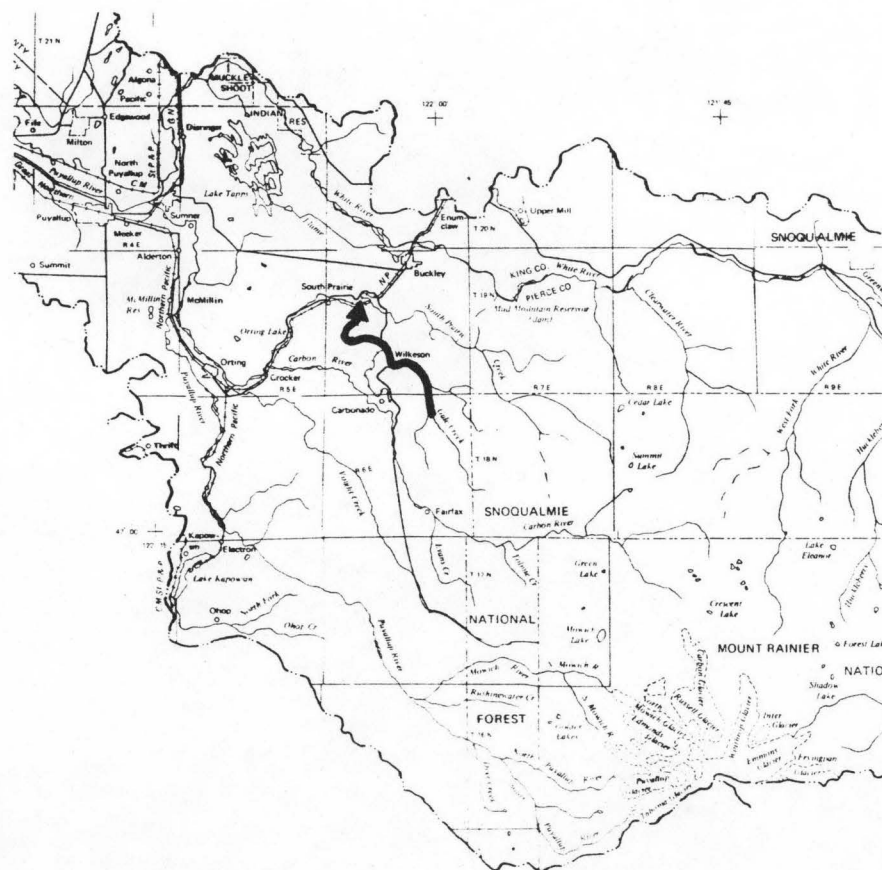
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	10.9	0.67	5.89	1.00
80	21.1	1.30	10.6	0.93
50	49.9	3.08	21.0	0.77
30	71.0	4.39	25.4	0.66
10	124	7.63	30.8	0.46

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 64 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0030

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T18N - R8E</u>
D. Latitude, Longitude	<u>47° 00' - 121° 50'</u>
E. Stream Name	<u>Chenvis Creek</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/2.7</u>

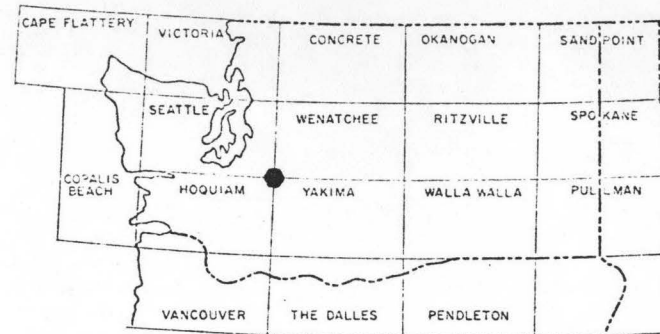
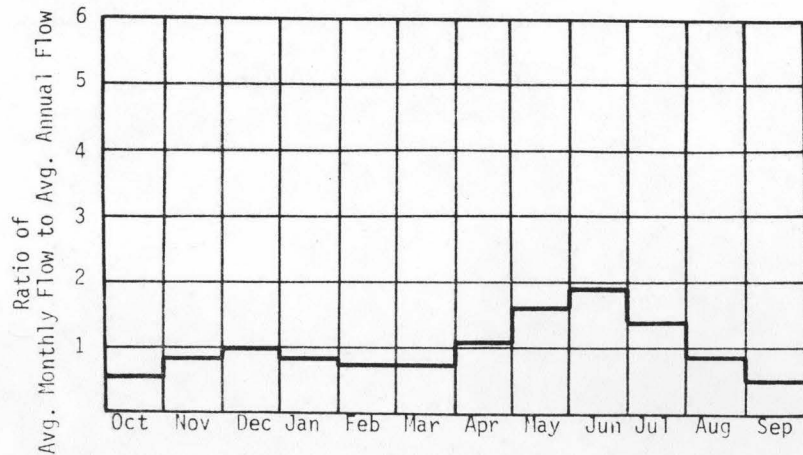
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>3325</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2100</u>	Ft. MSL
C. Total Available Head in Reach	<u>1225</u>	Ft.
D. Average Slope in Reach	<u>454</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

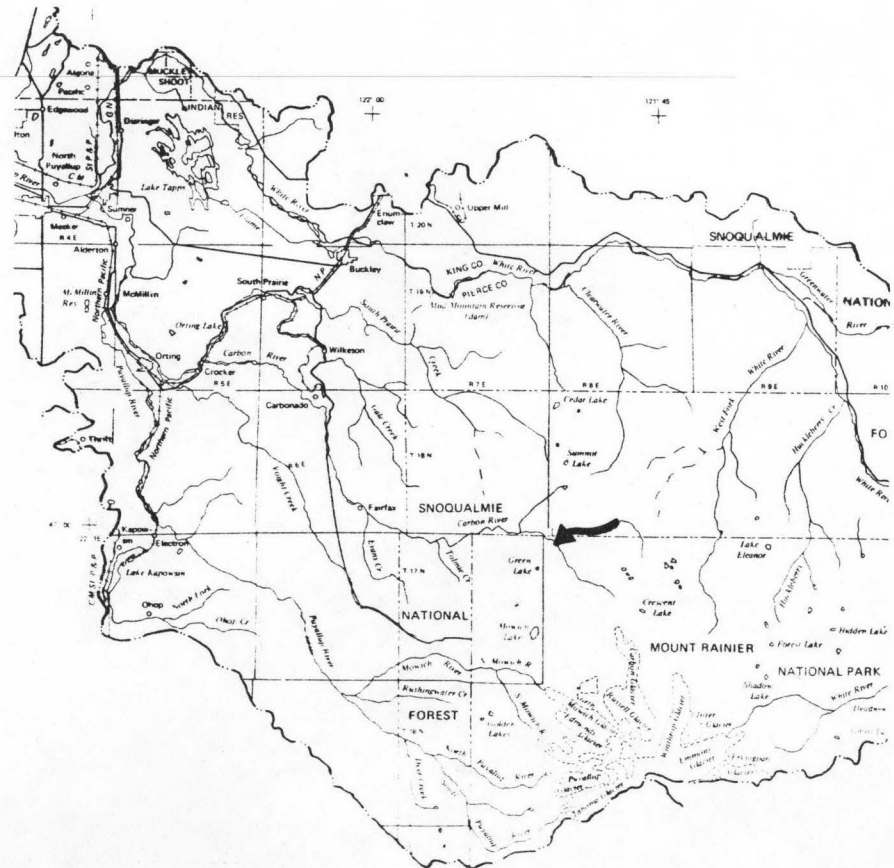
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.6	1.51	13.2	1.00
80	22.1	2.29	19.3	0.96
50	37.6	3.90	28.4	0.83
30	53.1	5.51	33.8	0.70
10	84.1	8.72	39.7	0.52

### IV. TYPICAL ANNUAL HYDROGRAPH QMR =47 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES





## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0031

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T17N - R7E
D. Latitude, Longitude	46° 55' - 121° 57'
E. Stream Name	Mowich
F. Major Basin Name	Puyallup
G. River Mile	0/9.7

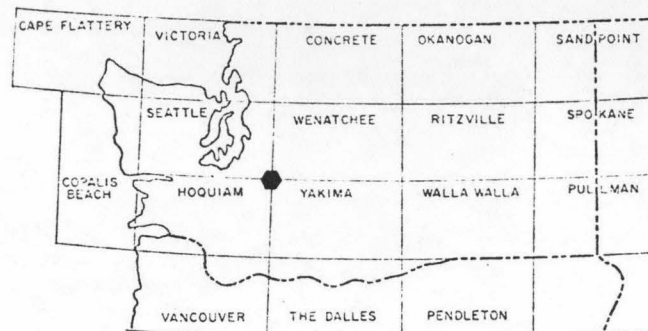
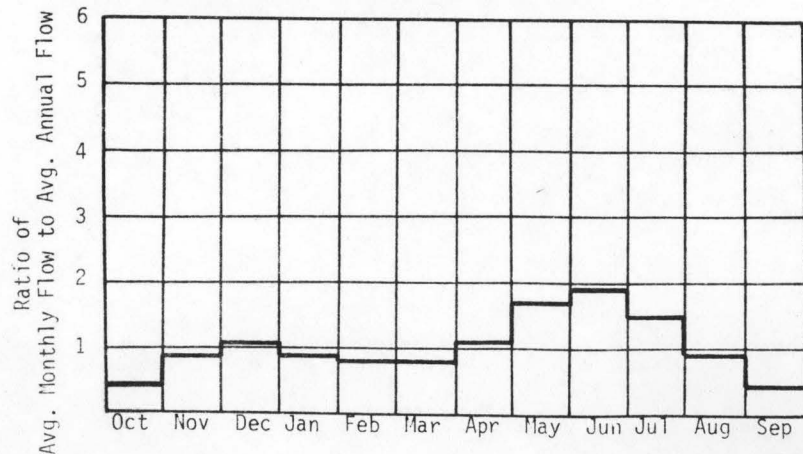
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2675	Ft.	MSL
B. Downstream Elevation of Reach	1678	Ft.	MSL
C. Total Available Head in Reach	997	Ft.	
D. Average Slope in Reach	103	Ft./Mi.	
E. Drainage Area above Reach Mouth	45.5	Sq.Mi.	
F. Inflow Classification	Natural		

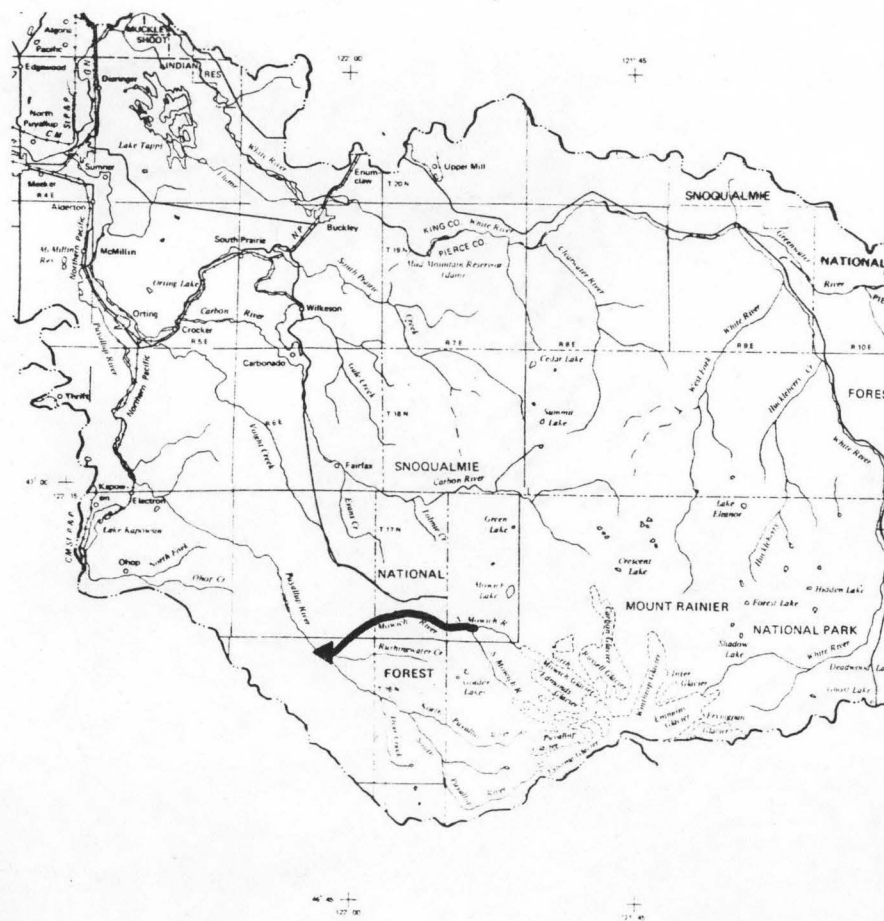
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	63.4	5.35	46.8	1.00
80	91.5	7.72	64.9	0.96
50	148	12.5	91.8	0.84
30	201	16.9	107	0.72
10	306	25.8	122	0.42

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 176 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0032

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T16N - R8E</u>
D. Latitude, Longitude	<u>46° 54' - 121° 53'</u>
E. Stream Name	<u>South Mowich</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/2.8</u>

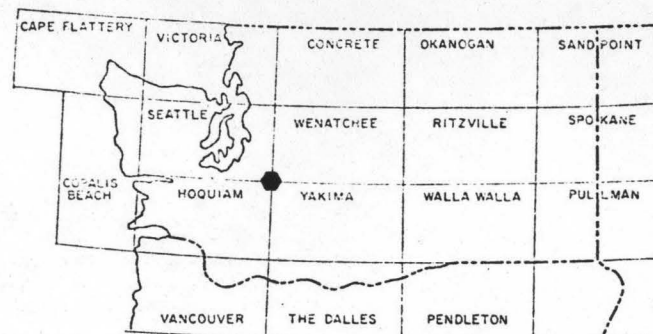
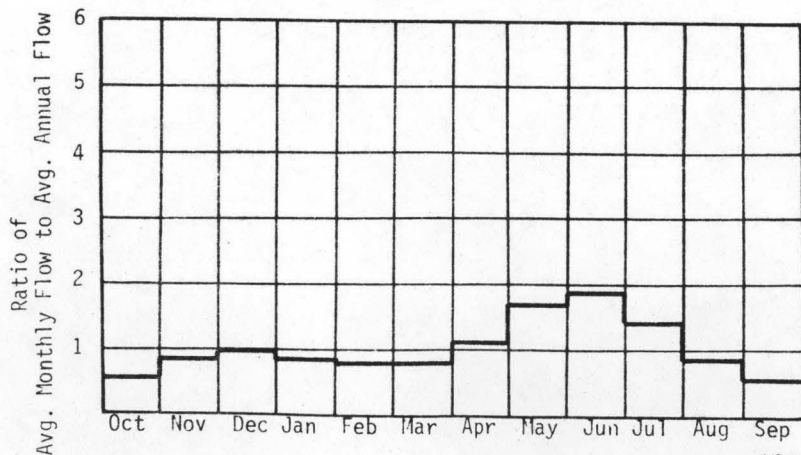
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>3765</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2675</u>	Ft. MSL
C. Total Available Head in Reach	<u>1090</u>	Ft.
D. Average Slope in Reach	<u>389</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>10.9</u>	Sq.Mi.
F. Inflow Classification	<u>Natural</u>	

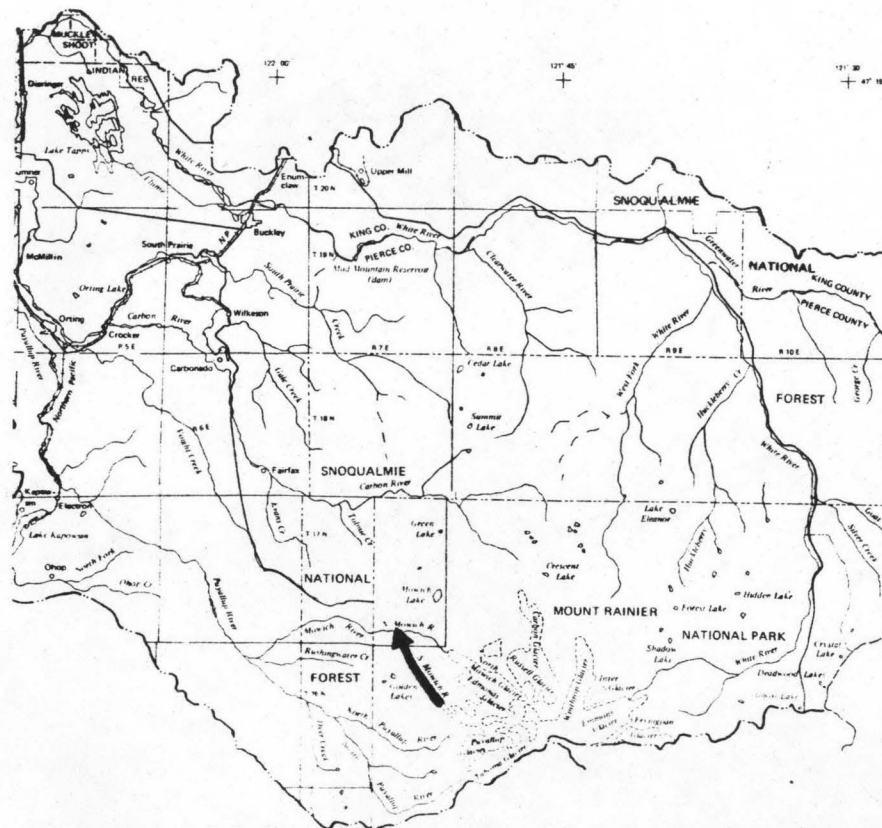
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	18.0	1.66	14.6	1.00
80	26.0	2.40	20.2	0.96
50	42.0	3.87	28.5	0.84
30	57.0	5.26	33.2	0.72
10	87.0	8.03	38.0	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 50 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0033

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T17N - R7E
D. Latitude, Longitude	46° 55' - 121° 52'
E. Stream Name	North Mowich
F. Major Basin Name	Puyallup
G. River Mile	0/1.1

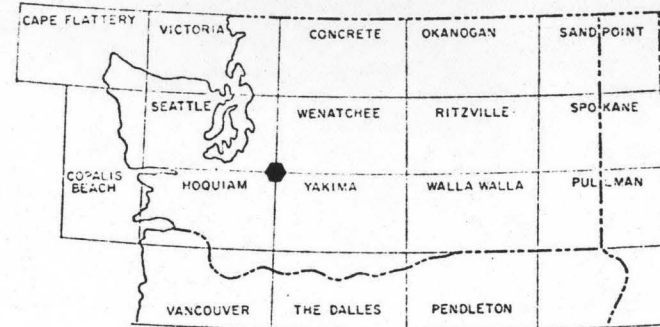
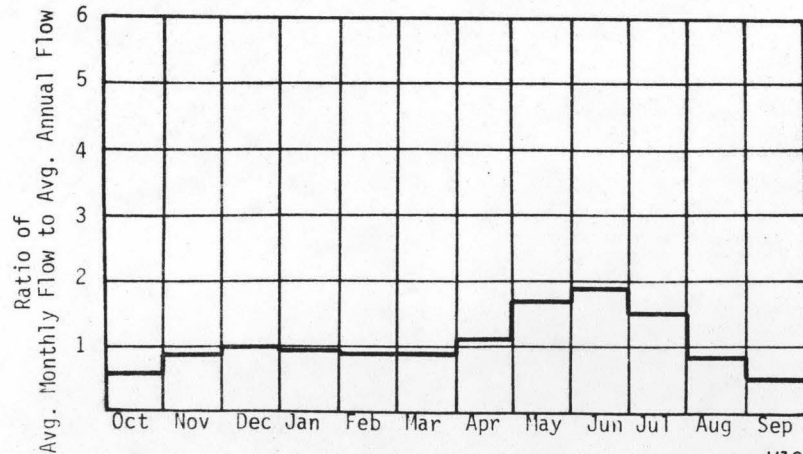
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3065	Ft. MSL
B. Downstream Elevation of Reach	2675	Ft. MSL
C. Total Available Head in Reach	390	Ft.
D. Average Slope in Reach	355	Ft./Mi.
E. Drainage Area above Reach Mouth	12.5	Sq.Mi.
F. Inflow Classification	Natural	

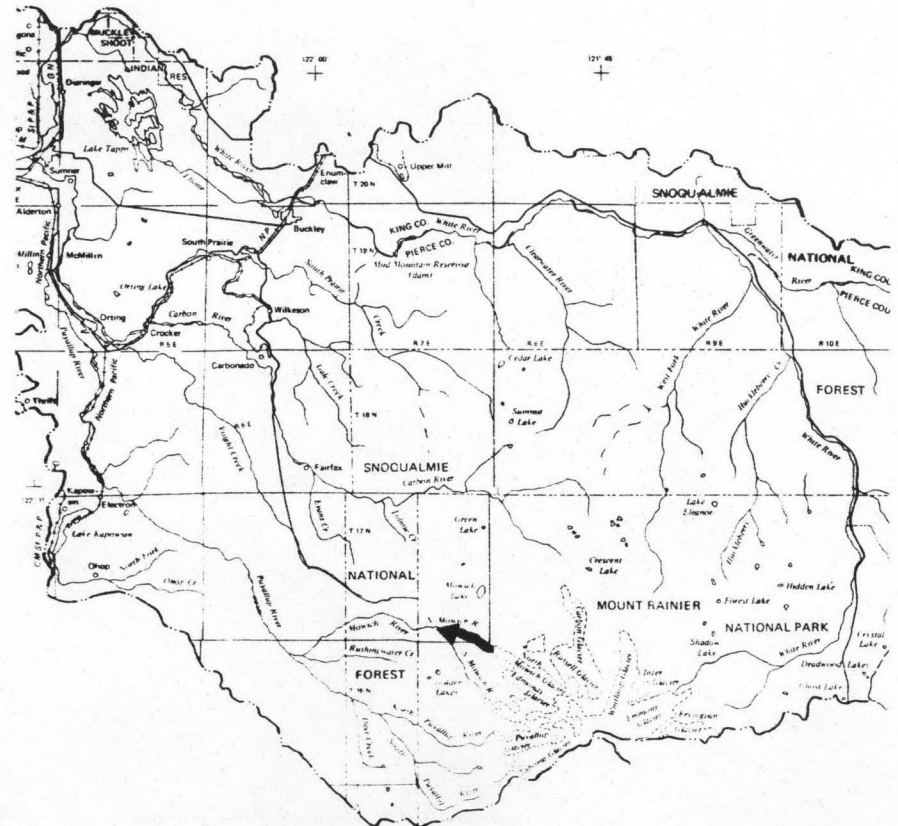
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	22.7	0.75	6.56	1.00
80	32.8	1.08	9.09	0.96
50	52.9	1.75	12.9	0.84
30	71.8	2.37	15.0	0.72
10	110	3.62	17.1	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 63 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0034

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T16N R7E</u>
D. Latitude, Longitude	<u>46° 52' - 121° 58'</u>
E. Stream Name	<u>Deer Creek</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/2.1</u>

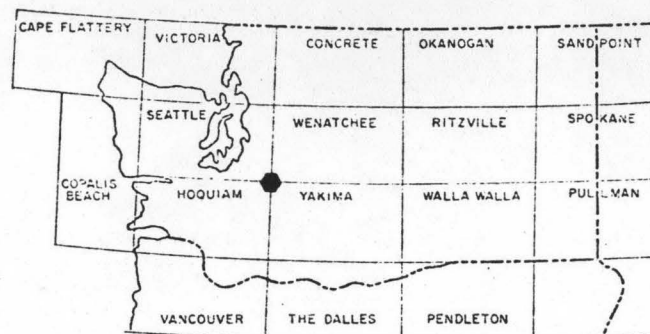
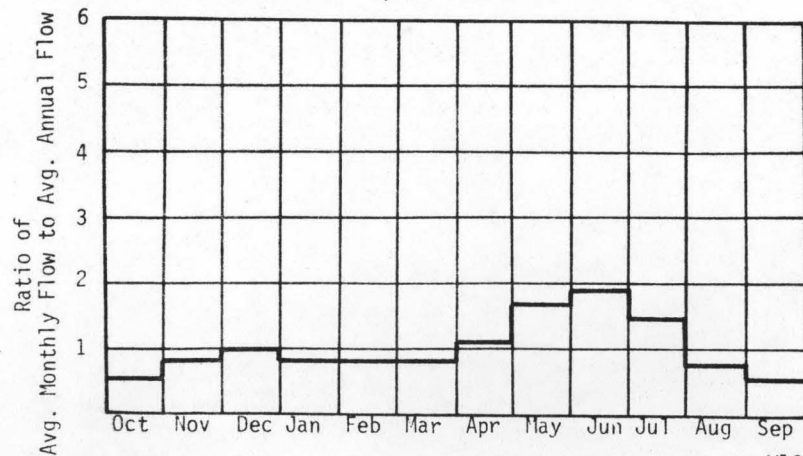
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>2665</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2050</u>	Ft. MSL
C. Total Available Head in Reach	<u>615</u>	Ft.
D. Average Slope in Reach	<u>293</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>11.0</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

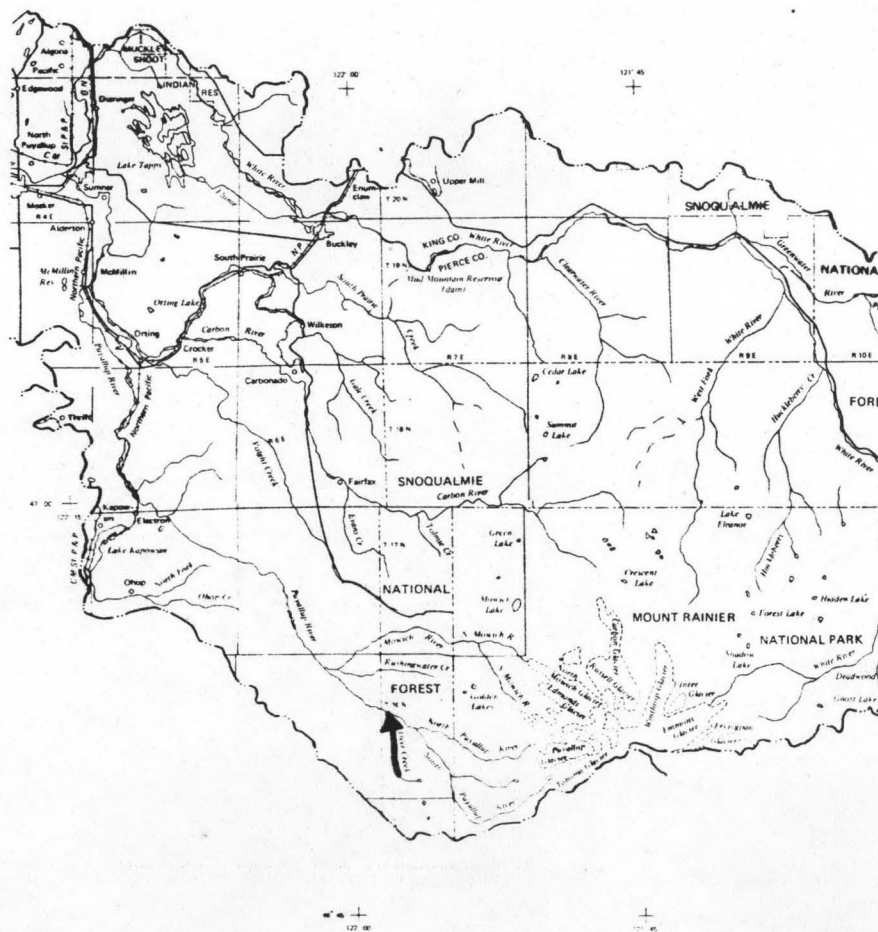
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.8	0.77	6.73	1.00
80	21.3	1.11	9.33	0.96
50	34.4	1.79	13.2	0.84
30	46.7	2.43	15.3	0.72
10	71.3	3.71	17.6	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 41 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0035

### I. LOCATION

A. State	<u>Washington</u>
B. County	<u>Pierce</u>
C. Township, Range	<u>T16N - R7E</u>
D. Latitude, Longitude	<u>46° 50' - 121° 55'</u>
E. Stream Name	<u>S. Fork Puyallup</u>
F. Major Basin Name	<u>Puyallup</u>
G. River Mile	<u>0/5.7</u>

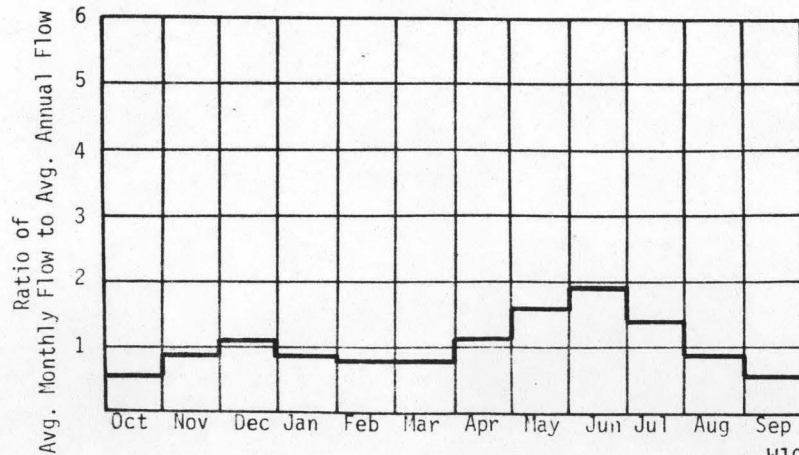
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	<u>3465</u>	Ft. MSL
B. Downstream Elevation of Reach	<u>2250</u>	Ft. MSL
C. Total Available Head in Reach	<u>1215</u>	Ft.
D. Average Slope in Reach	<u>213</u>	Ft./Mi.
E. Drainage Area above Reach Mouth	<u>17.8</u>	Sq. Mi.
F. Inflow Classification	<u>Natural</u>	

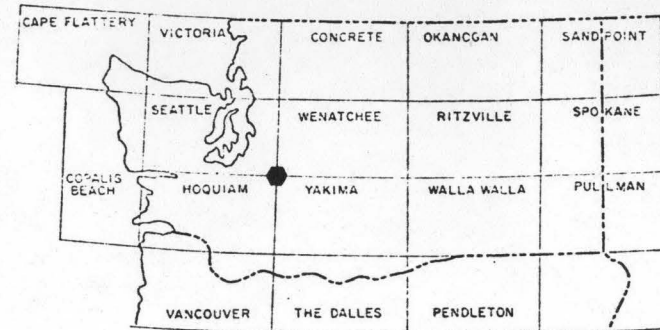
### III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	23.8	2.44	21.4	1.00
80	34.3	3.53	29.7	0.96
50	55.4	5.70	42.0	0.84
30	75.2	7.74	48.8	0.72
10	115	11.8	55.9	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 66 cfs



W10-425



LOCATIONS FOR USGS 1:250,000 MAP SERIES



## REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 01-001-000-000-000-R0036

### I. LOCATION

A. State	Washington
B. County	Pierce
C. Township, Range	T16N - R7E
D. Latitude, Longitude	46° 51' - 121° 54'
E. Stream Name	N. Puyallup
F. Major Basin Name	Puyallup
G. River Mile	0/3.3

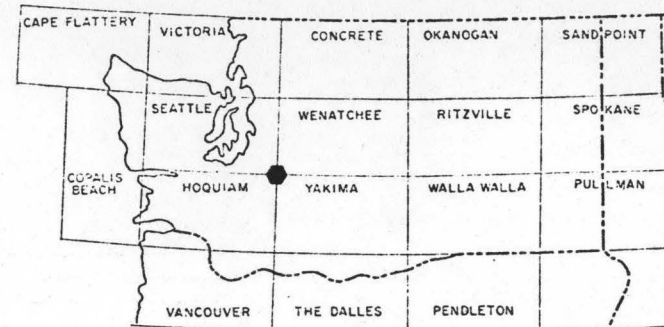
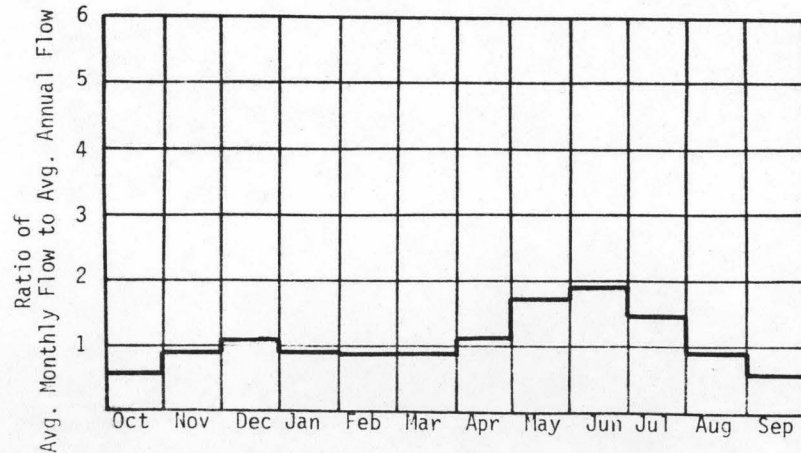
### II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2965	Ft. MSL
B. Downstream Elevation of Reach	2250	Ft. MSL
C. Total Available Head in Reach	715	Ft.
D. Average Slope in Reach	217	Ft./Mi.
E. Drainage Area above Reach Mouth	12.3	Sq.Mi.
F. Inflow Classification	Natural	

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

Exceedance Percentage	Discharge CFS	Theoretical Plant Size MW	Annual Energy Available GWH	Plant Factor
95	14.8	0.89	7.82	1.00
80	21.3	1.29	10.9	0.96
50	34.4	2.08	15.3	0.84
30	46.7	2.83	17.8	0.72
10	71.3	4.32	20.4	0.54

### IV. TYPICAL ANNUAL HYDROGRAPH QMR = 41 cfs



LOCATIONS FOR USGS 1:250,000 MAP SERIES

