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Inland Waters Directorate
Western and Northern Region

Direction générale des eaux intérieures
Région de l'Ouest et du Nord



GEOGRAPHIC OVERVIEW

BACKGROUND PAPER
ON A
NEGOTIATING STRATEGY
FOR
RECOMMENDATION #1
MACKENZIE RIVER BASIN STUDY

Supplement A

June 1985

Background Paper
on Negotiating
Strategy for Recommendation 1,
Mackenzie River Basin Study

SUPPLEMENT A
GEOGRAPHIC OVERVIEW

Engineering Division
Water Planning & Management Branch
Inland Waters Directorate
Western & Northern Region
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SUPPLEMENT A

1.1 INTRODUCTION

The Mackenzie River basin covers an area of over 1 3/4 million square kilometres, incorporating land areas in the three most western provinces and both the territories. The boundaries of British Columbia, Alberta, Saskatchewan, Yukon Territory and the Northwest Territories are traversed by numerous water courses large and small which form part of the Mackenzie River system. Supplement A is meant to serve as a catalogue of the Mackenzie Basin inter-jurisdictional subbasins, providing general information on the location and size of those basins in addition to an indication of their general geological and hydrological character. The location of meteorological and hydrometric stations in the vicinity of the transboundary basins is also provided in this document.

A total of 87 transboundary subbasins have been identified within the Mackenzie River basin. The diversity of subbasin size ranges from 34 km² (Deschermé River) to over 350 000 km² (Slave River). The identification of 87 interjurisdictional subbasins should not be misunderstood to imply that there are a total of 87 separate inter-jurisdictional subbasins or even 87 separate transboundary crossing points. Some of the transboundary watercourses cross more than one boundary while others cross the same boundary line several times. Also, in a few cases where two or three very small streams cross the same boundary and are tributary to the same watercourse, only one subbasin number has been assigned for the sake of simplicity. Section 1.2 outlines the procedures followed in identifying and describing the individual transboundary subbasins.

Lake Athabasca, on the boundary between Saskatchewan and Alberta, represents a special interjurisdictional case. Inflow to the lake from the major sources in each province are recorded while ungauged contributions to the lake can be estimated using hydrologic techniques. An agreement on the transboundary water management of Lake Athabasca water will be based on such inflow information.

Inflow to Lake Athabasca from Alberta is complicated somewhat by the fact that the Peace River contributes large quantities of water to the lake during periods of high flow. On the average Alberta and Saskatchewan contribute equally to the annual lake inflow, approximately 25,000 dam³ per year. ???

A further complication regarding Lake Athabasca involves the Fond du Lac River in Saskatchewan. The Fond du Lac River flows out of Wollaston Lake and is the major source of inflow to Lake Athabasca from Saskatchewan. A potential interjurisdictional problem may arise from the fact that Wollaston Lake has a second outlet, Cochrane River, which contributes flow to the Churchill River System, thus affecting Manitoba.

This completely ignores the fact that the Athabasca River flows into the Athabasca reservoir below McMurtry the average annual flow is 21,000,000 dam³

If this is a briefing note this information needs to be derived.

1.2 GENERAL SUBBASIN SELECTION PROCEDURE

An attempt has been made to account for all interjurisdictional watershed areas within the Mackenzie River Basin. This was accomplished through the use of 1:1,000,000 scale maps of the International Map of the World series. All drainage areas have been delineated and planimetered on the 1:1,000,000 scale maps.

The delineation of the drainage area contributing to a river at a specific point such as the intersection of the river and a boundary line would typically look like diagram Figure 1(a). However, if the drainage area is delineated for another point downstream as in the diagram Figure 1(b), an additional area shows up in Jurisdiction A which contributes to the downstream Jurisdiction B. This additional area is shown as the hatched area in Figure 1(b). Generally the additional area is small in relation to the total basin size at the boundary but on occasion can amount to a sizeable proportion of the contributing drainage area.

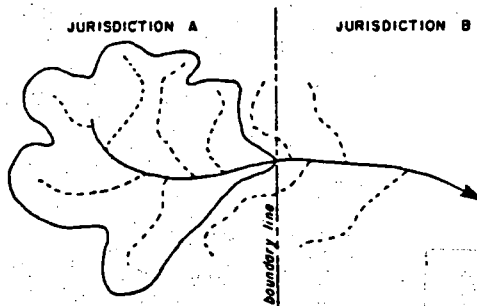


Figure 1(a)

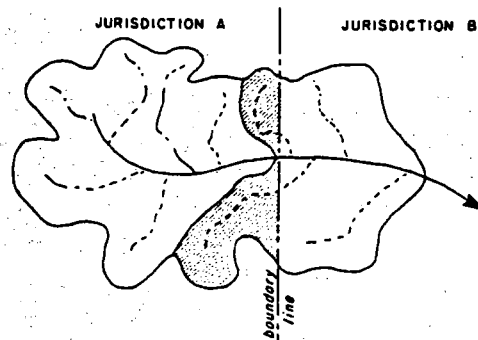


Figure 1(b)

Throughout the drainage area delineation process for the subbasins incorporated in this supplement the total contributing drainage area has been determined. All drainage area figures published in this supplement include the additional contributing areas contiguous to the subbasin at the boundary crossing point.

In several instances, two or three small streams were found in close proximity crossing the same boundary line and tributary to the same watercourse. For the sake of simplicity these streams have been classified as one interjurisdictional subbasin.

Some larger rivers cross more than one jurisdictional boundary or weave across the same boundary several times as shown in Figure 2. The gross drainage area figures provided throughout this supplement are the gross drainage areas for only that portion of the subbasin in the jurisdiction immediately upstream of the boundary crossing point. Using the diagrams in Figure 2 to illustrate, the gross drainage area for the second interjurisdictional crossing point in each case is the cross-hatched area. In order to determine the total gross drainage area of the subbasin up to the second crossing point it is necessary to look up the gross drainage area for the first crossing point and add it to the area for the second.

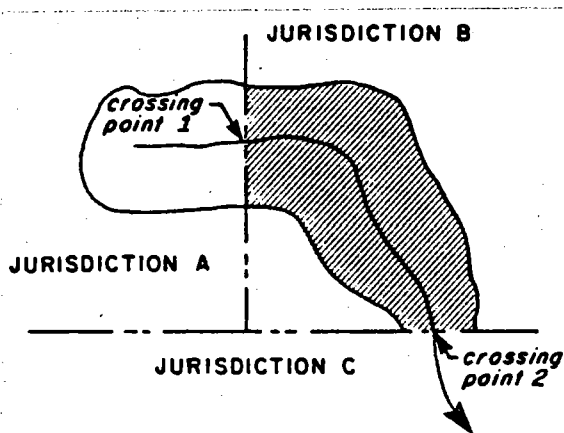


Figure 2(a)

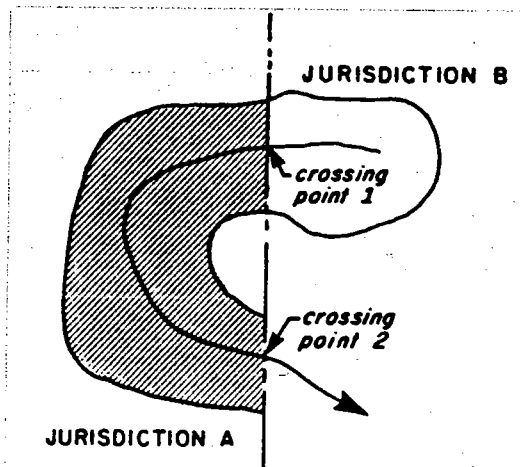


Figure 2(b)

Annual flows have been treated in a little different manner. The total average annual flow for the entire basin is provided as well as the average annual flow volume for that portion of the subbasin immediately upstream of the crossing point. Once again referring to Figure 2, the total average annual flow volume for the second crossing point is the value for the whole basin upstream of the second crossing point. However, the value, which has been termed the, "Contributed", average annual flow represents the average annual flow volume for the cross-hatched area only.

The average annual flow volumes for rivers with hydrometric gauging stations were determined from records at the gauging station. Estimated volumes at the boundary crossing points were then obtained using a drainage area ratio technique. Average annual flow figures for ungauged basins are estimates based on a formula statistically derived for the Mackenzie River subbasins.

The formula is based on a statistical analysis which was conducted using data from fourteen hydrometric stations on Mackenzie River tributaries. Stations selected for the analysis were limited to those in the vicinity to the interjurisdictional boundaries. Average annual flow volumes for the selected hydrometric stations were correlated with gross drainage area, mean annual temperature, mean annual precipitation and latitude. The only significant reduction in the residual was obtained by correlation with the gross drainage area as the only independent variable, giving a correlation coefficient of 0.897. The formula used to estimate average annual flow volume at the boundary crossing points was:

$$Q = 0.008A$$

where Q = average annual flow in m^3/s and

A = gross drainage area in km^2 .

The average annual flow value in m^3/s was converted to the average annual flow volume in thousands decametres cubed (dam^3) using the conversion factor 31.536.

1.3 INFORMATION PROVIDED

Table 1 provides a list of the 87 subbasins along with information on the location, boundary crossed, drainage area and average annual flow volume. Each subbasin has been arbitrarily assigned a number from 1 to 87 for identification purposes. The boundaries have been listed in Table 2 along with the total number of crossing points and a breakdown indicating the number of crossings in each direction.

A map, Figure 3, shows the meteorologic stations within the Mackenzie River Basin which have been selected as being representative of climatic conditions over the various transboundary basins. The meteorologic stations have been listed in Table 3 with average annual precipitation and temperature figures.

Figures 4 to 7 are index maps showing the interjurisdictional boundaries and the 87 subbasins. These maps provide an overview of their relative location and size.

Each of the 87 subbasins is described in greater detail in Appendix A. A separate page has been devoted to each subbasin providing information on drainage area, average annual flow volume, geography, and the closest hydrometric and water quality monitoring stations. An attempt was made to select hydrometric and water quality monitoring stations which would be representative of the particular transboundary subbasin. However, the dearth of monitoring stations often made it necessary to indicate only the closest stations to the crossing point. In addition a sketch map of the subbasin is provided on each of the 87 detail sheets to show the shape of the subbasin and its orientation to both the boundary crossed and to adjacent interjurisdictional subbasins.

Table 1

**Mackenzie River Basin
Index of Interjurisdictional Subbasins**

Sub-Basin Number	Name	Location of Crossing Point ¹			IMW Map #	Gross ² Drainage Area (km ²)	Annual Flow ³ (1000 Dam ³)		Border ⁴ Crossing	Receiving Sub-Basin(s)
		Latitude	Longitude	Total			Contr'd			
01	La Biche River	60° 00'	124° 12'	NP-9/10	2 105	531	531	Y-B	29	
02	Beaver River	60° 00'	124° 30'	NP-9/10	8 270	1 959	1 959	Y-B	29	
03	Crow River	60° 00'	125° 25'	NP-9/10	515	223	130	Y-B	29	
04	Crow River (trib)	60° 00'	125° 46'	NO-10	170	93	93	B-Y	3-29	
05	Smith River	60° 00'	126° 23'	NP-9/10	2 064	619	520	Y-B	29	
06	Smith River (trib)	60° 00'	126° 15'	NO-9; 10	394	99	99	B-Y	5-29	
07	Coal River	60° 00'	127° 07'	NP-9/10; 7/8/9	8 599	3 063	3 063	Y-B	29	
08	Liard River (trib)	60° 00'	127° 24'	NP-9/10	357	90	90	Y-B	29	
09	Irons Creek	60° 00'	127° 53'	NP-7/8/9; 9/10	515	130	130	Y-B	29	
10	Hyland River	60° 00'	128° 11'	NP-7/8/9; 9/10	9 362	4 280	4 280	Y-B	29	
11	Liard River	60° 00'	128° 36'	NP-7/8/9	30 652	12 190	11 346	Y-B	29	
12	Albert Creek (trib)	60° 00'	129° 19'	NO-9	673	170	170	B-Y	11-29	
13	Little Rancneria River	60° 00'	129° 48'	NO-9	1 554	392	392	B-Y	11-29	
14	L. Rancheria R. (trib)	60° 00'	129° 52'	NO-9	585	148	148	B-Y	11-29	
15	Tootsee Lake	60° 00'	130° 18'	NO-9	533	134	134	B-Y	11-29	
16	Petitot River	60° 00'	123° 00'	NO-10	12 087	5 673	3 049	B-N		
17	Petitot River (trib)	60° 00'	121° 30'	NP-9/10	1 702	429	429	N-B	16	
18	Petitot River	59° 40'	120° 00'	NO-11	7 563	2 195	1 908	A-B	16	
19	Petitot River	60° 00'	118° 28'	NP-11/12	1 137	287	287	N-A	18-16	
20	Kakisa River	60° 00'	120° 10'	NO-10	62	16	16	B-N		
21	Kakisa River	60° 00'	119° 56'	NO-11	407	167	103	A-N		
22	Shekille R. (trib)	59° 06'	120° 00'	NO-11	811	55	55	A-B	25-39	
23	Hay River	58° 23'	120° 00'	NO-11	2 963	199	199	A-B	25-39	
24	Little Buffalo River	58° 16'	120° 00'	NO-11	422	28	28	A-B	25-39	
25	Hay River	58° 44'	120° 00'	NO-10	7 866	811	529	B-A	39	
26	Fontas River	57° 56'	120° 00'	NO-11	961	242	242	A-B	29	
27	Chinchaga River	57° 19'	120° 00'	NO-10	790	53	53	B-A	39	
28	Doig River	56° 57'	120° 00'	NO-11	1 658	418	418	A-B	38-71	
29	Liard River	60° 00'	123° 48'	NO-9; 10	126 617	55 727	32 400	B-N		
30	Pouce Coupé R. (trib)	55° 58'	120° 00'	NO-10; NN-10	218	55	55	B-A	71	
31	Pouce Coupé River	55° 53'	120° 00'	NN-10	1 250	274	120	B-A	71	
32	Pouce Coupé River	55° 40'	120° 00'	NN-11	1 600	154	154	A-B	31-71	
33	Beaverlodge River	55° 14'	120° 00'	NN-10	311	78	78	B-A	71	
34	Redwillow River	55° 03'	120° 00'	NN-10	997	251	251	B-A	71	
35	Wapiti River	54° 43'	120° 00'	NN-10	2 574	1 266	1 266	B-A	71	
36	Narraway River	54° 21'	120° 00'	NN-10	761	192	192	B-A	71	
37	Kakwa River	54° 11'	120° 00'	NN-10	269	68	68	B-A	71	
38	Peace River	56° 09'	120° 00'	NO-9; 10 NN-8/9; 10	120 388	51 784	51 366	B-A	71	
39	Hay River	60° 00'	116° 57'	NO-11	33 210	3 098	2 234	A-N		
40	Hay River (trib)	60° 00'	117° 24'	NO-10	191	48	48	N-A	39	
41	Swan Lake	60° 00'	116° 47'	NO-11	98	25	25	A-N		
42	Creek to Buffalo Lake	60° 00'	116° 23'	NO-11	124	31	31	A-N		
43	Yates River	60° 00'	116° 04'	NO-11	2 388	602	602	A-N		
44	Whitesand River	60° 00'	115° 36'	NO-11	3 569	900	900	A-N		
45	Tourangeau Creek	60° 00'	115° 26'	NO-11	515	130	130	A-N		
46	Buffalo River	60° 00'	114° 30'	NO-11; 12	4 659	600	600	A-N		
47	Copp Lake (trib)	60° 00'	114° 10'	NO-11; 12	352	89	89	A-N		
48	Sass River	60° 00'	113° 13'	NO-12	544	137	137	A-N		
49	Little Buffalo River	60° 00'	112° 51'	NO-12	4 509	1 138	1 138	A-N		
50	Salt River	60° 00'	112° 22'	NO-12	1 707	431	431	A-N		
51	Dog River (trib)	60° 00'	110° 58'	NP-12/13	106	27	27	N-A	71	
52	Tethul River	60° 00'	111° 29'	NO-12	220	728	56	A-N		
53	Tethul River	60° 00'	111° 13'	NP-12/13	1 072	672	270	N-A	52	
54	Tethul River	60° 00'	110° 36'	NO-12	681	402	172	A-N	53-52	
55	Tethul River	60° 00'	110° 29'	NO-12	391	230	99	N-A	54-53-52	
56	Tethul River	60° 00'	110° 18'	NO-12	458	131	116	A-N	55-54-53 52	
57	Tethul River	59° 52'	110° 00'	NO-12	60	15	15	S-A	56-55-54 53-52	
58	Colin Lake	59° 32'	110° 00'	NO-12	878	222	222	A-S	80-71	
59	Lake Athabasca (trib)	59° 22'	110° 00'	NO-12	228	58	58	A-S	80-71	
60	Lake Athabasca (trib)	58° 57'	110° 00'	NO-12	1 658	418	418	S-A	71	
61	Douglas River	58° 22'	110° 00'	NO-12	1 802	275	275	S-A	71	
62	Old Fort River	58° 12'	110° 00'	NO-12	935	236	236	S-A	71	
63	Maybelle River	57° 57'	110° 00'	NO-12	269	68	68	S-A	71	
64	Richardson River	57° 44'	110° 00'	NO-12	1 593	402	402	S-A	71	
65	Firebag River	57° 21'	110° 00'	NO-12	751	189	189	S-A	71	
66	Descharme River	57° 07'	110° 00'	NO-12	34	9	9	A-S	68-71	
67	High Hill River	56° 50'	110° 00'	NO-12	383	97	97	S-A	71	
68	Clearwater River	56° 42'	110° 00'	NO-12; 13	14 185	2 195	2 186	S-A	71	
69	Clearwater R. (trib)	56° 34'	110° 00'	NO-12	98	25	25	S-A	71	

Table 1 (continued)

Sub-Basin Number	Name	Location of Crossing Point ¹			Gross ² Drainage Area (km ²)	Annual Flow ³ (1000 Dam ³)		Border ⁴ Crossing	Receiving Sub basin(s)
		Latitude	Longitude	IMW Map #		Total	Contr'd		
70	Winefred R. (trib)	56° 06'	110° 00'	NO-12; NN-12	298	75	75	S-A	71
71	Slave River	60° 00'	111° 49'	NO-11; 12 NN-11; 12	355 562	108 361	83 457	A-N	
72	Nolan River	60° 00'	109° 06'	NP-12/13	878	222	222	N-S	79
73	Abitau River	60° 00'	108° 36'	NP-12/13	2 929	739	739	N-S	79
74	Ena River	60° 00'	108° 10'	NP-12/13	575	145	145	N-S	79
75	Tazin River	60° 00'	107° 36'	NP-12/13	1 463	369	369	N-S	79
76	Grease River	60° 00'	106° 05'	NP-12/13	2 846	718	718	N-S	80-71
77	Selwyn Lake	60° 00'	104° 40'	NP-12/13; 13/14	3 222	813	813	N-S	80-71
78	Striding River	60° 00'	103° 59'	NP-12/13; 13/14	521	131	131	N-S	80-71
79	Tazin River	60° 00'	109° 48'	NO-12; 13	4 216	2 539	1 064	S-N	
80	Lake Athabasca	59° 10'	110° 00'	NO-12; 13	93 305	25 482	23 540	S-A	71
81	Big Fish River	68° 30'	136° 27'	NR-7/8/9	668	169	169	Y-N	
82	Little Fish Creek	68° 14'	136° 27'	NR-7/8/9; NQ-7/8/9	308	78	78	Y-N	
83	Rat River	67° 53'	136° 27'	NQ-7/8/9	179	45	45	Y-N	
84	Vittrekwa River	67° 00'	135° 35'	NQ-7/8/9	679	171	171	Y-N	
85	Peel River	67° 00'	135° 00'	NQ-7/8/9	67 343	23 622	23 622	Y-N	
86	Satah River	67° 00'	134° 29'	NQ-7/8/9	940	237	237	Y-N	
87	Kakisa R. (trib)	60° 00'	119° 16'	NP-11/12	252	64	64	N-A	21

1 - The International Maps of the World (I.M.W.) are the metric version of the National Topographic Survey (N.T.S.) maps.

2 - Gross drainage area refers only to the area in the jurisdiction immediately upstream of the crossing point.

3 - The total figure is the average annual flow volume from all upstream contributing areas, regardless of their jurisdiction. The (contr'd) average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

4 - Letters indicate the boundary being crossed, the first letter represents the supplying province or territory, the second represents the receiving province or territory;
B - British Columbia; A - Alberta; S - Saskatchewan; Y - Yukon;
N - Northwest Territories.

Table 2

Table Showing the Number of
Boundary Crossing Points by Boundary

Boundary	Total Number of Crossing Points	Breakdown of Crossing Points		
		From	To	Number of Crossing Points
British Columbia - Yukon	15	B.C. Yukon	Yukon B.C.	6 9
Alberta - Northwest Territories	22	Alta. N.W.T.	N.W.T. Alta.	16 6
British Columbia - Northwest Territories	4	B.C. N.W.T.	N.W.T. B.C.	3 1
Yukon - Northwest Territories	6	Yukon N.W.T.	N.W.T. Yukon	6 0
Saskatchewan - Northwest Territories	8	Sask. N.W.T.	N.W.T. Sask.	1 7
Alberta - British Columbia	17	Alta. B.C.	B.C. Alta.	7 10
Alberta - Saskatchewan	15	Alta. Sask.	Sask. Alta.	3 12

TABLE 3

MACKENZIE RIVER BASIN INTERJURISDICTIONAL WATERS TASK FORCE

General Meteorological Information

P - Average Annual Precipitation (mm)
 Y/P - Period of record; complete years/partial years
 * - Greater than 15 years of record

Station Name	Atmospheric Environment Station No.	P(mm)	Temperature (C°)			Y/P
			Mean Annual	Mean Annual Maximum	Mean Annual Minimum	
B.C.						
Mackenzie 'BCFS'	1184792	483.7	-	-	-	0/3
Ware	1188696	445.6	-0.6	29.8	-45.3	3/13
* Fort Nelson 'A'	1192940	443.4	-1.1	31.3	-42.7	42/3
Fort St. John	1182998	500.4	0.3	31.9	-44.4	5/15
* Fort St. John 'A'	1183000	460.9	1.3	29.8	-38.7	39/1
* Fort St. James	1092970	432.0	1.9	30.7	-39.3	85/2
Lower Post	1194722	402.6	-3.2	30.9	-49.3	5/7
* Smith R. 'A'	1197530	467.9	-2.9	29.3	-48.7	24/2
N.W.T.						
* Fort Providence	2201800	269.4	-4.2	30.9	-46.9	17/13
* Fort Reliance	2201900	252.3	-6.9	28.3	-46.6	32/2
* Fort Simpson	2202100	324.8	-4.1	31.2	-46.8	42/24
* Fort Smith 'A'	2202200	342.3	-3.2	31.3	-46.4	36/3
* Hay River	2202400	330.1	-3.5	31.2	-44.4	34/5
* Inuvik	2202570	270.7	-9.5	28.9	-48.8	23/2
* Norman Wells 'A'	2202800	328.3	-6.1	30.6	-46.7	38/1
Tuktoyaktuk	2203900	172.2	-10.6	27.5	-47.0	4/5
* Tuktoyaktuk	2203910	139.2	-10.7	26.1	-43.6	22/3
* Yellowknife 'A'	2204100	257.4	-5.2	28.1	-45.4	38/2
* Yellowknife Hydro	2204200	280.8	-6.1	28.6	-47.4	28/10
Alberta						
* Jasper	3053520	399.2	2.8	31.9	-37.0	44/12
* Fort McMurray 'A'	3062693	451.4	-0.2	32.2	-42.6	38/0
* Fort McMurray	3062695	427.8	-1.0	33.7	-46.7	25/8
* Slave Lake	3066000	463.7	0.9	31.2	-41.7	31/10
Whitecourt Forest.	3067392	-	-	-	-	0/36
* Fort Chipweyan	3072657	339.6	-2.8	30.4	-44.3	29/32
Fort Chipweyan 'A'	3072658	393.9	-2.3	31.0	-46.6	12/3
Grande Prairie	3072910	542.6	0.6	31.8	-46.8	4/6
* Grande Prairie 'A'	3072920	439.6	1.2	30.8	-42.0	39/1
High Level 'A'	3073145	334.7	-2.0	29.4	-50.2	2/2
High Level 'RS'	3073150	334.2	-4.3	30.6	-	1/10
Saskatchewan						
Buffalo Narrows	4060980	497.4	-1.1	30.7	-44.4	2/6
Buffalo Narrows	4060981	446.5	-0.2	30.8	-42.9	8/4
* Uranium City 'A'	4068340	349.8	-3.4	30.2	-45.3	22/4

MACKENZIE RIVER BASIN



Figure 3

Representative Metrologic Stations with >15 years of record

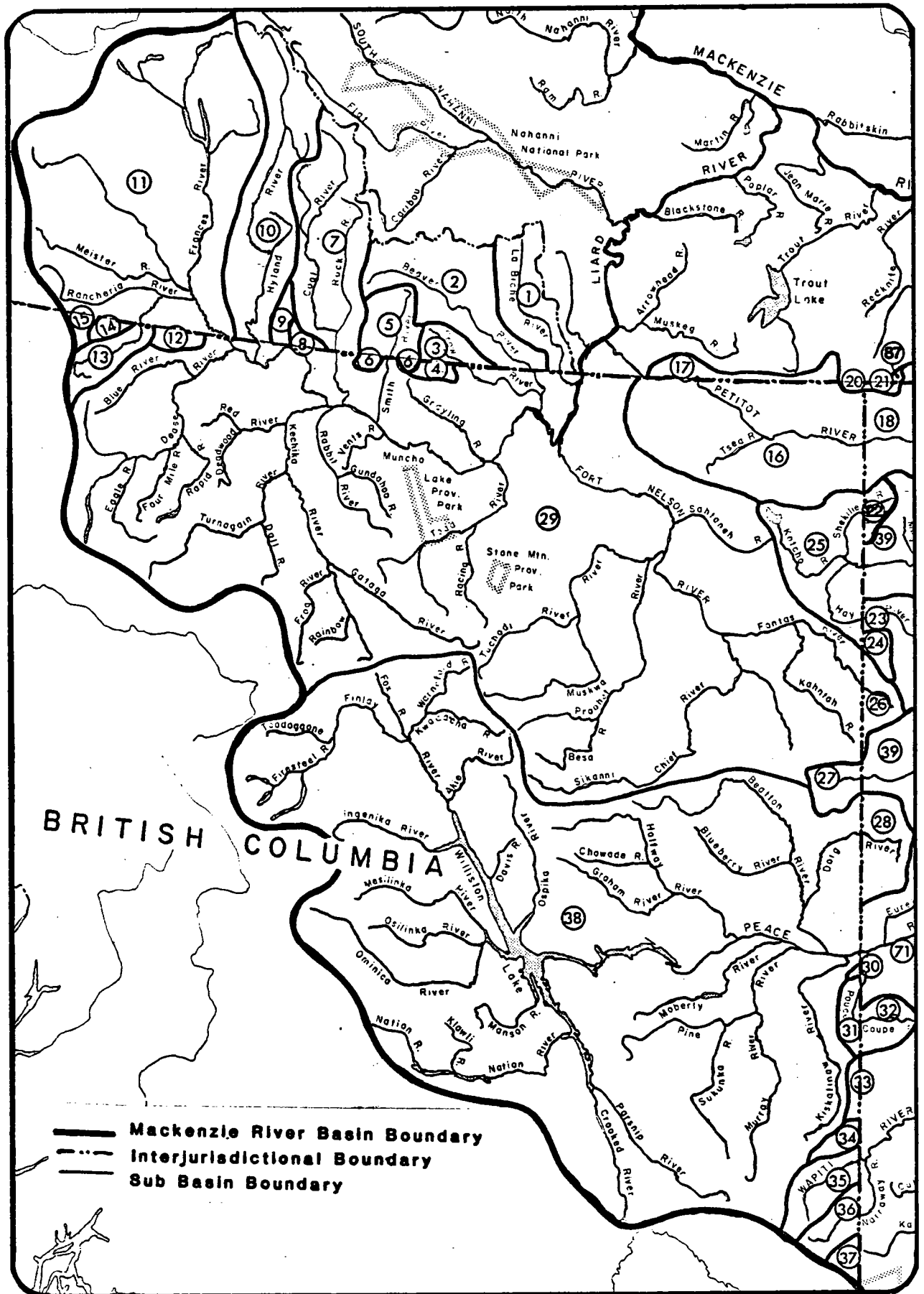


Figure 4
KEY MAP

Mackenzie River Interjurisdictional Subbasins
contiguous with BRITISH COLUMBIA

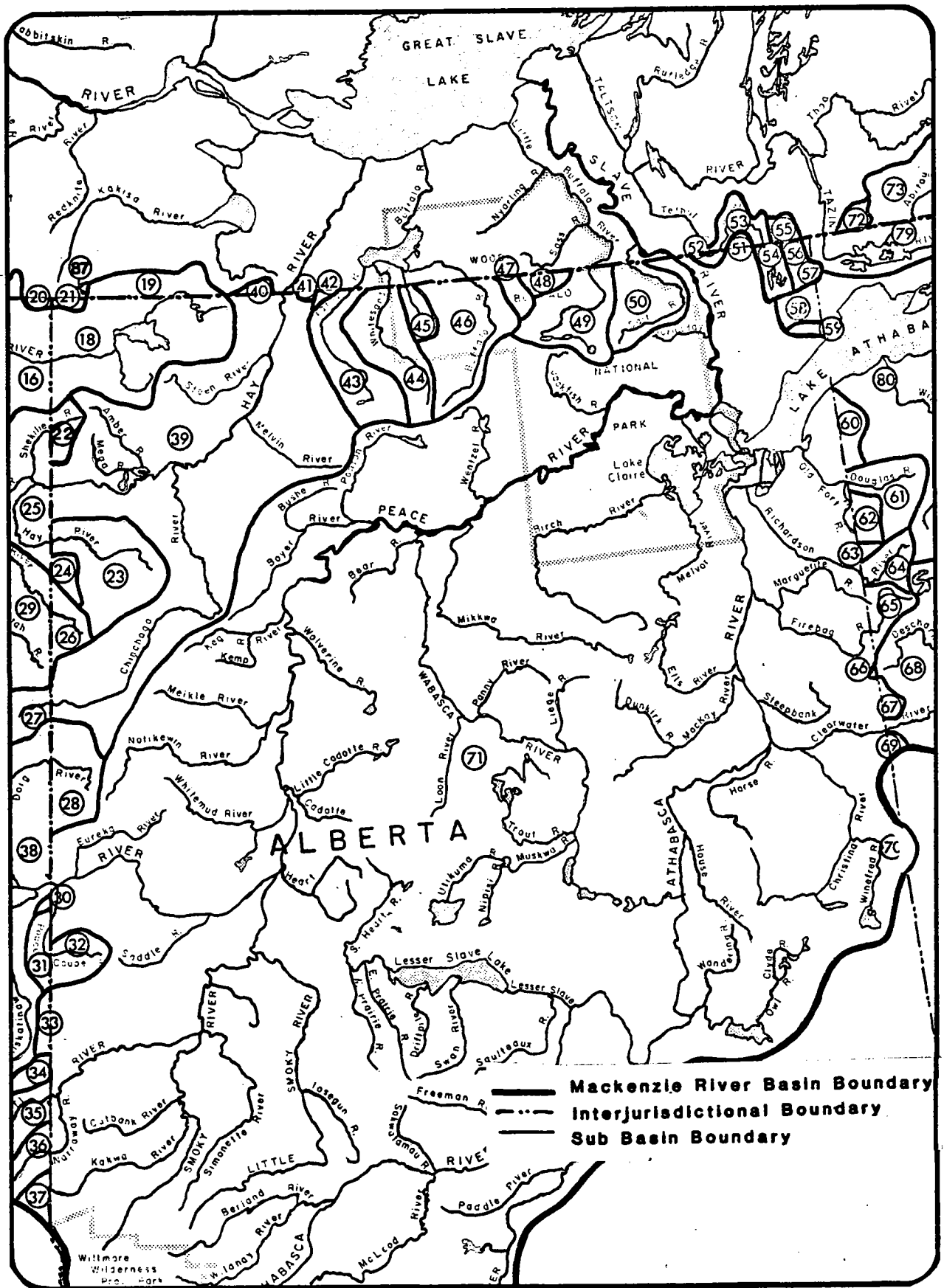
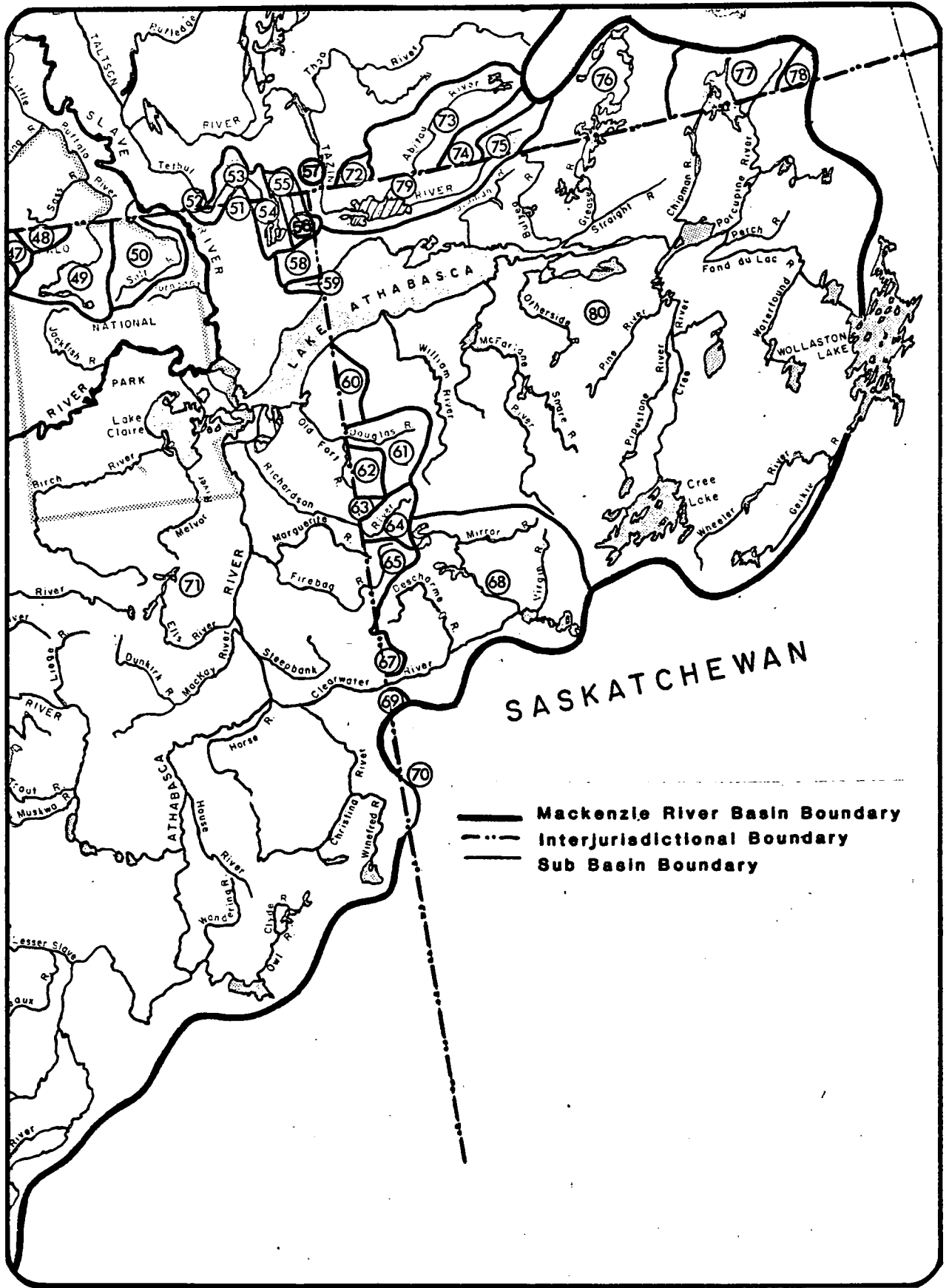


Figure 5
KEY MAP

Mackenzie River Interjurisdictional Subbasins
contiguous with ALBERTA



- Mackenzie River Basin Boundary
- - - Interjurisdictional Boundary
- Sub Basin Boundary

Figure 6
KEY MAP

Mackenzie River Interjurisdictional Subbasins
contiguous with SASKATCHEWAN

APPENDIX A

Mackenzie River Basin
Interjurisdictional Subbasin Number 1

River Name: La Biche River

Gross Drainage Area (km²): 2105

*Average Annual Flow Volume (1000's dam³): Total 531
Contributed 531

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 124° 12'

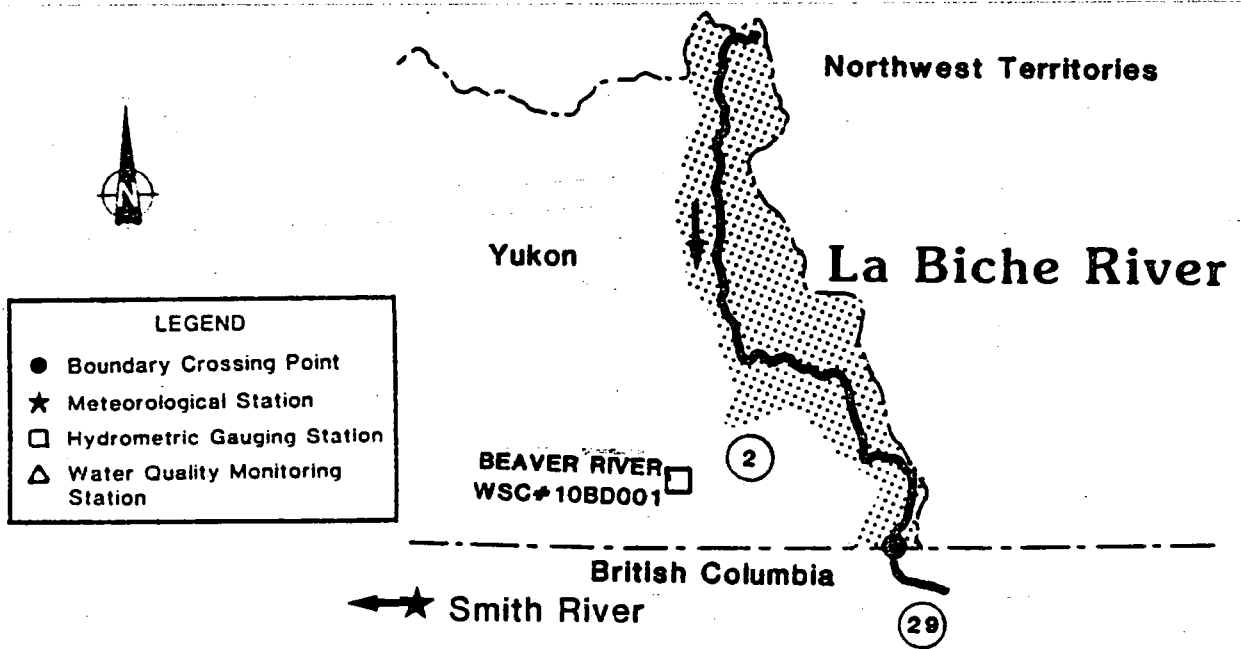
I.M.W. Map number(s): NP-9/10

General Topography: low mountainous area between the Liard Range and the Logan Mountains

General Location: west of the Yukon-NWT Boundary and north of the Yukon-B.C. boundary.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 2

River Name: Beaver River

Gross Drainage Area (km²): 8270

*Average Annual Flow Volume (1000's dam³): Total 1959
Contributed 1959

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 124° 30'

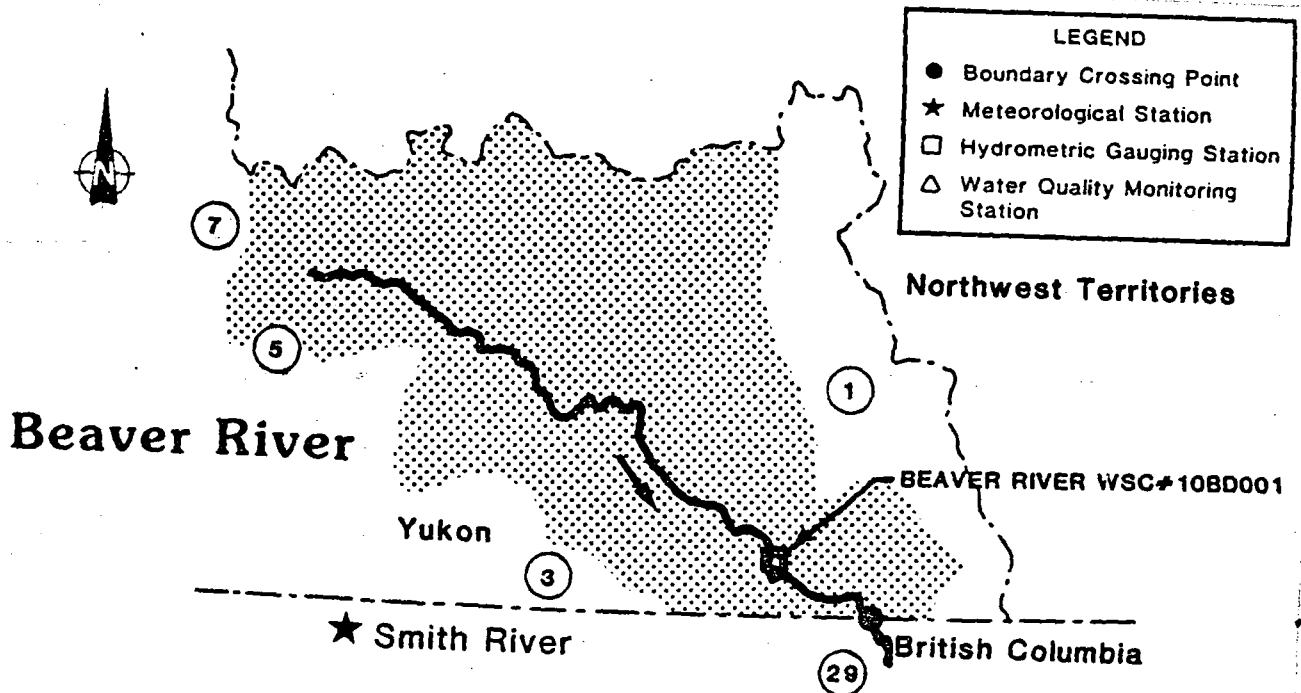
I.M.W. Map number(s): NP-9/10

General Topography: low mountains

General Location: south of the Logan Mountains and north of
the B.C. Yukon borders.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 3

River Name: Crow River

Gross Drainage Area (km²): 515

*Average Annual Flow Volume (1000's dam³): Total 223
Contributed 130

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 125° 25'

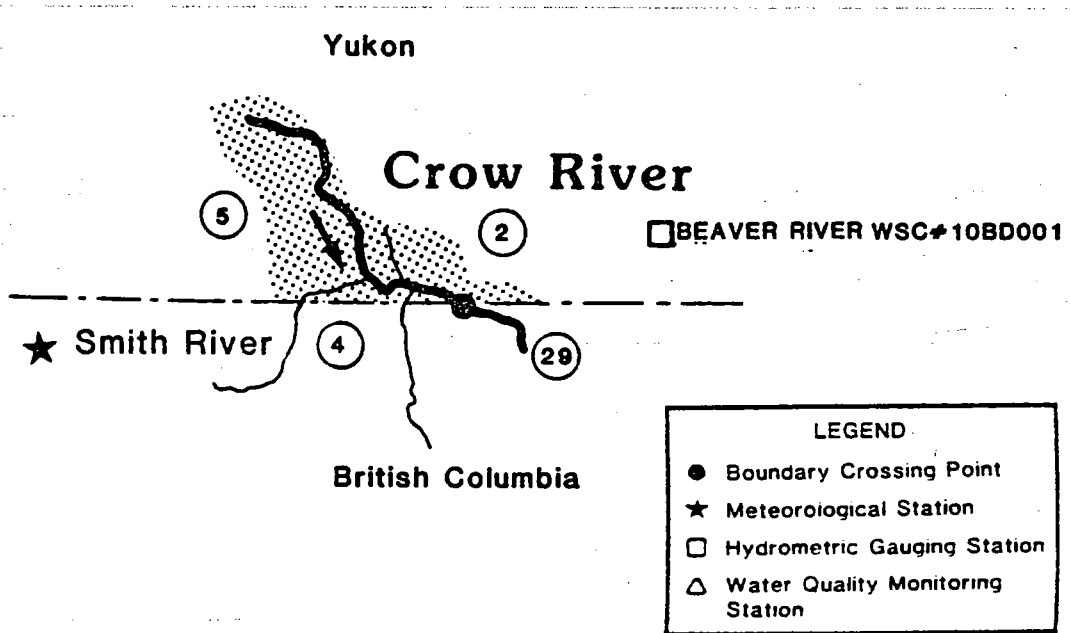
I.M.W. Map number(s): NP-9/10

General Topography: flat high plain

General Location: directly north of the settlement of Liard River.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 4

River Name: Crow River tributaries

Gross Drainage Area (km²): 370

*Average Annual Flow Volume (1000's dam³): Total 93
Contributed 93

Boundary Crossing: B.C. to Yukon

Latitude; Longitude: 60° 00'; 125° 46'

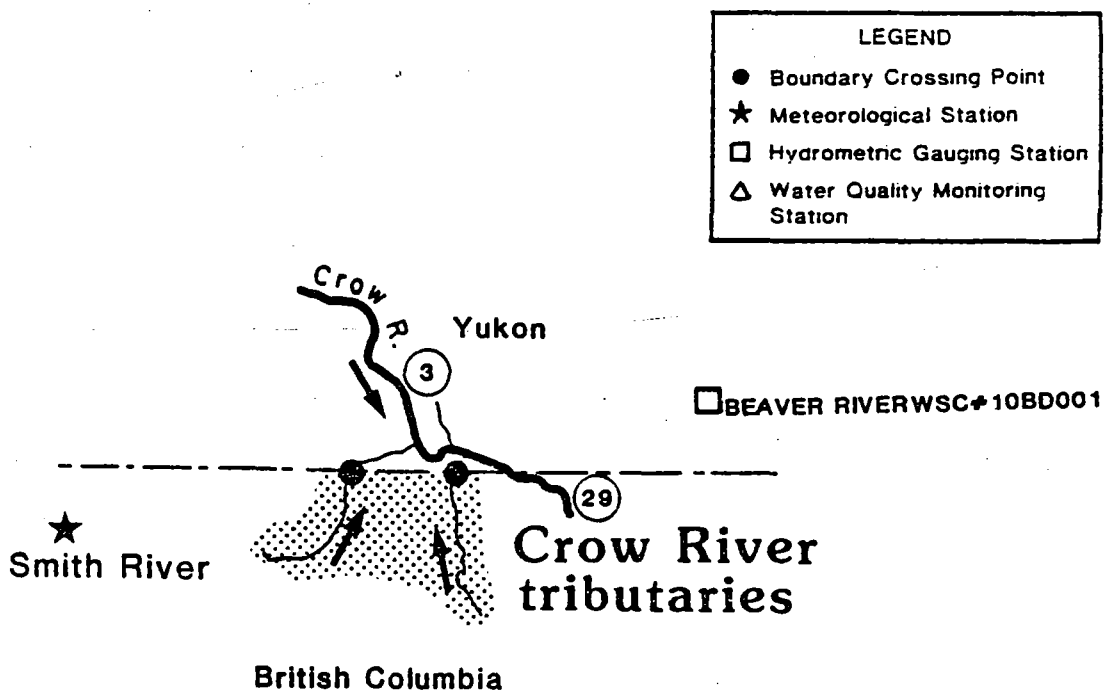
I.M.W. Map number(s): NO 10

General Topography: flat high plain

General Location: directly north of the settlement of Liard River.

This basin contributes to subbasin number: 3 and 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 5

River Name: Smith River

Gross Drainage Area (km²): 2064

*Average Annual Flow Volume (1000's dam³): Total 619
Contributed 520

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 126° 23'

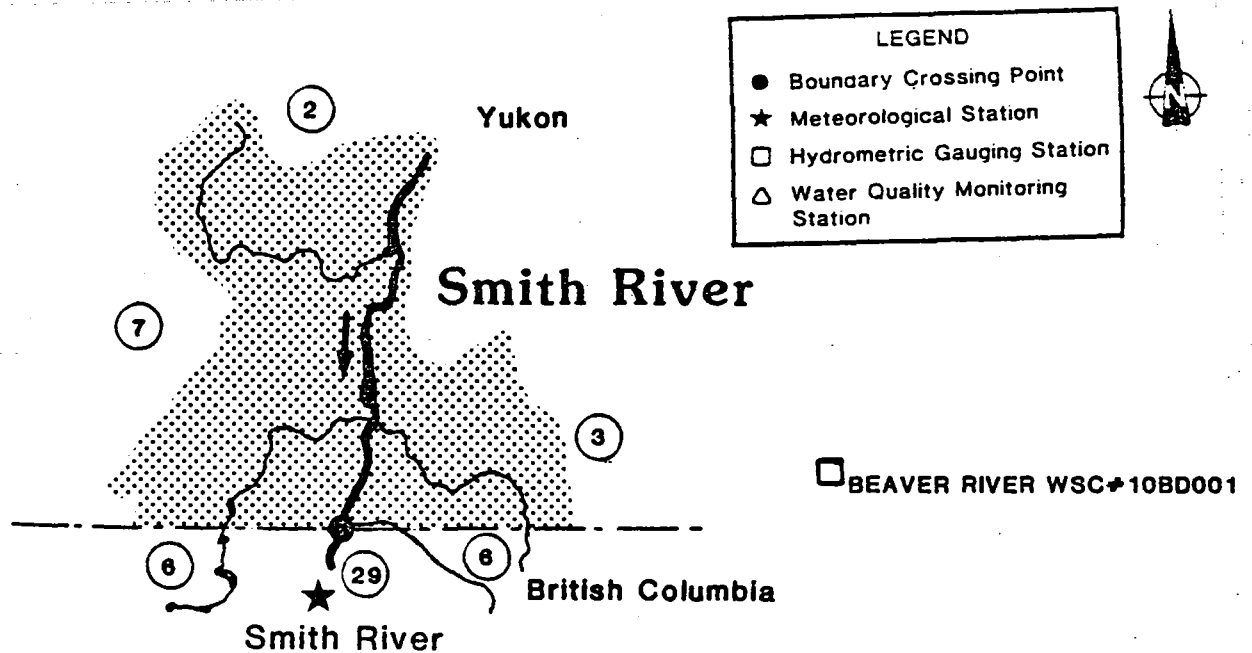
I.M.W. Map number(s): NP-9/10

General Topography: low flat land with numerous small lakes

General Location: directly north of the settlement of Liard River.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 6

River Name: Smith River tributaries

Gross Drainage Area (km²): 394

*Average Annual Flow Volume (1000's dam³): Total 99
 Contributed 99

Boundary Crossing: B.C. to Yukon

Latitude; Longitude: 60° 00'; 126° 15'

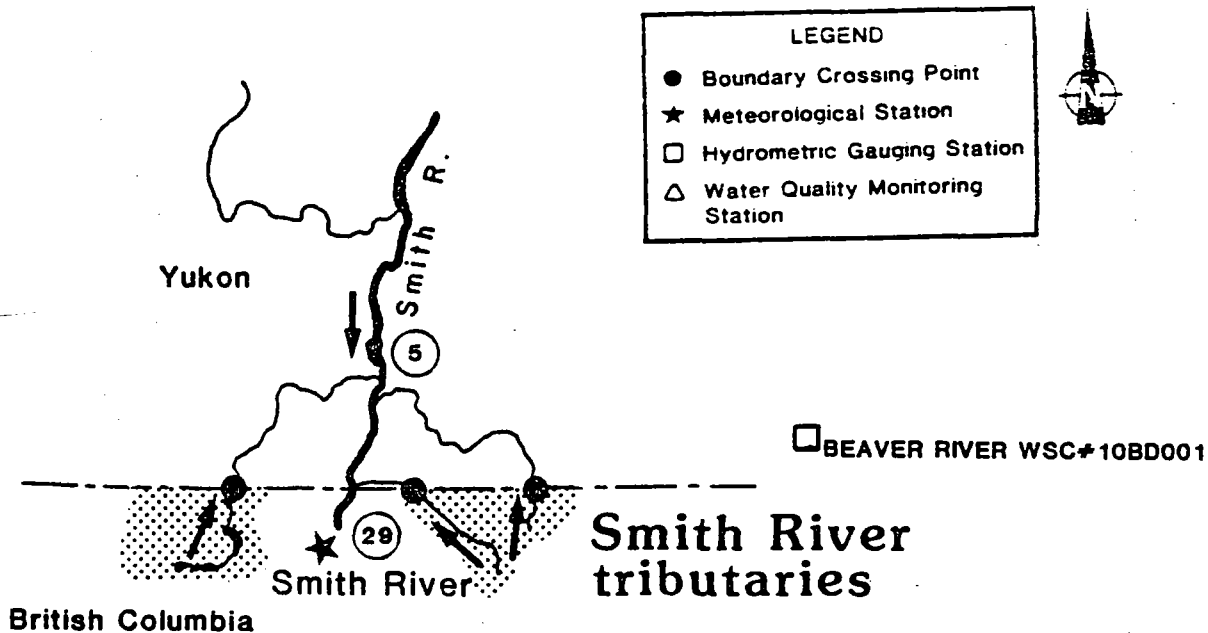
I.M.W. Map number(s): NP-9; 10

General Topography: low flat land with numerous small lakes

General Location: directly north of the settlement of Liard River.

This basin contributes to subbasin number: 5 and 29

Meteorologic station(s) applicable to the basin: Smith River
 AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 7

River Name: Coal River

Gross Drainage Area (km²): 8599

*Average Annual Flow Volume (1000's dam³): Total 3063
Contributed 3063

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 127° 07'

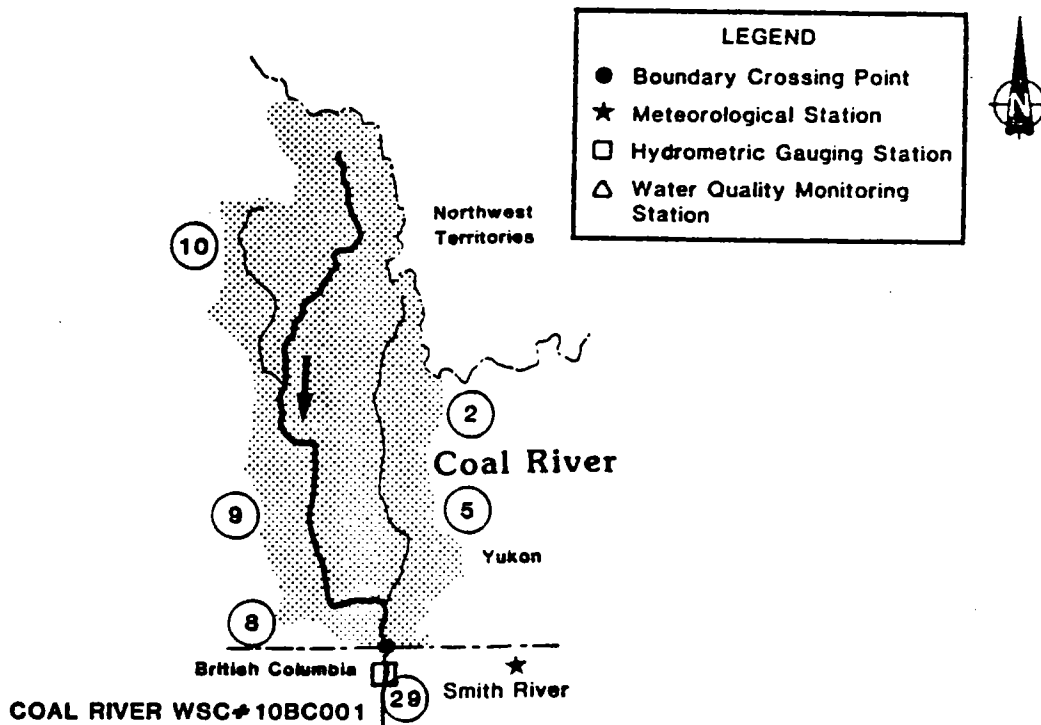
I.M.W. Map number(s): NP-7/8/9; 9/10

General Topography: upper reaches lie in the Logan Mountains
and the lower section in the low land
surrounding the Liard River

General Location: straddles the area between the Logan
Mountains and the B.C.-Yukon boundary.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 8

River Name: Liard River tributaries

Gross Drainage Area (km²): 357

*Average Annual Flow Volume (1000's dam³): Total 90
Contributed 90

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 127° 24'

I.M.W. Map number(s): NP-9/10

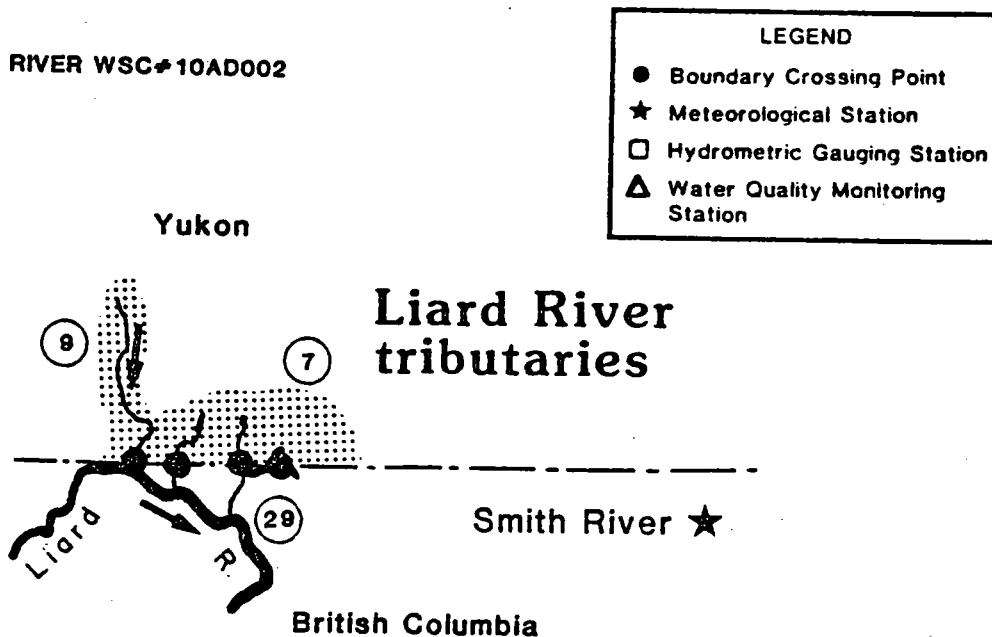
General Topography: steeply sloping land with several small lakes

General Location: at the point where the Liard River swings north to almost touch the Yukon-B.C. boundary.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530

HYLAND RIVER WSC#10AD002



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 9

River Name: Irons Creek

Gross Drainage Area (km²): 515

*Average Annual Flow Volume (1000's dam³): Total 130
Contributed 130

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 127° 53'

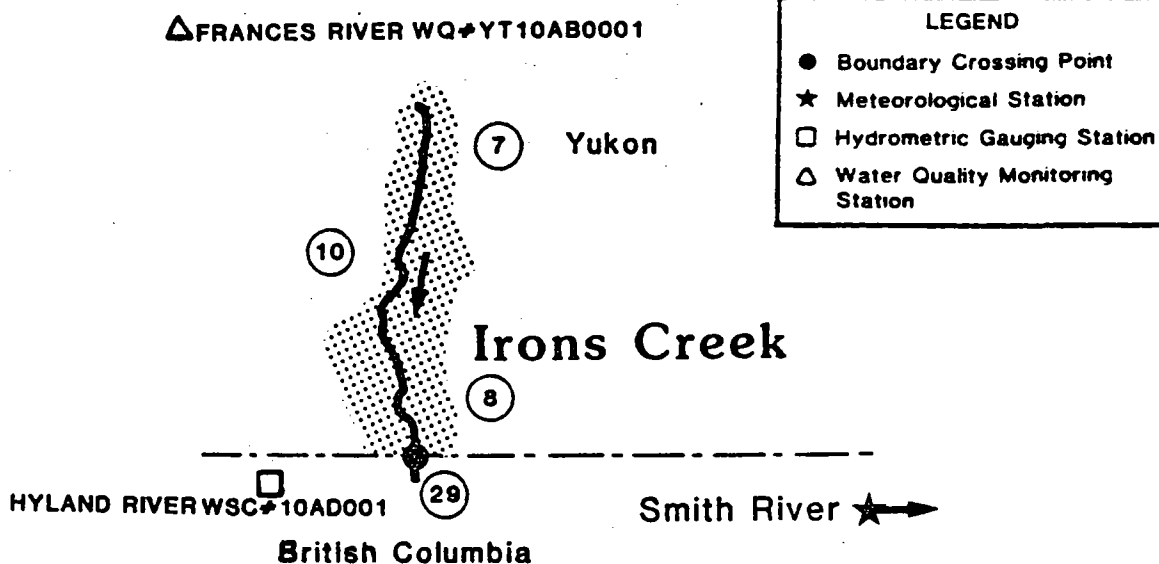
I.M.W. Map number(s): NP-7/8/9; -9/10

General Topography: mountainous

General Location: flows south from the Logan Mountains.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 10

River Name: Hyland River

Gross Drainage Area (km²): 9362

*Average Annual Flow Volume (1000's dam³): Total 4280
 Contributed 4280

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 128° 11'

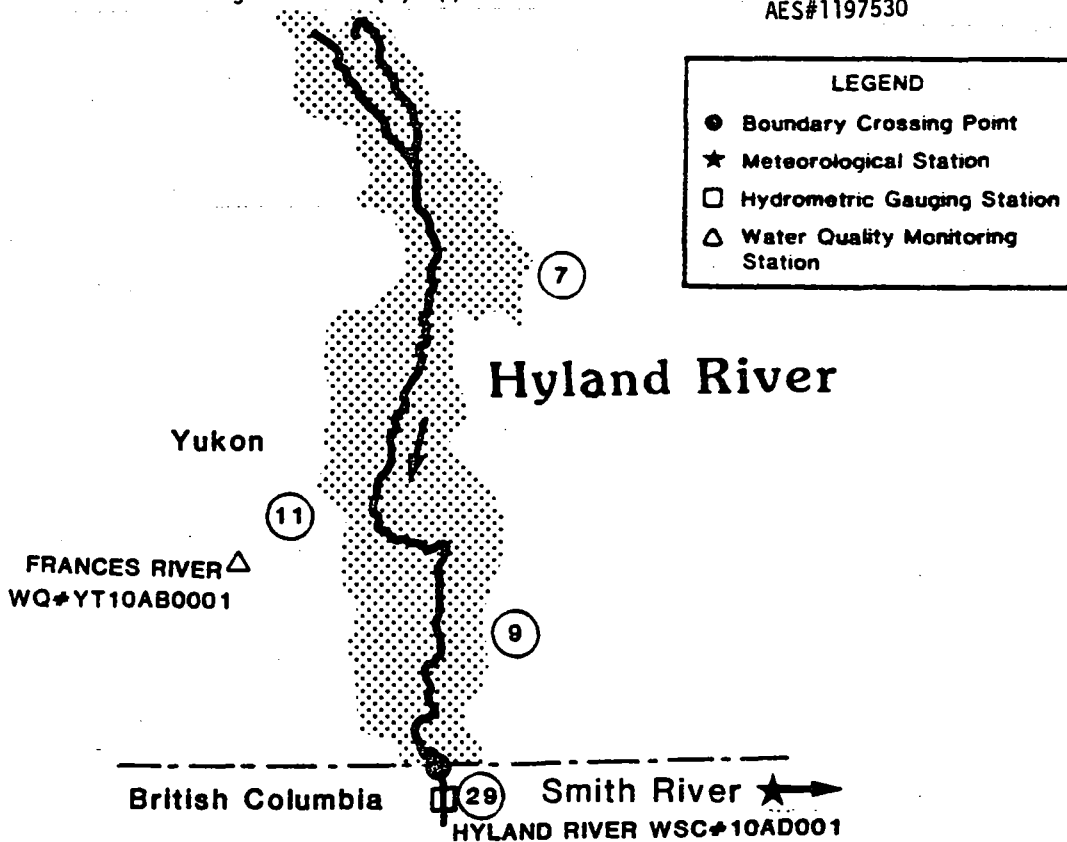
I.M.W. Map number(s): NP-7/8/9; -9/10

General Topography: varies from low flat land near the Liard River to the heart of the Logan Mountains

General Location: spans the area between the settlement of Tungston N.W.T. and Watson Lake near the Yukon-B.C. border.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
 AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 11

River Name: Liard River

Gross Drainage Area (km²): 30,652

*Average Annual Flow Volume (1000's dam³): Total 12190
Contributed 11346

Boundary Crossing: Yukon to B.C.

Latitude; Longitude: 60° 00'; 128° 36'

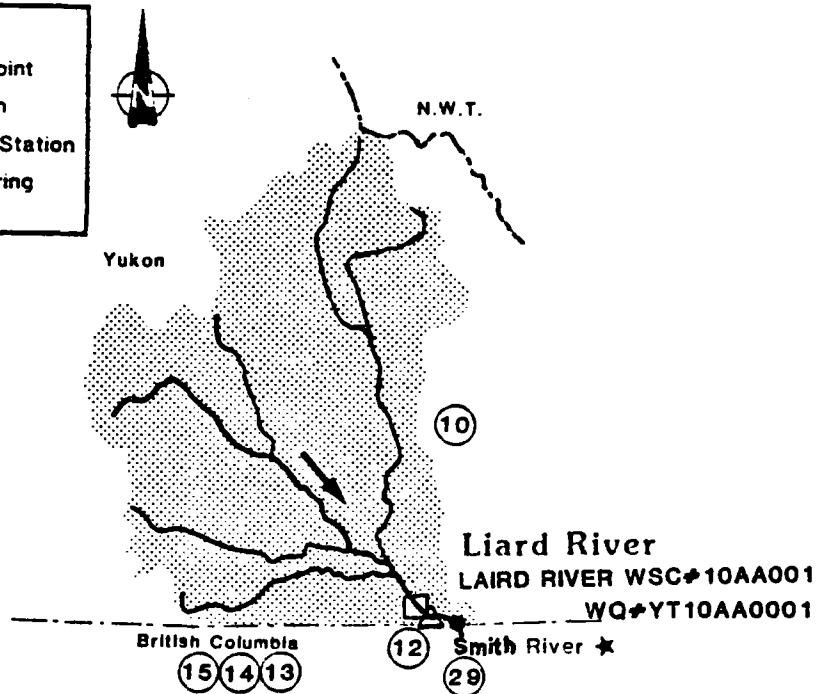
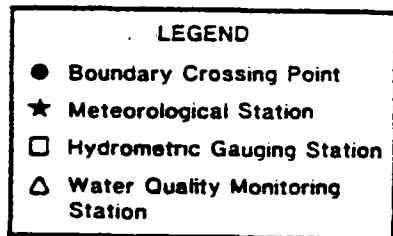
I.M.W. Map number(s): NP-7/8/9

General Topography: includes mountains and low lands near the Liard River

General Location: lies north of the B.C.-Yukon border and includes the settlements of Watson Lake, Upper Liard and Frances Lake.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 12

River Name: Albert Creek tributaries

Gross Drainage Area (km²): 673

*Average Annual Flow Volume (1000's dam³): Total 170
Contributed 170

Boundary Crossing: B.C. to Yukon

Latitude; Longitude: 60° 00'; 129° 19'

I.M.W. Map number(s): NO-9

General Topography: low land near the Liard River

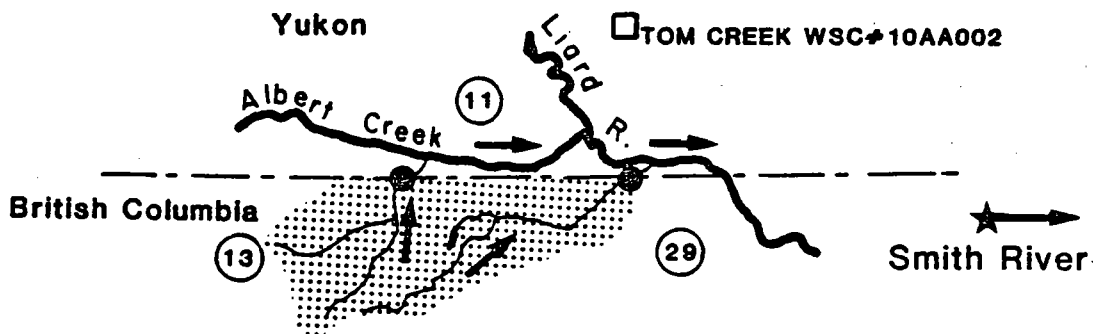
General Location: south of the town of Watson Lake.

This basin contributes to subbasin number: 11 and 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



Albert Creek tributaries

*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 13

River Name: Little Rancheria River

Gross Drainage Area (km²): 1554

*Average Annual Flow Volume (1000's dam³): Total 392
Contributed 392

Boundary Crossing: B.C. to Yukon

Latitude; Longitude: 60° 00'; 129° 48'

I.M.W. Map number(s): NO-9

General Topography: mountainous

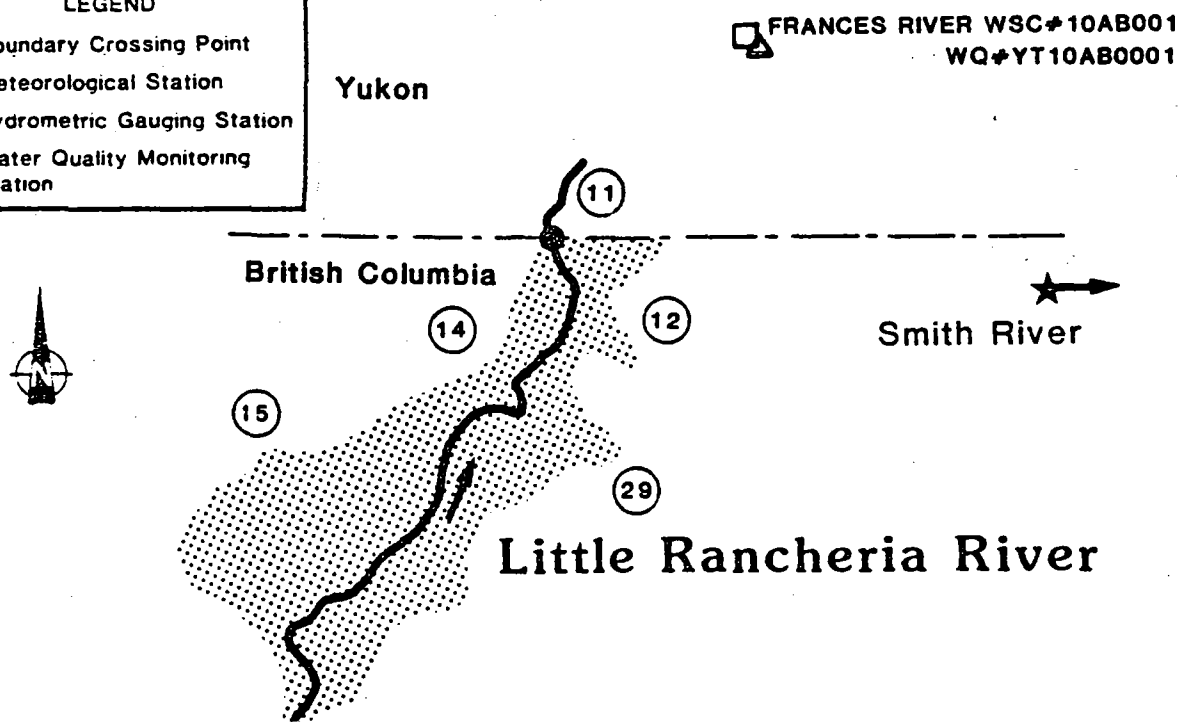
General Location: spans the area between the continental divide and the Rancheria River in the Cassiar Mountains.

This basin contributes to subbasin number: 11 and 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 14

River Name: Little Rancheria River tributary

Gross Drainage Area (km²): 585

*Average Annual Flow Volume (1000's dam³): Total 148
Contributed 148

Boundary Crossing: B.C. to Yukon

Latitude; Longitude: 60° 00'; 129° 52'

I.M.W. Map number(s): NO-9

General Topography: mountainous

General Location: from the Cassiar Mountains to the Little Rancheria River.

This basin contributes to subbasin number: 11 and 29

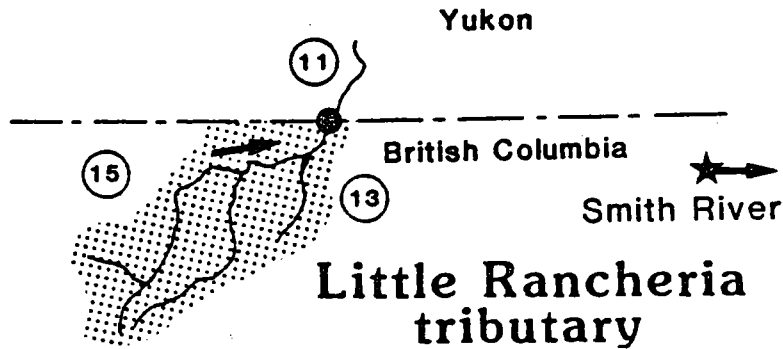
Meteorologic station(s) applicable to the basin: Smith River
AES#1197530

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



FRANCES RIVER WSC#10AB001
WQ#YT10AB0001



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 15

River Name: Tootsee Lake

Gross Drainage Area (km²): 533

*Average Annual Flow Volume (1000's dam³): Total 134
Contributed 134

Boundary Crossing: B.C. to Yukon

Latitude; Longitude: 60° 00'; 130° 18'

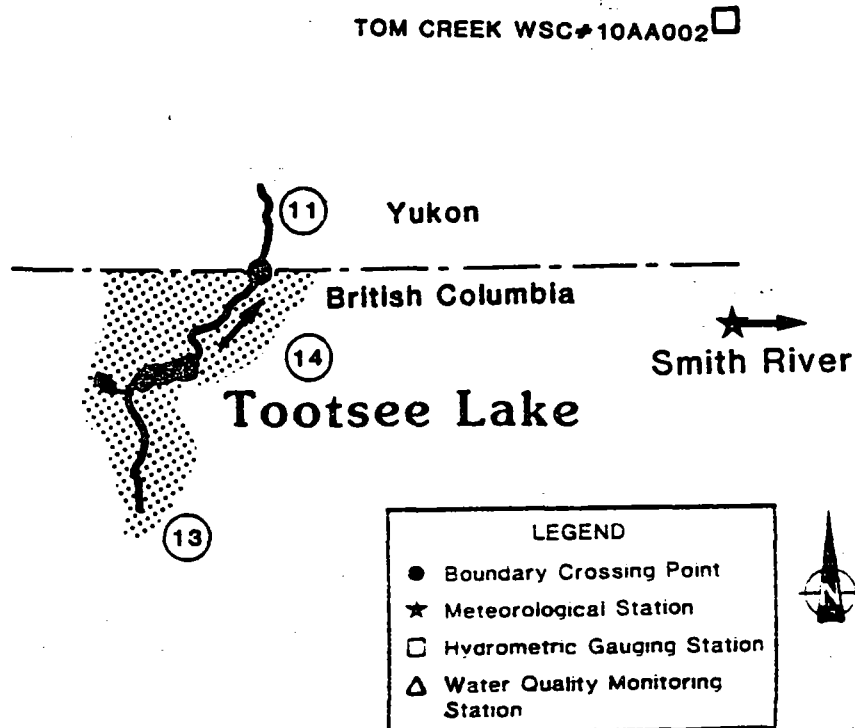
I.M.W. Map number(s): NO-9

General Topography: mountainous area containing Tootsee Lake

General Location: south of the town of Rancheria in the
Cassiar Mountains.

This basin contributes to subbasin number: 11 and 29

Meteorologic station(s) applicable to the basin: Smith River
AES#1197530



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 16

River Name: Petitot River

Gross Drainage Area (km²): 12,087

*Average Annual Flow Volume (1000's dam³): Total 5673
Contributed 3049

Boundary Crossing: B.C. to N.W.T.

Latitude; Longitude: 60° 00'; 123° 00'

I.M.W. Map number(s): NO-10

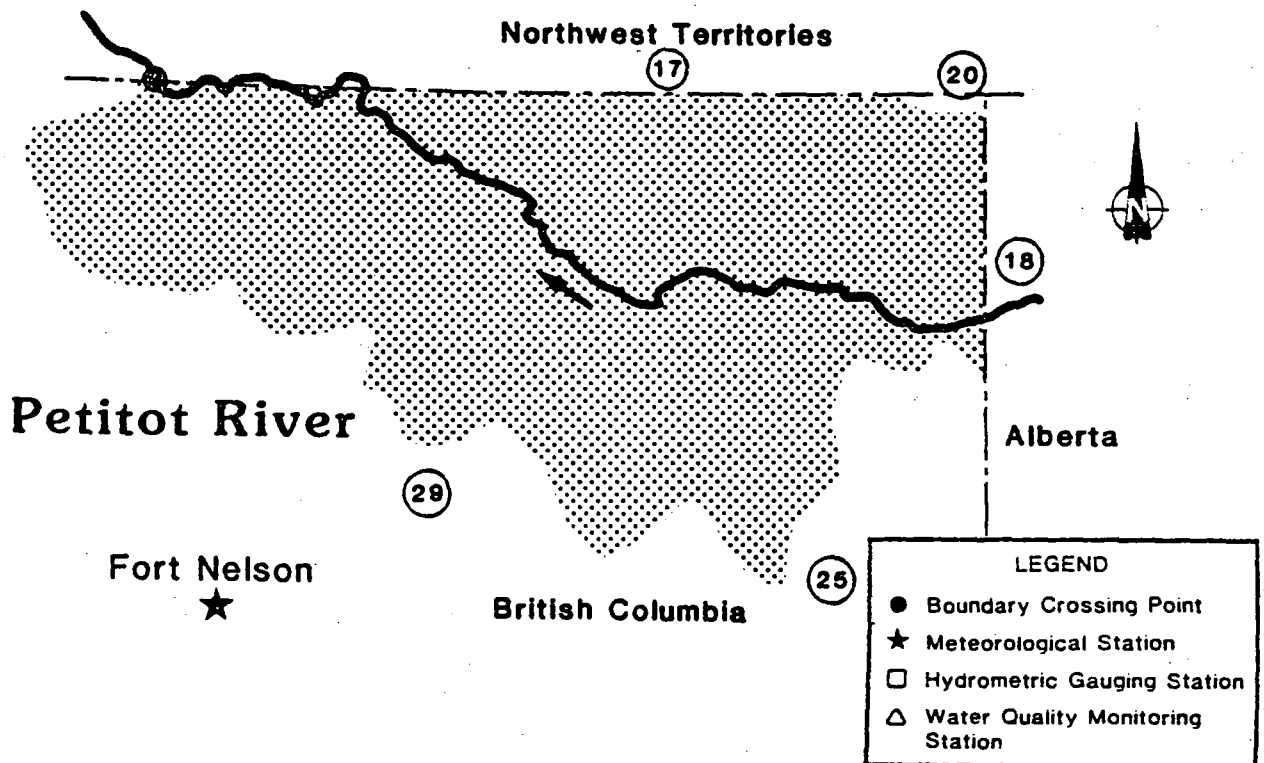
General Topography: many small creeks and lakes

General Location: in the northeast corner of B.C.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940

□ SOUTH NAHANNI RIVER
WSC#10EC001
WQ#YT10EC0001



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 17

River Name: Petitot River tributaries

Gross Drainage Area (km²): 1702

*Average Annual Flow Volume (1000's dam³): Total 429
Contributed 429

Boundary Crossing: N.W.T. to B.C.

Latitude; Longitude: 60° 00'; 121° 30'

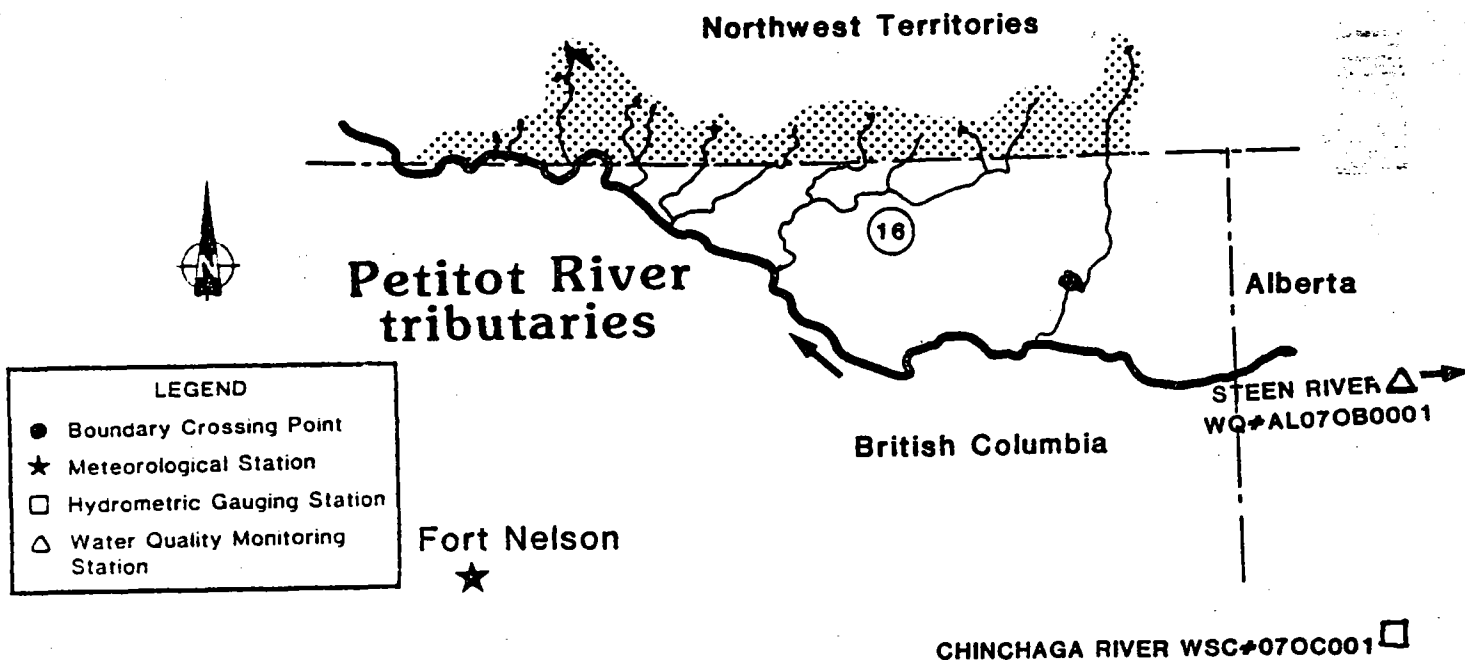
I.M.W. Map number(s): NP-9/10

General Topography: marsh land with many small lakes

General Location: in the N.W.T. east of the Laird River and
west of the junction of the
B.C.-Alberta-N.W.T. boundaries.

This basin contributes to subbasin number: 16

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 18

River Name: Petitot River

Gross Drainage Area (km²): 7563

*Average Annual Flow Volume (1000's dam³): Total 2195
Contributed 1908

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 59° 40'; 120° 00'

I.M.W. Map number(s): NO-11

General Topography: high hills and includes a large lake

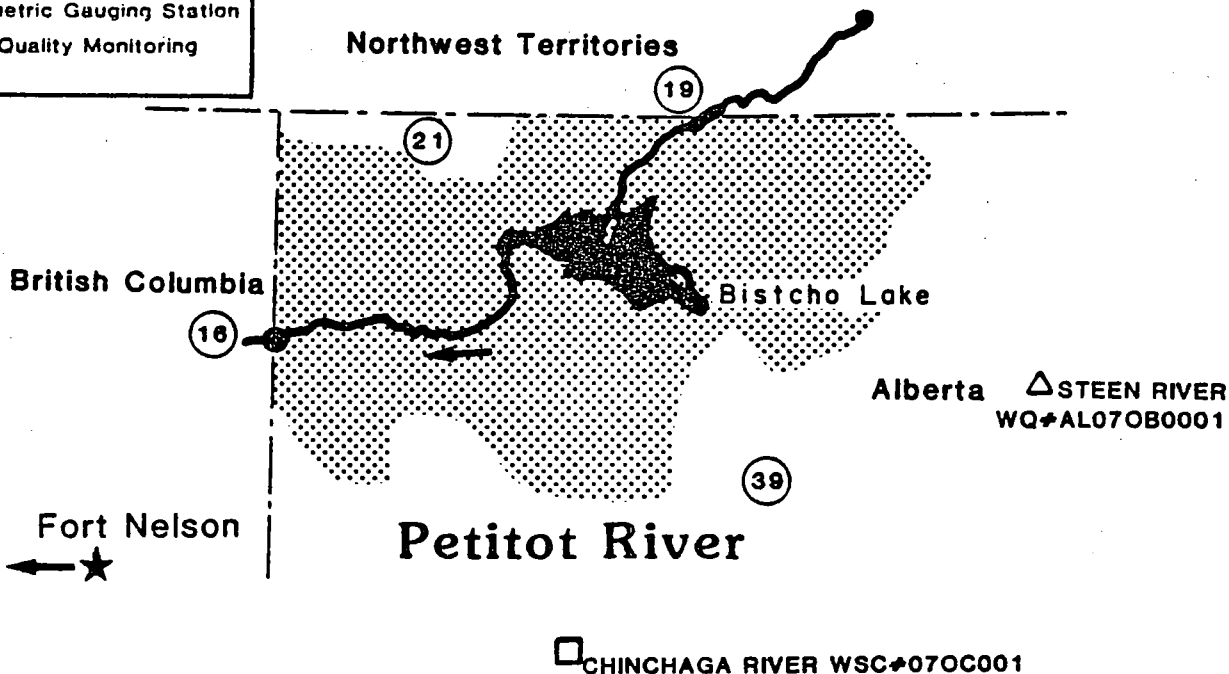
General Location: the extreme northwest corner of Alberta.

This basin contributes to subbasin number: 16

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 19

River Name: Petitot River

Gross Drainage Area (km²): 1137

*Average Annual Flow Volume (1000's dam³): Total 287
Contributed 287

Boundary Crossing: N.W.T. Alberta

Latitude; Longitude: 60° 00'; 118° 28'

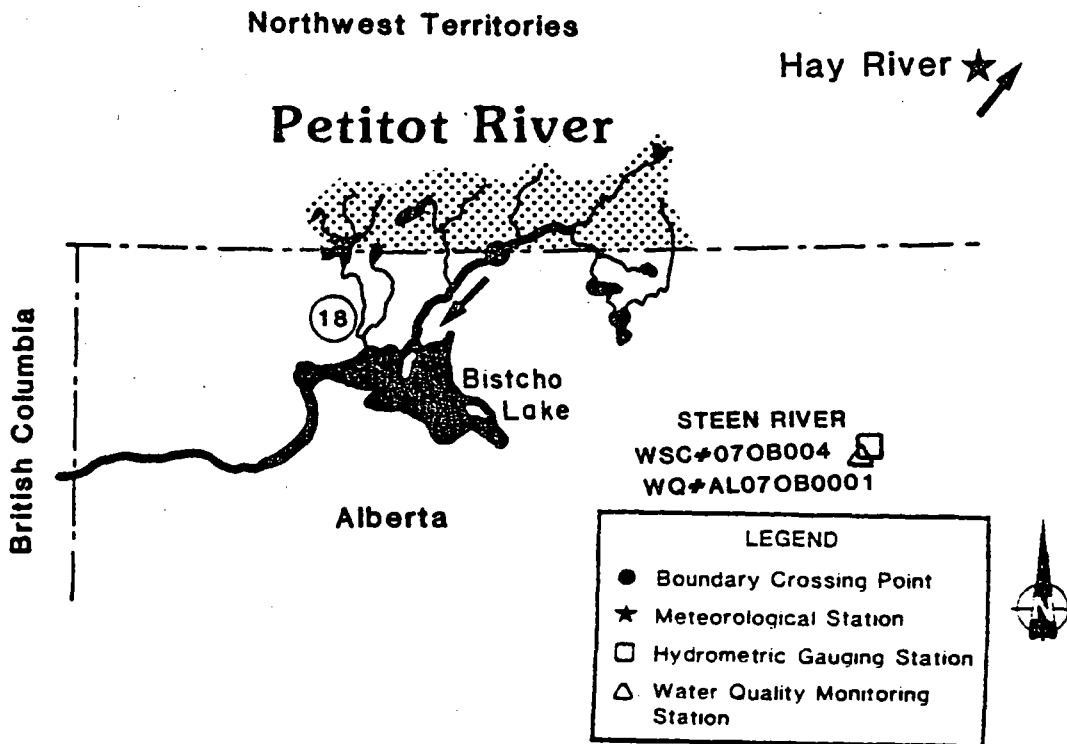
I.M.W. Map number(s): NP-11/12

General Topography: high hills

General Location: flows out of the Cameron Hills.

This basin contributes to subbasin number: 16 and 18

Meteorologic station(s) applicable to the basin: Hay River
AES#2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 20

River Name: Kakisa River

Gross Drainage Area (km²): 62

*Average Annual Flow Volume (1000's dam³): Total 16
Contributed 16

Boundary Crossing: B.C. to N.W.T.

Latitude; Longitude: 60° 00'; 120° 10'

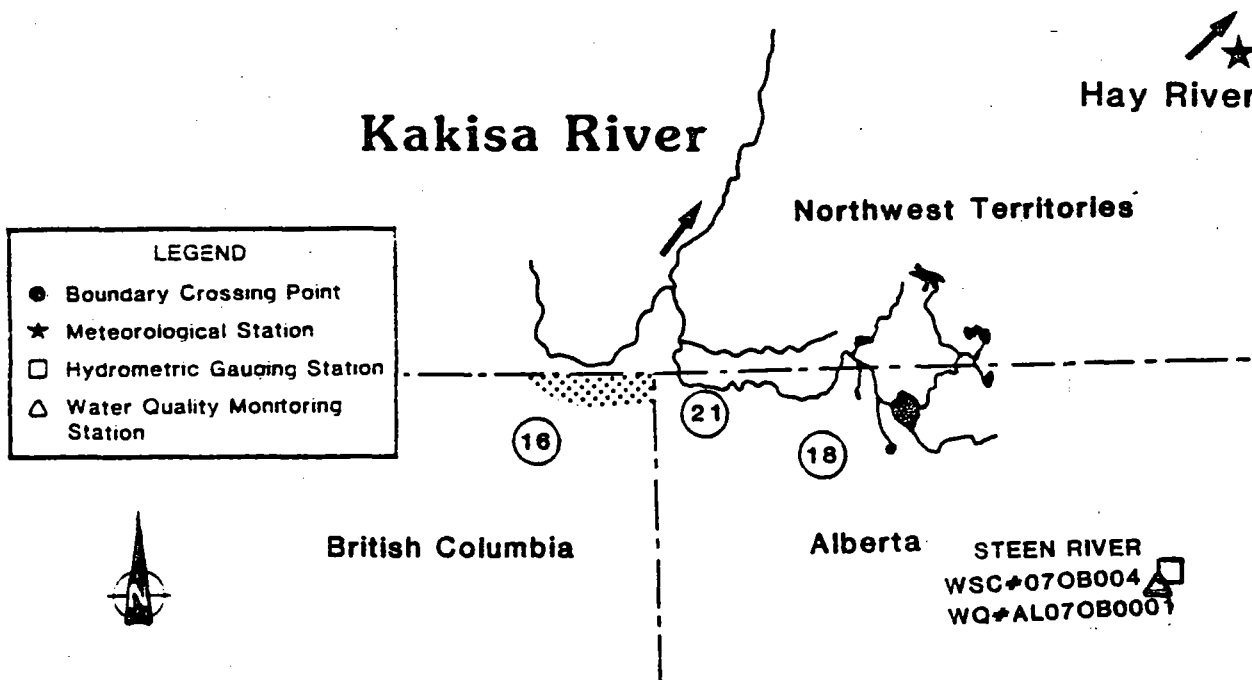
I.M.W. Map number(s): NP-10

General Topography: low flat land

General Location: extreme northeast corner of B.C.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River
AES#2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 21

River Name: Kakisa River

Gross Drainage Area (km²): 407

*Average Annual Flow Volume (1000's dam³): Total 167
Contributed 103

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 119° 56'

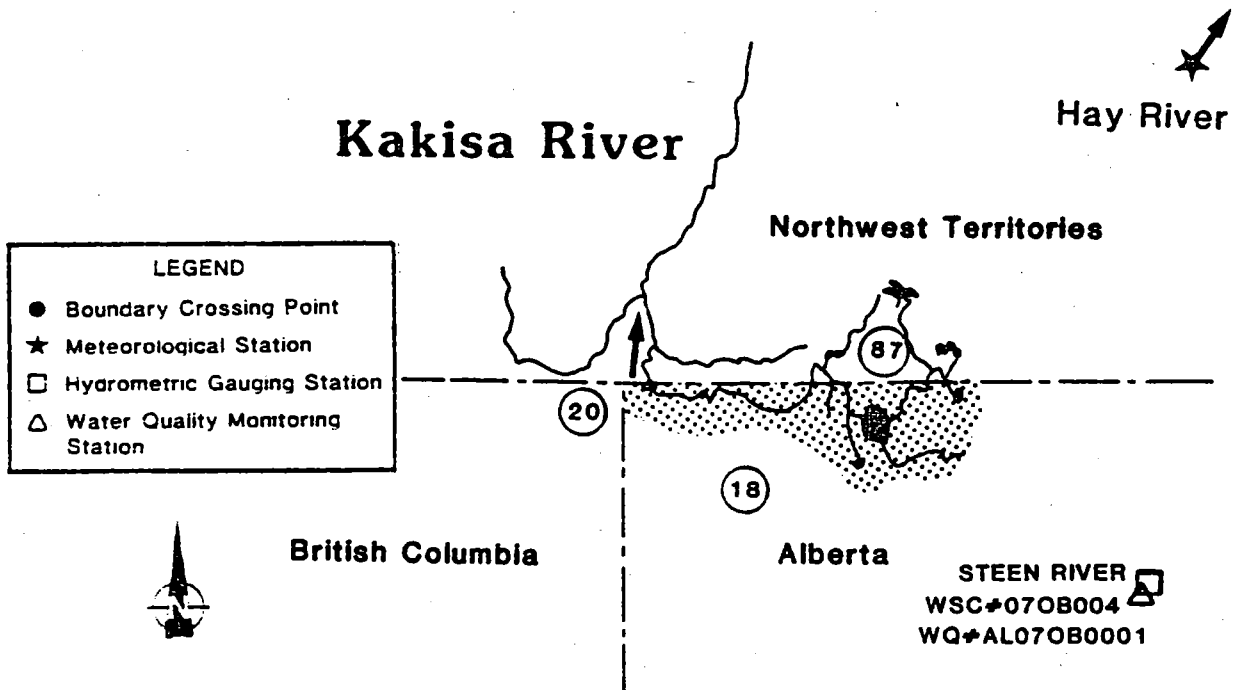
I.M.W. Map number(s): NO-11

General Topography: flat land with small lakes

General Location: extreme northwest corner of Alberta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River
AES#2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 22

River Name: Shekilie River tributaries

Gross Drainage Area (km²): 811

*Average Annual Flow Volume (1000's dam³): Total 55
Contributed 55

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 59° 06'; 120° 00'

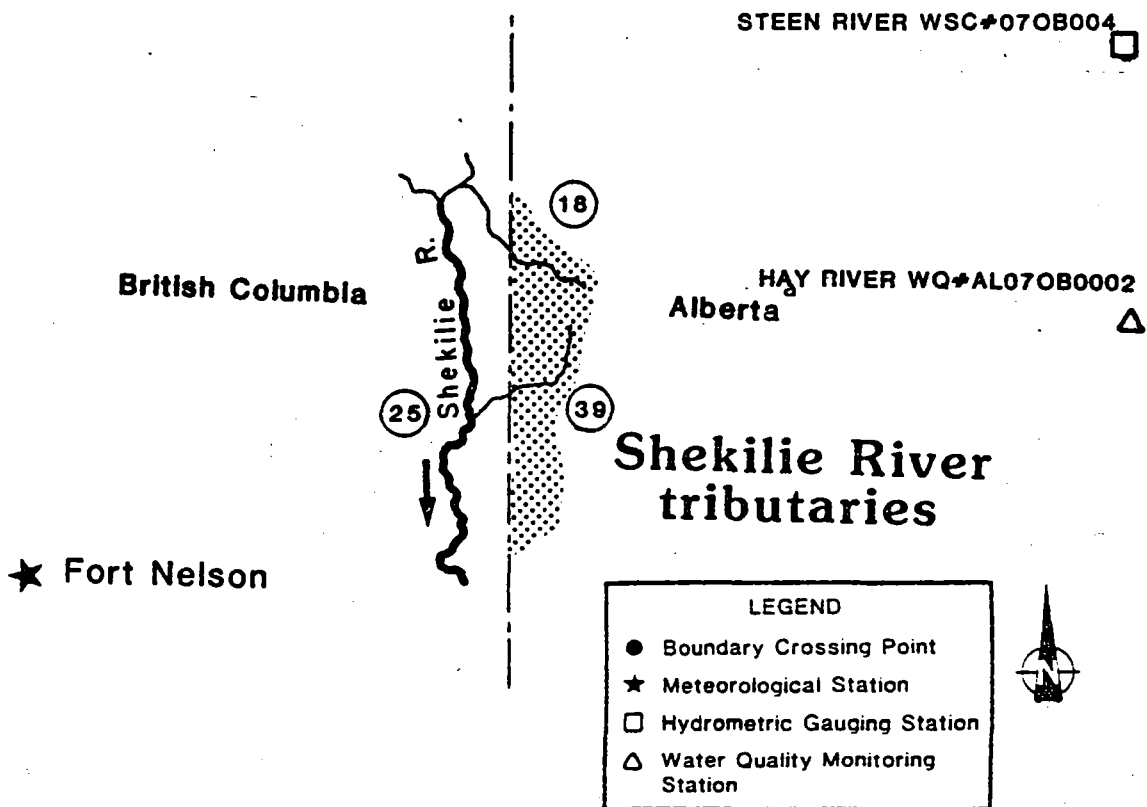
I.M.W. Map number(s): NO-11

General Topography: flat land

General Location: 90 km south of the junction of the
B.C.-Alberta-N.W.T. boundaries.

This basin contributes to subbasin number: 25 and 39

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 26

River Name: Fontas River

Gross Drainage Area (km²): 961

*Average Annual Flow Volume (1000's dam³): Total 242
Contributed 242

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 57° 56'; 120° 00'

I.M.W. Map number(s): NO-11

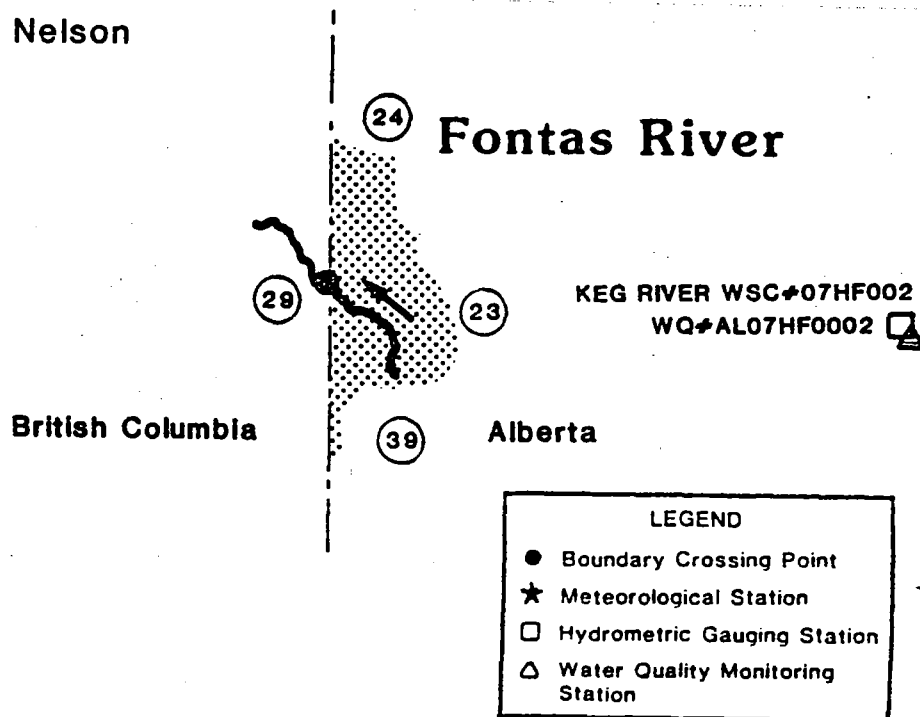
General Topography: many small tributaries

General Location: between the Hay and Chinchaga Rivers.

This basin contributes to subbasin number: 29

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940

★ Fort Nelson



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 25

River Name: Hay River

Gross Drainage Area (km²): 7866

*Average Annual Flow Volume (1000's dam³): Total 811
Contributed 529

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 58° 44'; 120° 00'

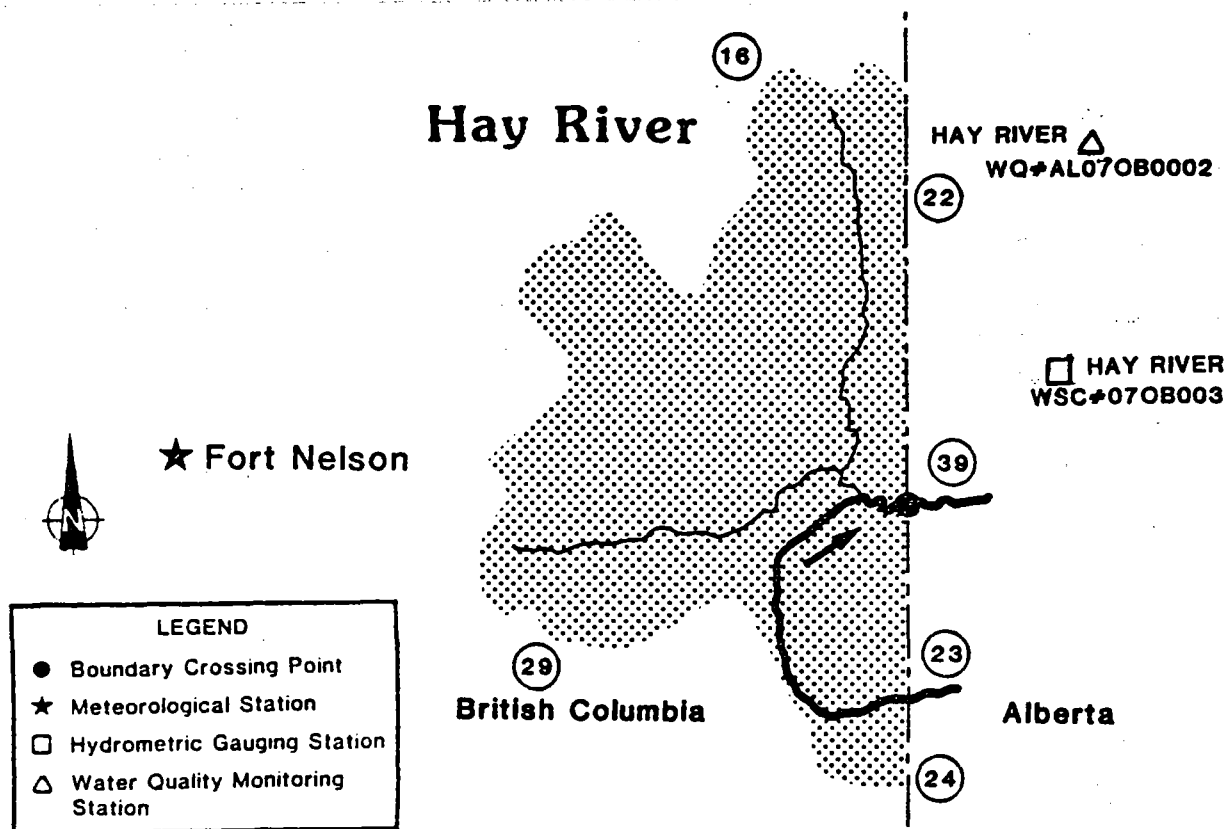
I.M.W. Map number(s): NO-10

General Topography: generally flat with many small tributaries

General Location: 130 km south of the junction of the
B.C.-Alberta-N.W.T. boundaries.

This basin contributes to subbasin number: 39

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 24

River Name: Little Buffalo River

Gross Drainage Area (km²): 422

*Average Annual Flow Volume (1000's dam³): Total 28
Contributed 28

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 58° 16'; 120° 00'

I.M.W. Map number(s): NO-11

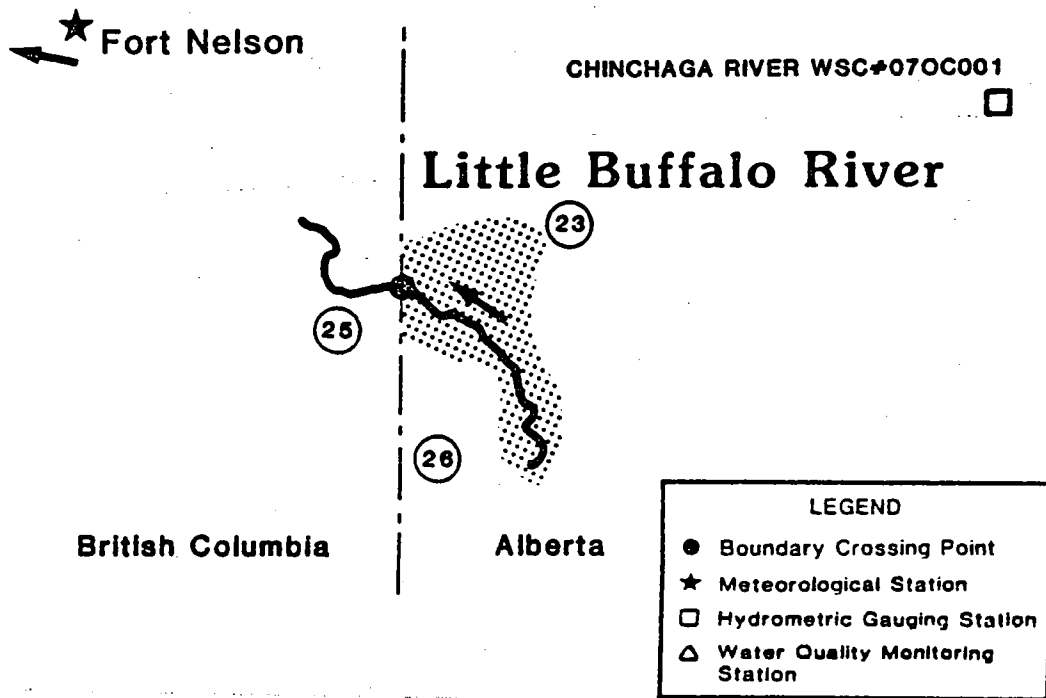
General Topography: flat low land

General Location: south of the Hay River at the B.C.-Alberta border.

This basin contributes to subbasin number: 25 and 39

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940

HAY RIVER WQ#AL070B0002△



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 23

River Name: Hay River

Gross Drainage Area (km²): 2963

*Average Annual Flow Volume (1000's dam³): Total 199
Contributed 199

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 58° 23'; 120° 00'

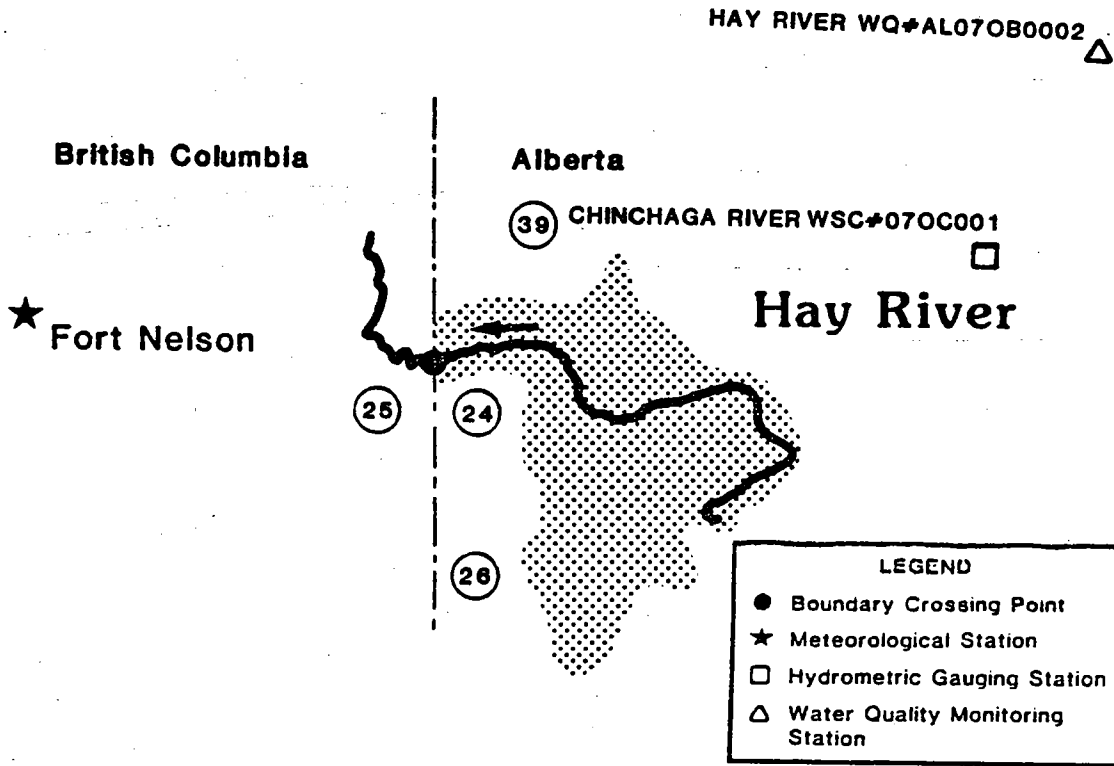
I.M.W. Map number(s): NO-11

General Topography: flat low land

General Location: west of the Caribou Mountains and north of
the Clear Hills.

This basin contributes to subbasin number: 25 and 39

Meteorologic station(s) applicable to the basin: Fort Nelson
AES#1192940



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 27

River Name: Chinchaga River

Gross Drainage Area (km²): 790

*Average Annual Flow Volume (1000's dam³): Total 53
Contributed 53

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 57° 19'; 120° 00'

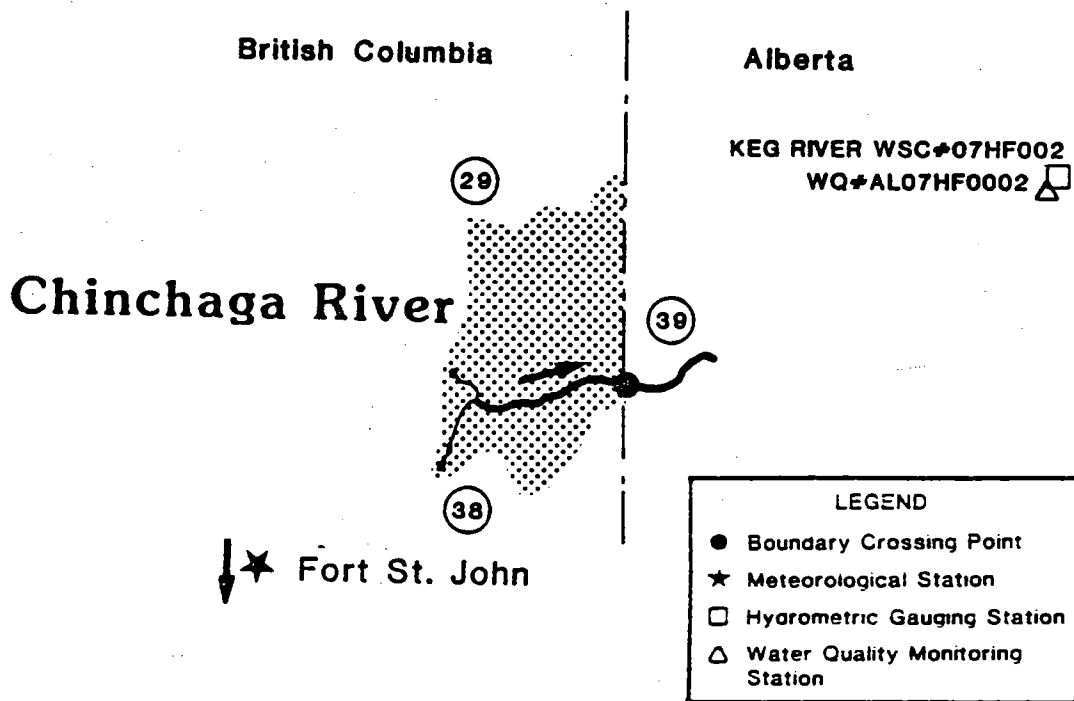
I.M.W. Map number(s): NO-10

General Topography: low hills

General Location: northwest of the Clear Hills.

This basin contributes to subbasin number: 39

Meteorologic station(s) applicable to the basin: Fort St. John 'A'
AES 1183000



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 28

River Name: Doig River

Gross Drainage Area (km²): 1658

*Average Annual Flow Volume (1000's dam³): Total 418
Contributed 418

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 56° 57'; 120° 00'

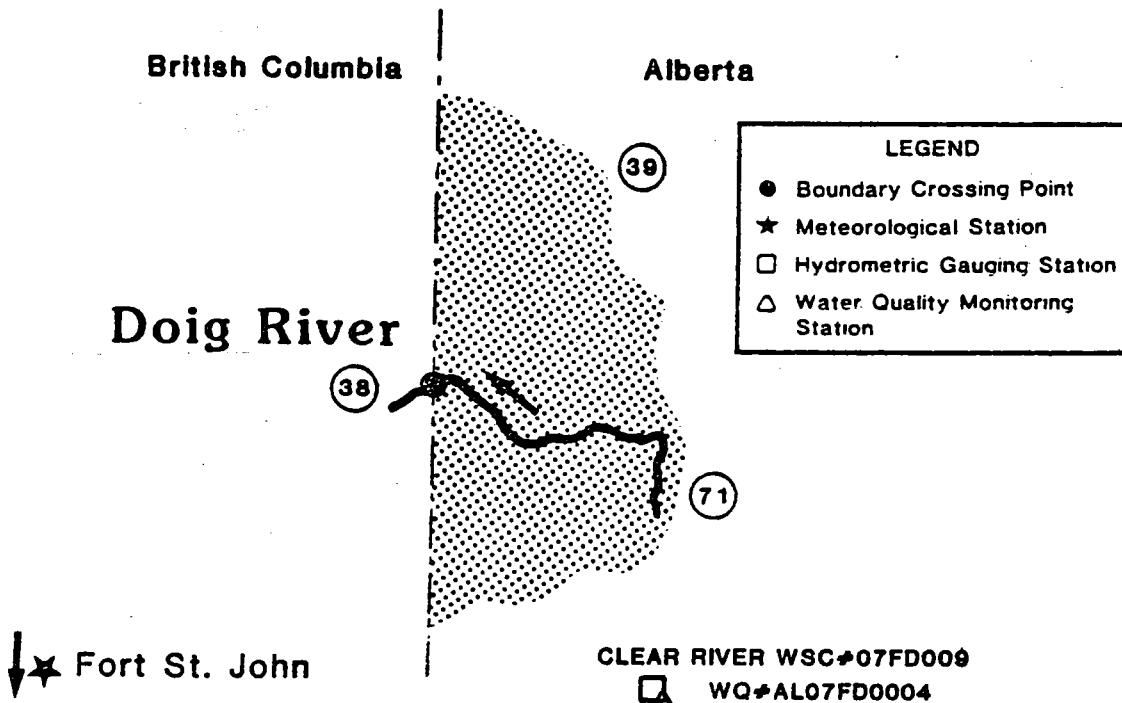
I.M.W. Map number(s): NO-11

General Topography: low hills

General Location: northwest of Fort St. John.

This basin contributes to subbasin number: 38 and 71

Meteorologic station(s) applicable to the basin: Fort St. John 'A'
AES 1183000



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 29

River Name: Liard River

Gross Drainage Area (km²): 126,617

*Average Annual Flow Volume (1000's dam³): Total 55,727
 Contributed 32,400

Boundary Crossing: B.C. to N.W.T.

Latitude; Longitude: 60° 00'; 123° 48'

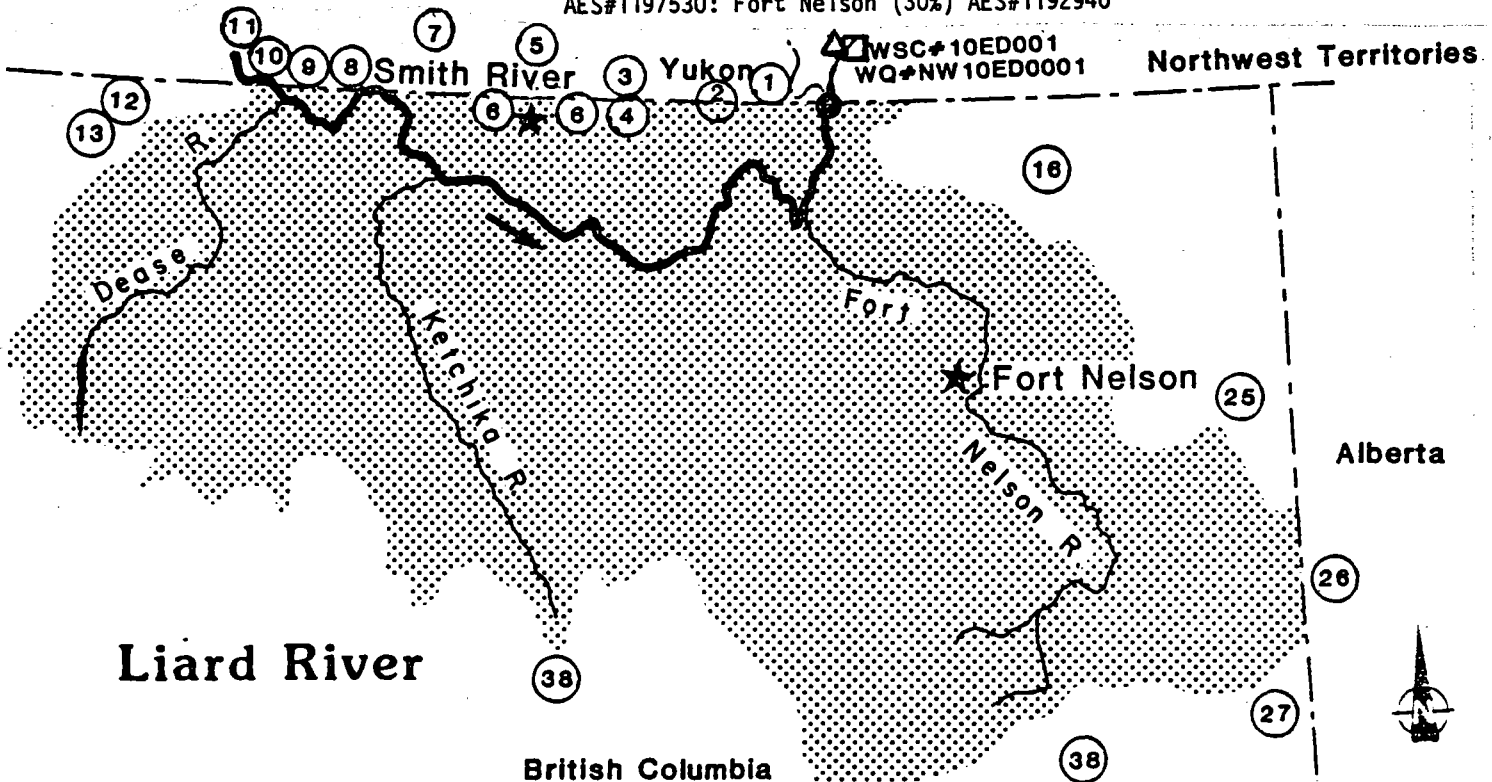
I.M.W. Map number(s): NO-9; NO-10

General Topography: approximately 60% of this basin lies in the Rocky Mountains; the remainder being foothills and northern plain

General Location: the area is bounded by the continental divide on the west, the Peace River basin on the south and the Alberta-B.C. border on the east.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Smith River (70%)
 AES#1197530: Fort Nelson (30%) AES#1192940



Liard River

British Columbia

Northwest Territories

Alberta

*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station

Mackenzie River Basin
Interjurisdictional Subbasin Number 31

River Name: Pouce Coupé River

Gross Drainage Area (km²): 1250

*Average Annual Flow Volume (1000's dam³): Total 274
Contributed 120

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 55° 53'; 120° 00'

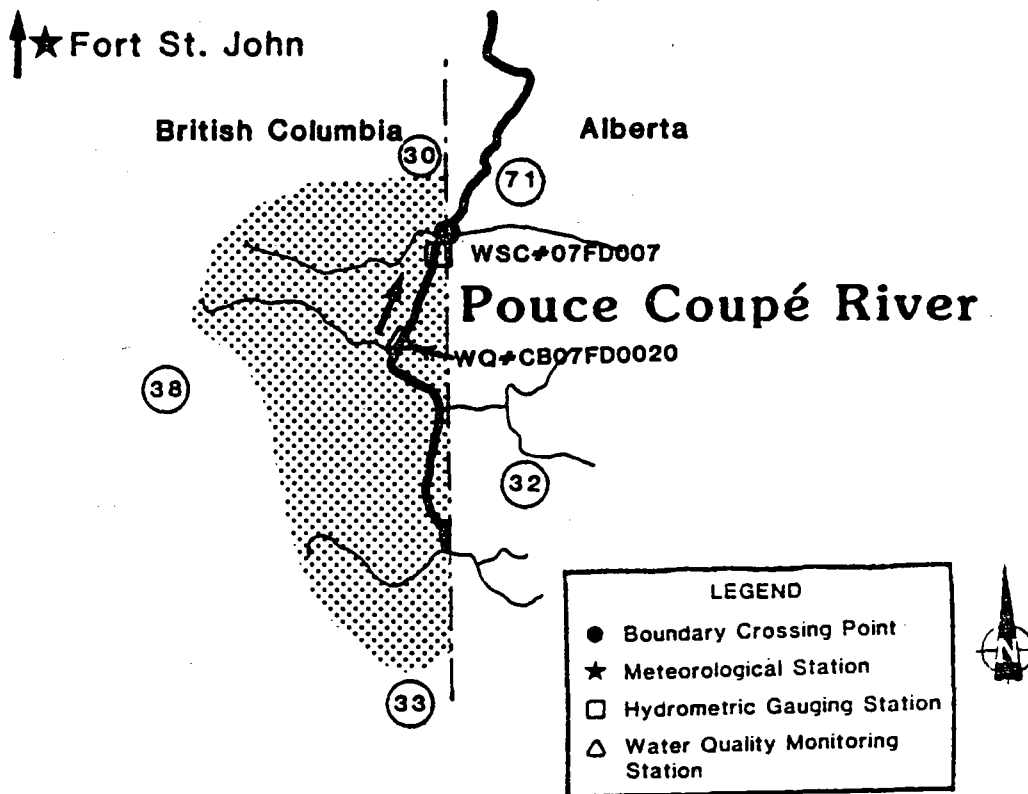
I.M.W. Map number(s): NN-10

General Topography: foothills of the Rocky Mountains

General Location: near the town of Dawson Creek.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort St. John 'A'
AES 1183000



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 30

River Name: Pouce Coupé River tributary

Gross Drainage Area (km²): 218

*Average Annual Flow Volume (1000's dam³): Total 55
Contributed 55

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 55° 58'; 120° 00'

I.M.W. Map number(s): NO-10; NN-10

General Topography: foothills of the Rocky Mountains

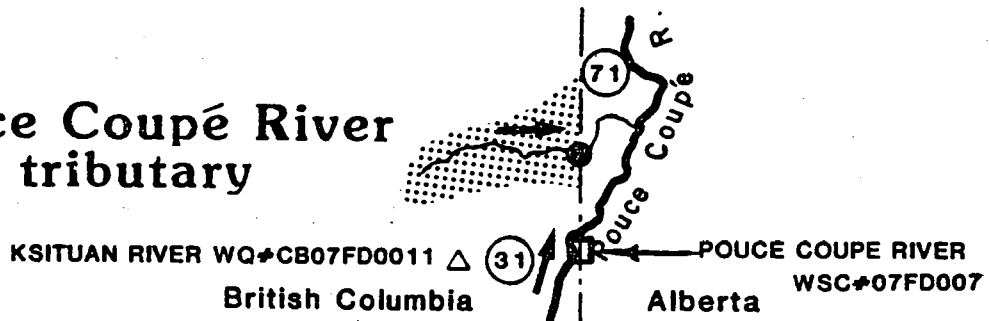
General Location: 25 km south of the Peace River.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort St. John 'A'
AES 1183000

★ Fort St. John

**Pouce Coupé River
tributary**



LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 32

River Name: Pouce Coupé River

Gross Drainage Area (km²): 1600

*Average Annual Flow Volume (1000's dam³): Total 154
Contributed 154

Boundary Crossing: Alberta to B.C.

Latitude; Longitude: 55° 40'; 120° 00'

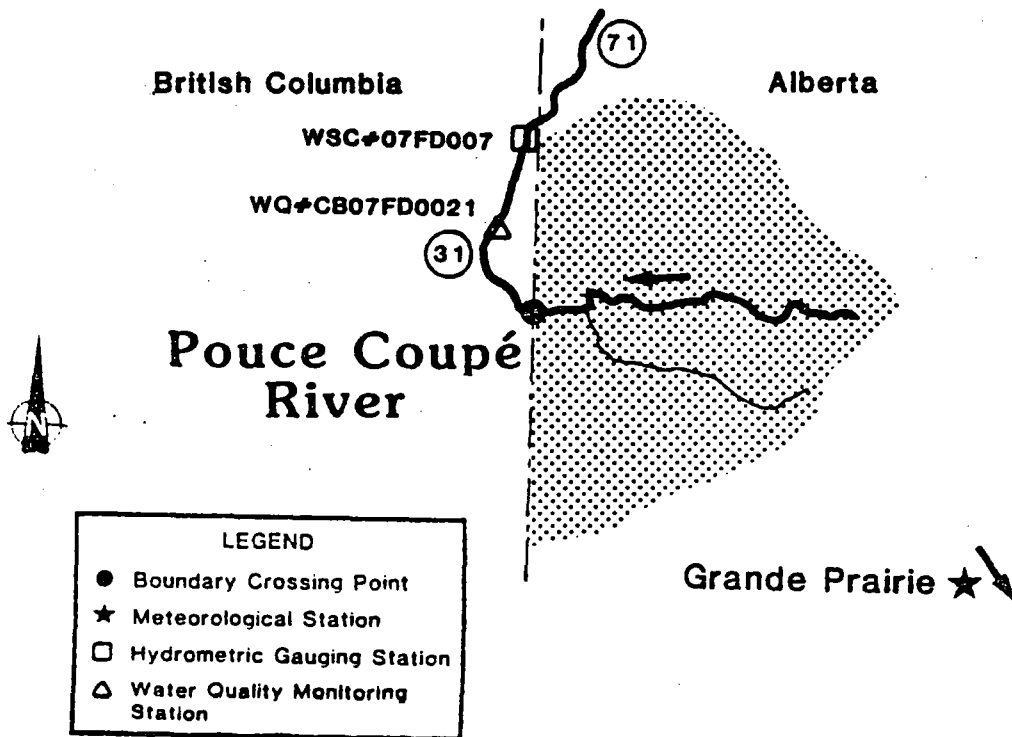
I.M.W. Map number(s): NM-11

General Topography: foothills of the Rocky Mountains

General Location: near the town of Dawson Creek.

This basin contributes to subbasin number: 31 and 71

Meteorologic station(s) applicable to the basin: Grand Prairie
AES 3072920



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 33

River Name: Beaverlodge River

Gross Drainage Area (km²): 311

*Average Annual Flow Volume (1000's dam³): Total 78
Contributed 78

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 55° 14'; 120° 00'

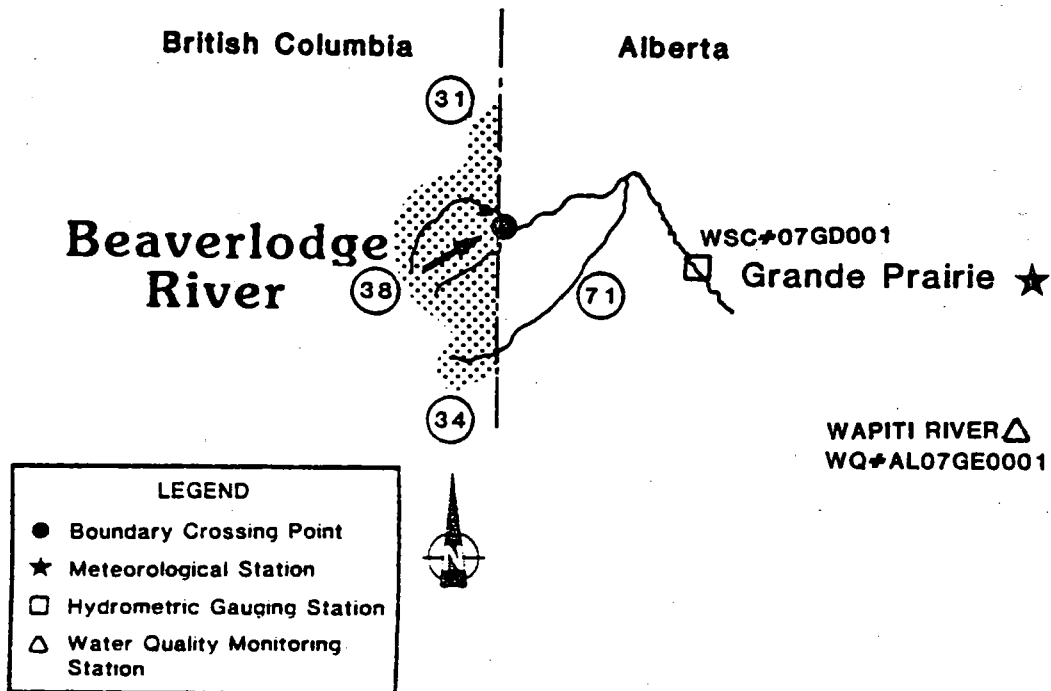
I.M.W. Map number(s): NN-10

General Topography: foothills of the Rocky Mountains

General Location: 65 km south of the town of Dawson Creek.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Grand Prairie
AES 3072920



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 34

River Name: Redwillow River

Gross Drainage Area (km²): 997

*Average Annual Flow Volume (1000's dam³): Total 251
Contributed 251

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 55° 03'; 120° 00'

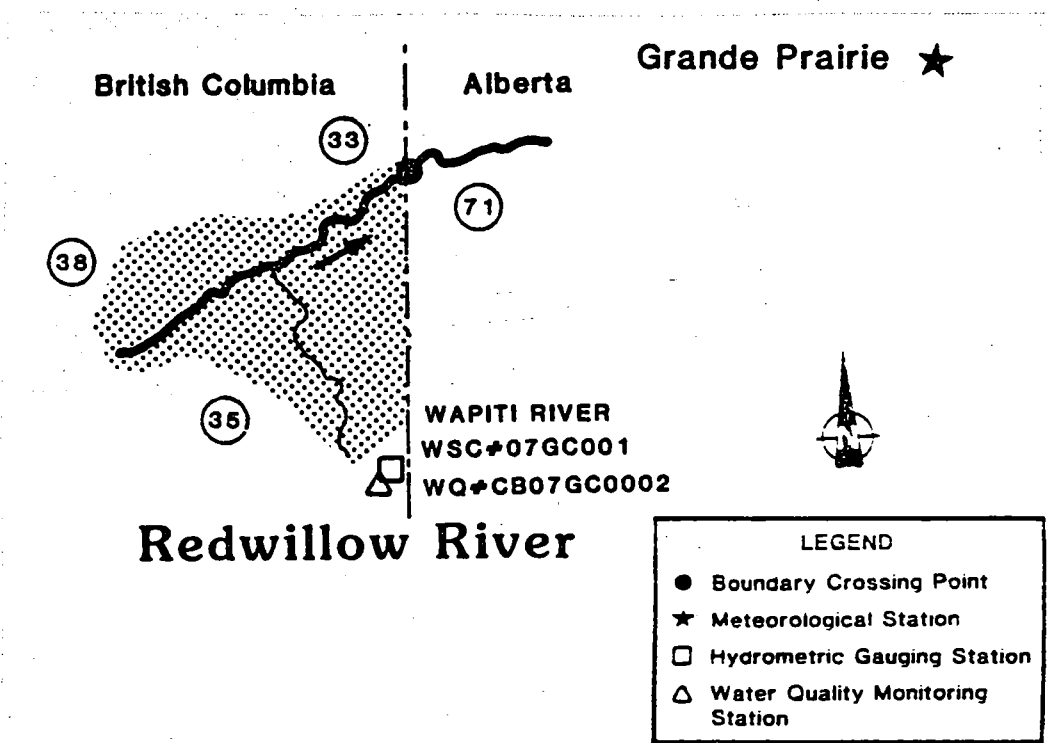
I.M.W. Map number(s): NN-10

General Topography: foothills

General Location: 95 km south of the town of Dawson Creek.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Grand Prairie
AES 3072920



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 35

River Name: Wapiti River

Gross Drainage Area (km²): 2574

*Average Annual Flow Volume (1000's dam³): Total 1266
Contributed 1266

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 54° 43'; 120° 00'

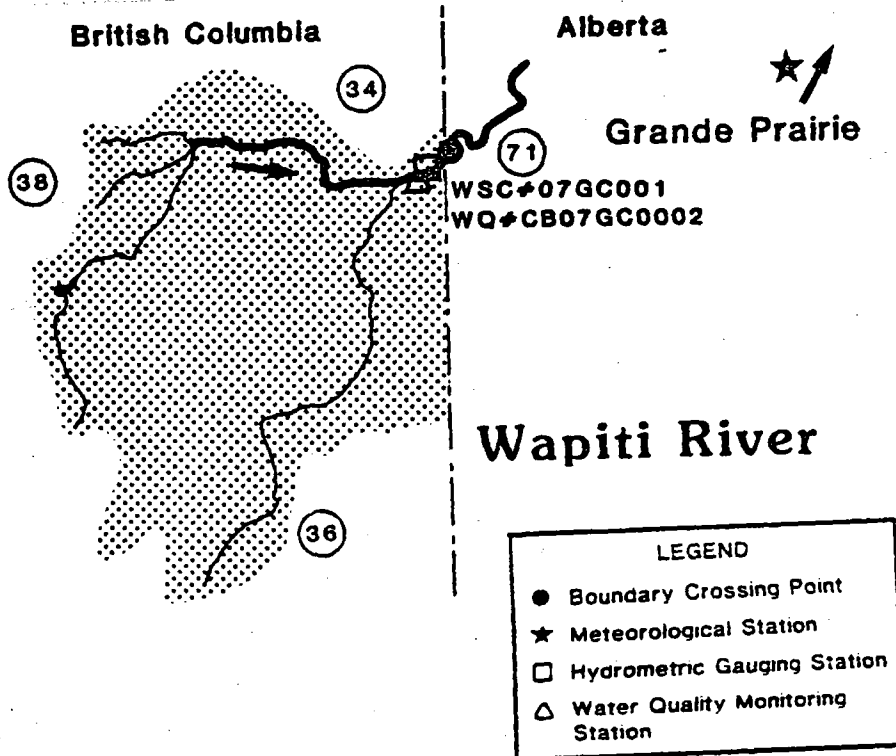
I.M.W. Map number(s): NN-10

General Topography: mountainous

General Location: east of the town of Prince George.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Grand Prairie
AES 3072920



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 36

River Name: Narraway River

Gross Drainage Area (km²): 761

*Average Annual Flow Volume (1000's dam³): Total 192
Contributed 192

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 54° 21'; 120° 00'

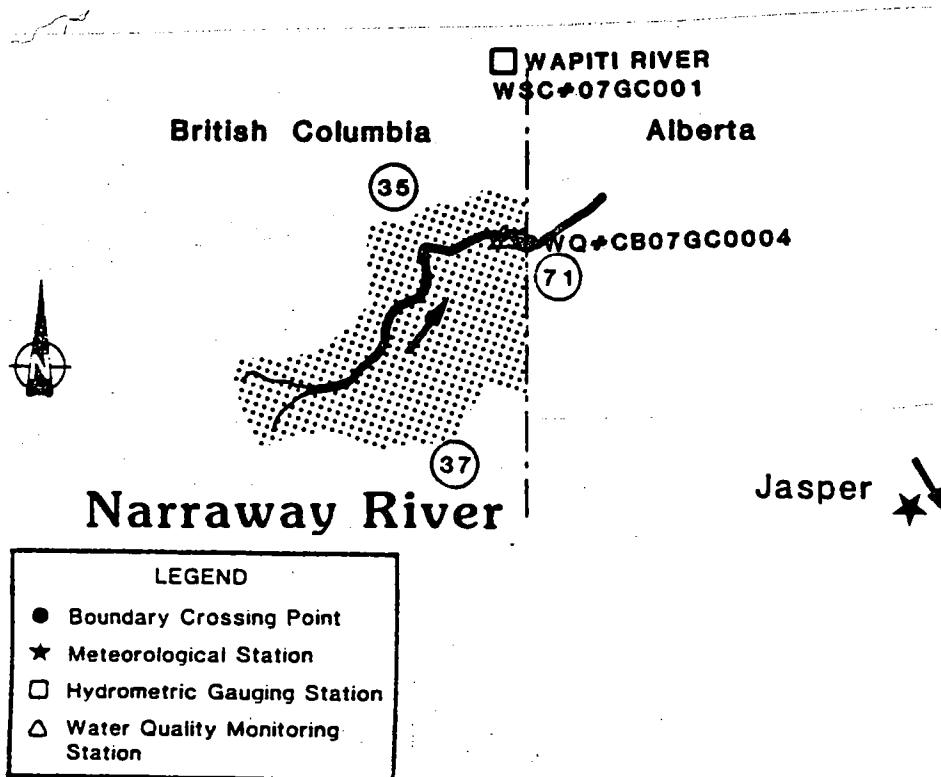
I.M.W. Map number(s): NN-10

General Topography: mountainous

General Location: east of Prince George, B.C.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Jasper
AES 3053520



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 37

River Name: Kakwa River

Gross Drainage Area (km²): 269

*Average Annual Flow Volume (1000's dam³): Total 68
Contributed 68

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 54° 11'; 120° 00'

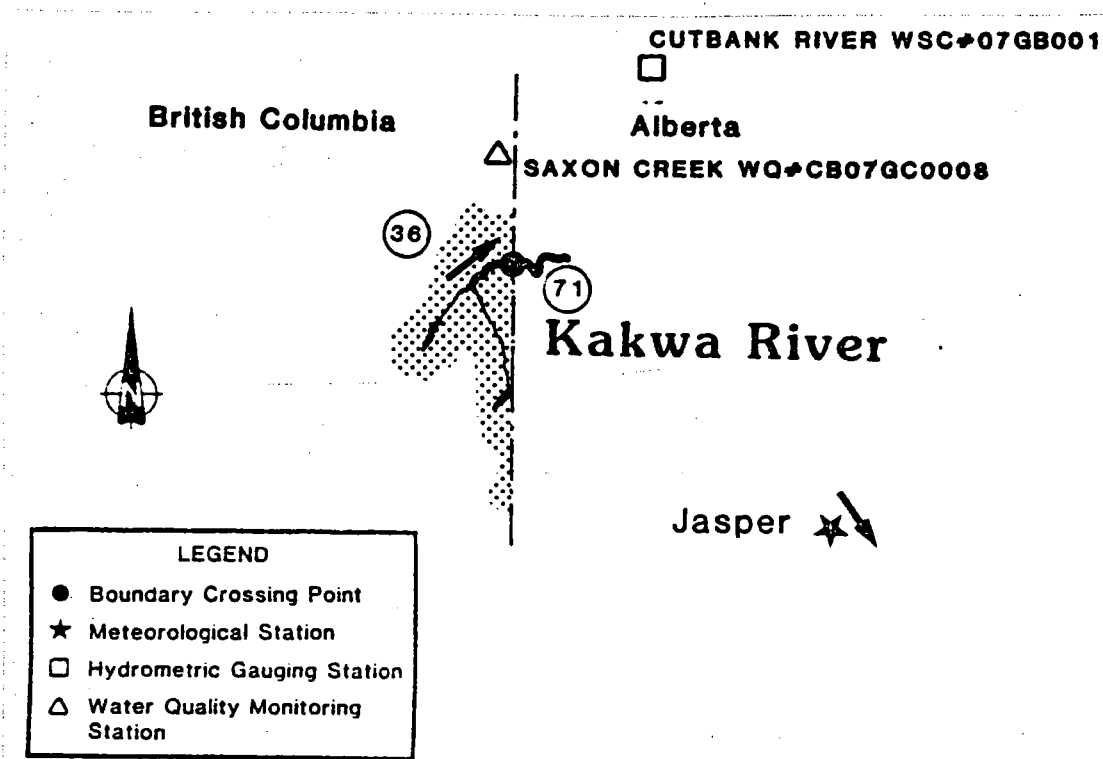
I.M.W. Map number(s): NN-10

General Topography: mountainous

General Location: east of Prince George, B.C.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Jasper
AES 3053520



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 38

River Name: Peace River

Gross Drainage Area (km²): 120,388

*Average Annual Flow Volume (1000's dam³): Total 51,784
 Contributed 51,366

Boundary Crossing: B.C. to Alberta

Latitude; Longitude: 56° 09'; 120° 00'

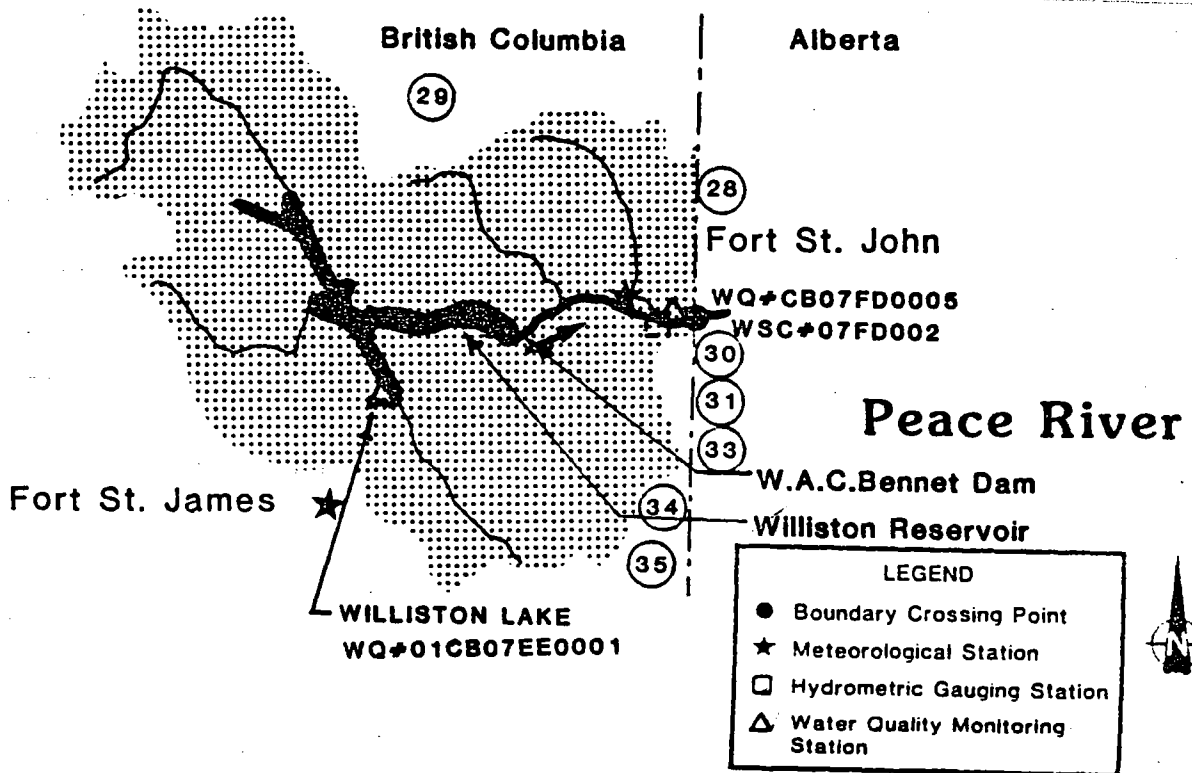
I.M.W. Map number(s): NO-9; NO-10; NN-8/9; NN-10

General Topography: mountainous

General Location: east of Prince George, B.C.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort St. James (60%) AES 1092970
 Fort St. John (40%) AES 1183000



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 39

River Name: Hay River

Gross Drainage Area (km²): 33,210

*Average Annual Flow Volume (1000's dam³): Total 3098
 Contributed 2234

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 116° 57'

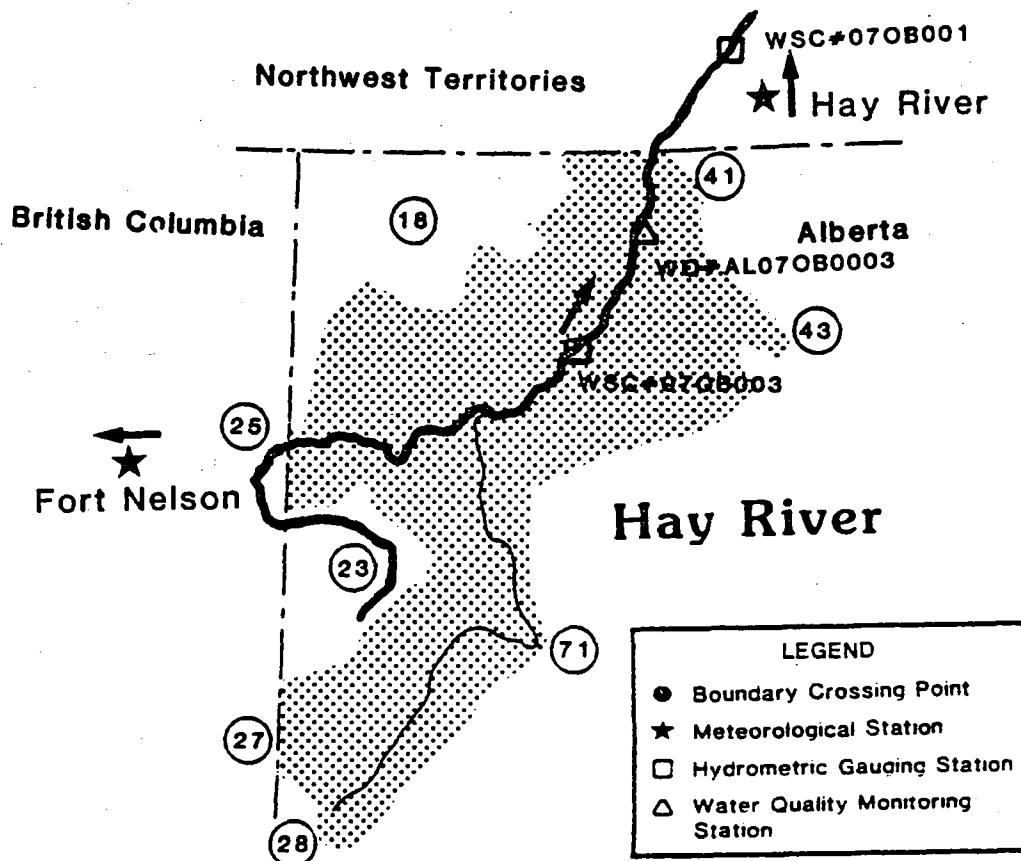
I.M.W. Map number(s): NO-11

General Topography: generally flat with the upper reaches in the Clear Hills and Caribou Hills

General Location: near the northwest corner of Alberta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River (50%) AES 2202400
 Fort Nelson (50%) AES 1192940



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 40

River Name: Hay River tributaries

Gross Drainage Area (km²): 191

*Average Annual Flow Volume (1000's dam³): Total 48
Contributed 48

Boundary Crossing: N.W.T. to Alberta

Latitude; Longitude: 60° 00'; 117° 24'

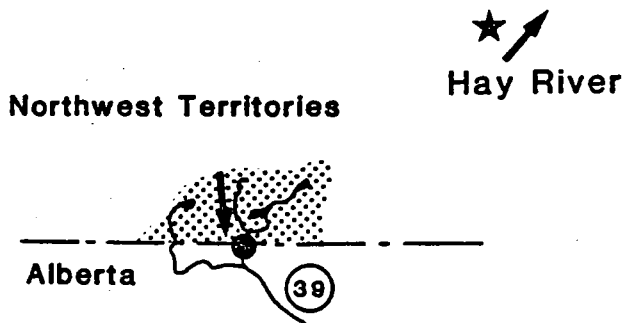
I.M.W. Map number(s): NO-10

General Topography: low hills

General Location: south of Great Slave Lake near the Cameron Hills.

This basin contributes to subbasin number: 39

Meteorologic station(s) applicable to the basin: Hay River
AES 2202400



Hay River tributary

LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station



STEEN RIVER WSC#070B004
WQ#AL070B001

*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 41

River Name: Swan Lake

Gross Drainage Area (km²): 98

*Average Annual Flow Volume (1000's dam³): Total 25
 Contributed 25

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 116° 47'

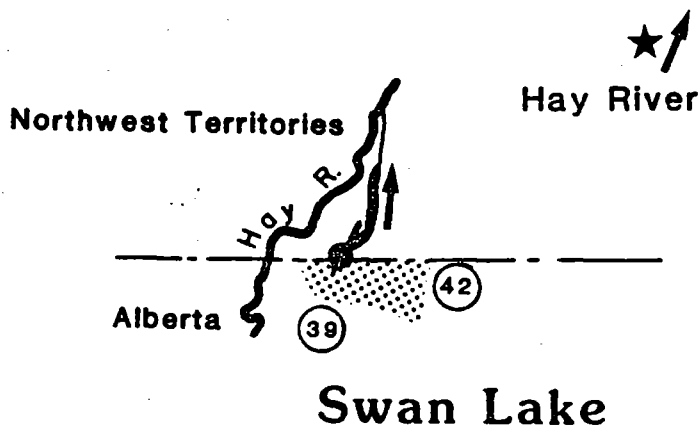
I.M.W. Map number(s): NO-11

General Topography: marshy flat land

General Location: west of the Hay River.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River
 AES 2202400



STEEN RIVER WSC#070B004
 WQ#AL070B001



LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 42

River Name: Creek to Buffalo Lake

Gross Drainage Area (km²): 124

*Average Annual Flow Volume (1000's dam³): Total 31
Contributed 31

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 116° 23'

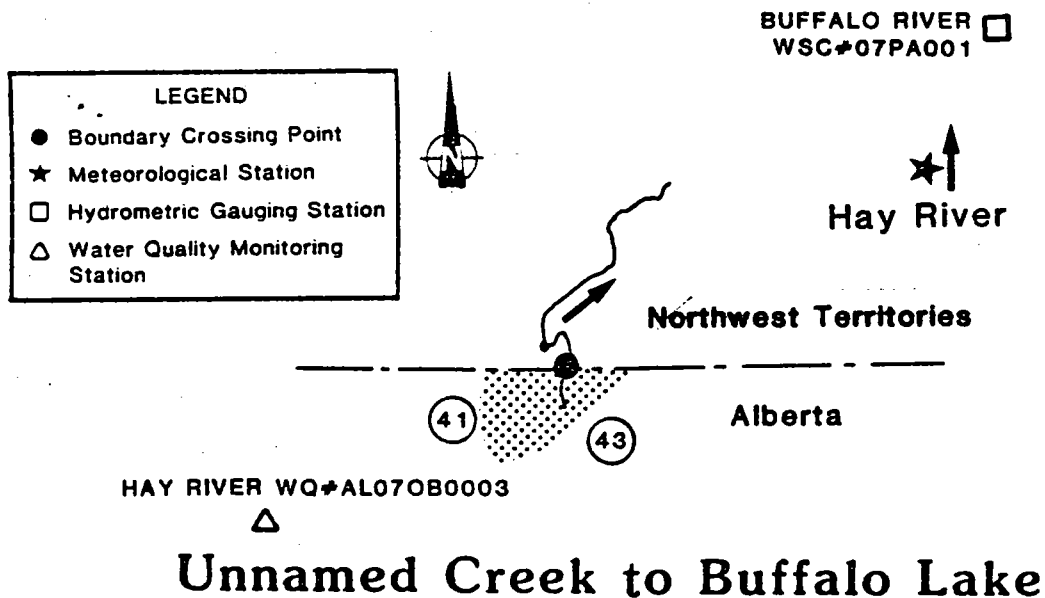
I.M.W. Map number(s): NO-11

General Topography: marshy flat land

General Location: southwest of Buffalo Lake.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River
AES 2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 43

River Name: Yates River

Gross Drainage Area (km²): 2388

*Average Annual Flow Volume (1000's dam³): Total 602
Contributed 602

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 116° 04'

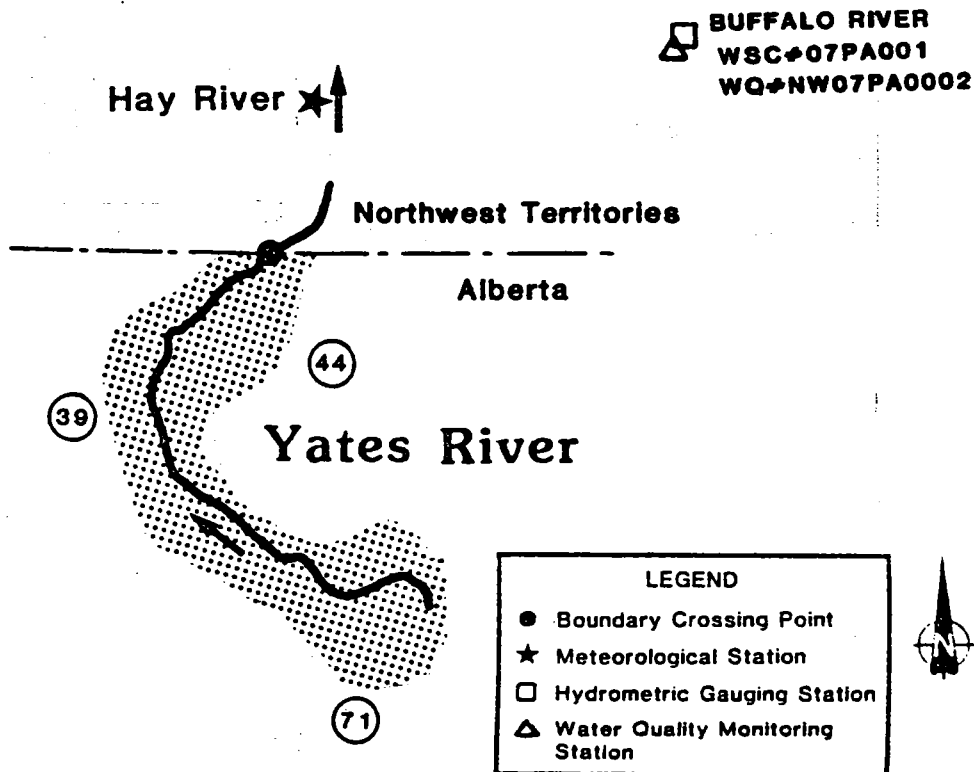
I.M.W. Map number(s): NO-11

General Topography: the upper reaches lie in the Caribou Hills and
the lower reaches are in a marshy flat land

General Location: southwest of Buffalo Lake.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River
AES 2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 44

River Name: Whitesand River

Gross Drainage Area (km²): 3569

*Average Annual Flow Volume (1000's dam³): Total 900
Contributed 900

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 115° 36'

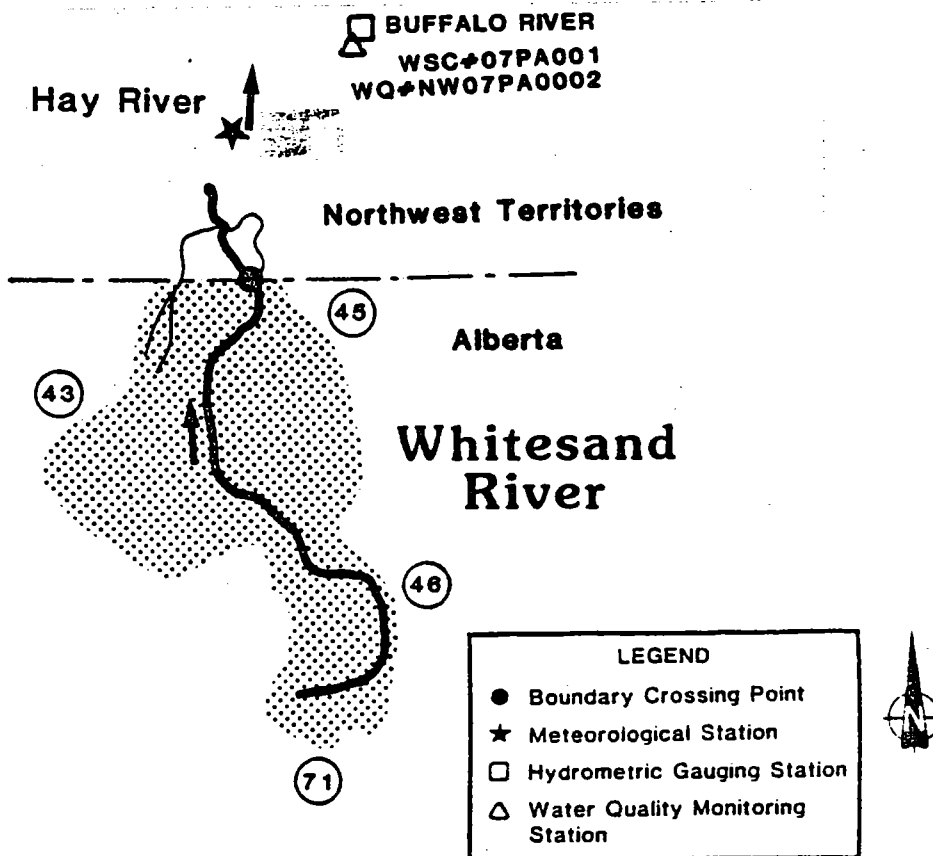
I.M.W. Map number(s): NO-11

General Topography: the upper reaches lie in the Caribou Hills and
the lower reaches are in a marshy flat land

General Location: southwest of Buffalo Lake.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River
AES 2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 45

River Name: Tourangeau Creek

Gross Drainage Area (km²): 515

*Average Annual Flow Volume (1000's dam³): Total 130
 Contributed 130

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 115° 26'

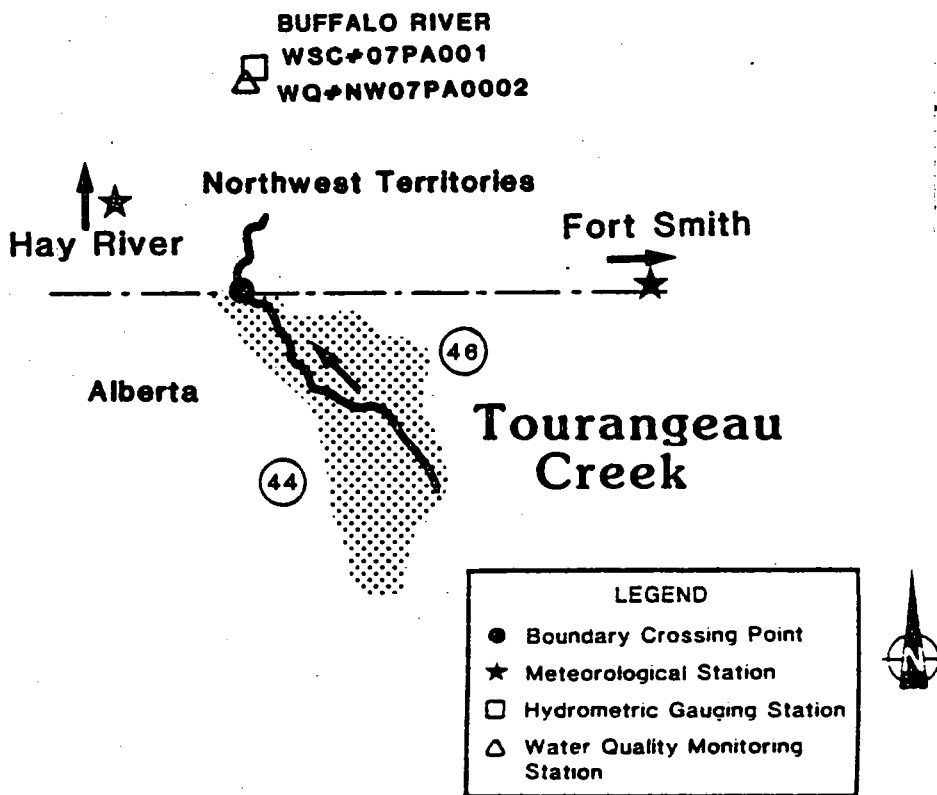
I.M.W. Map number(s): NO-11

General Topography: originating in the Caribou Mountains and
 flowing to a low flat area with many small lakes

General Location: south of Buffalo Lake in Wood Buffalo
 National Park.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River (50%) AES 2202400
 Fort Smith (50%) AES 2202200



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 46

River Name: Buffalo River

Gross Drainage Area (km²): 4659

*Average Annual Flow Volume (1000's dam³): Total 600
Contributed 600

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 114° 30'

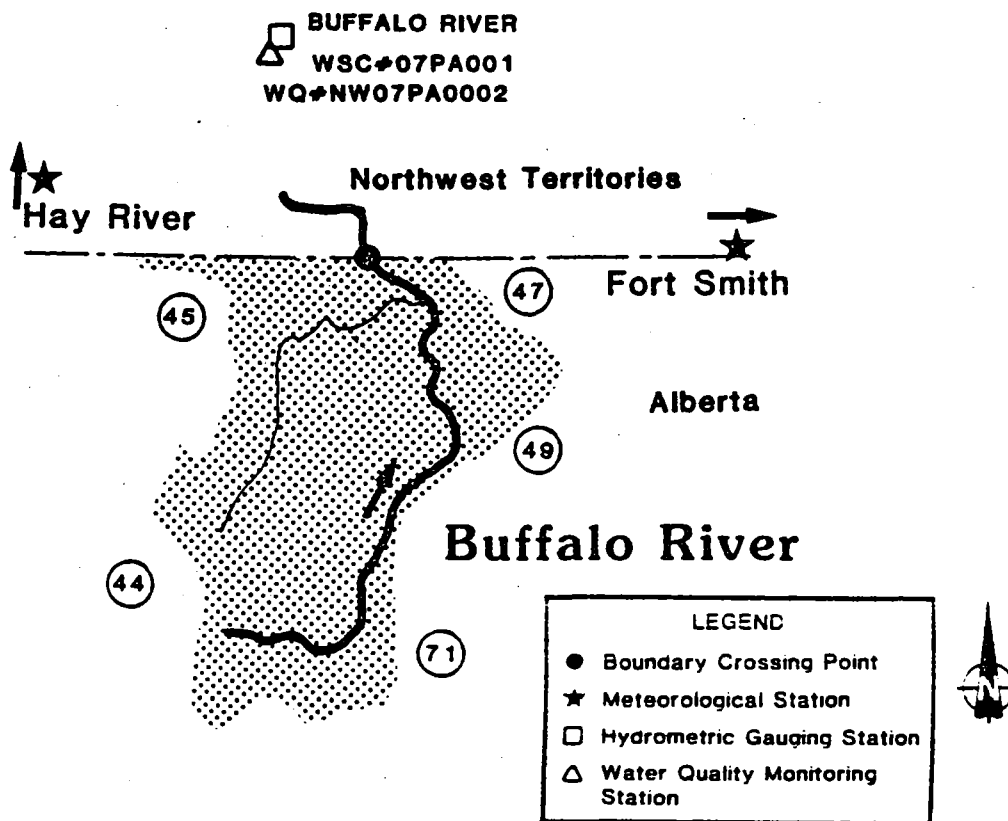
I.M.W. Map number(s): NO-11; NO-12

General Topography: originates in the Caribou Mountains and flows
to a flat marshy area

General Location: south of Buffalo Lake.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Hay River (50%) AES 2202400
Fort Smith (50%) AES 2202200



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 47

River Name: Copp Lake tributary

Gross Drainage Area (km²): 352

*Average Annual Flow Volume (1000's dam³): Total 89
Contributed 89

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 114° 10'


I.M.W. Map number(s): NO-11; NO-12

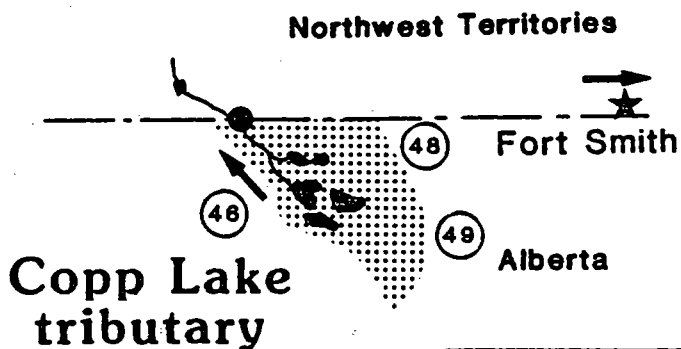
General Topography: flat marsh area

General Location: southwest of Buffalo Lake.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Fort Smith
AES 2202200

 BUFFALO RIVER
WSC#07PA001
WQ#NW07PA0002



LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 48

River Name: Sass River

Gross Drainage Area (km²): 544

*Average Annual Flow Volume (1000's dam³): Total 137
Contributed 137

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 113° 13'

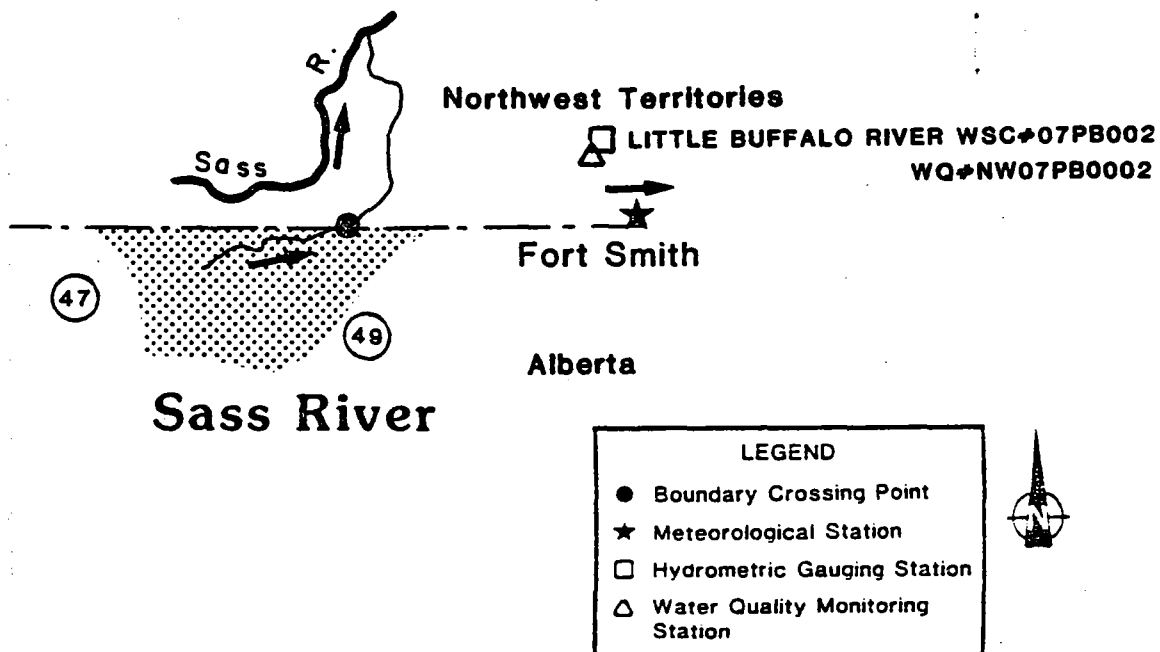
I.M.W. Map number(s): N0-12

General Topography: flat marshy area

General Location: south of Great Slave Lake, between the Hay
and Slave Rivers.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Fort Smith
AES 2202200



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 49

River Name: Little Buffalo River

Gross Drainage Area (km²): 4509

*Average Annual Flow Volume (1000's dam³): Total 1138
Contributed 1138

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 112° 51'

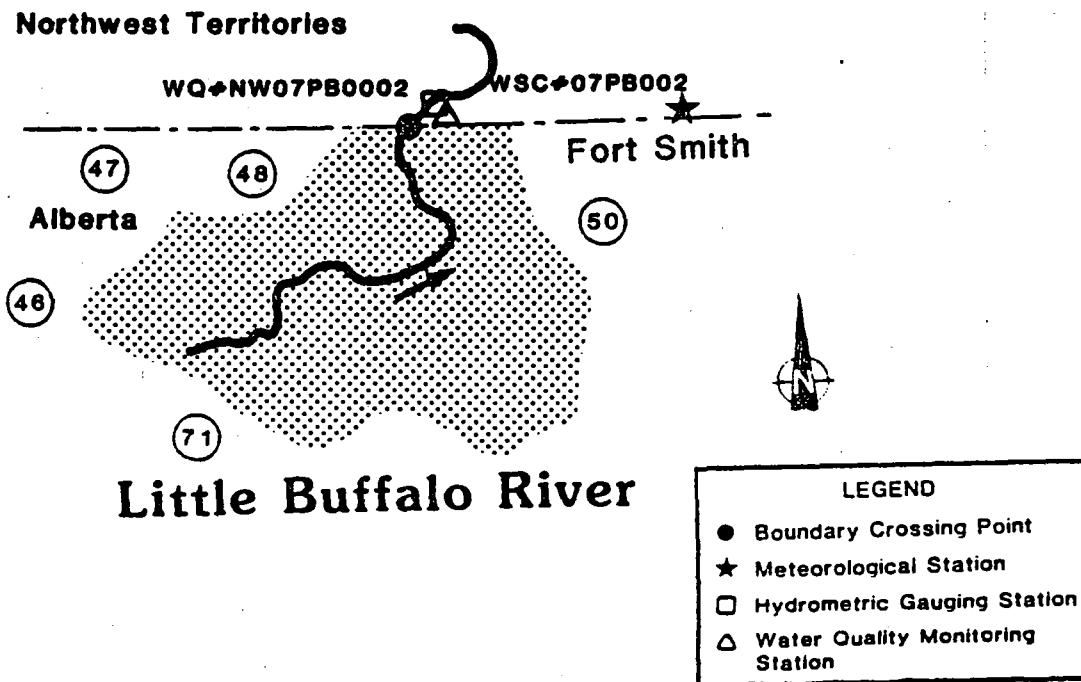
I.M.W. Map number(s): NO-12

General Topography: flat marshy area

General Location: south of Great Slave Lake and west of the Slave River.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Fort Smith
AES 2202200



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 50

River Name: Salt River

Gross Drainage Area (km²): 1707

*Average Annual Flow Volume (1000's dam³): Total 431
Contributed 431

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 112° 22'

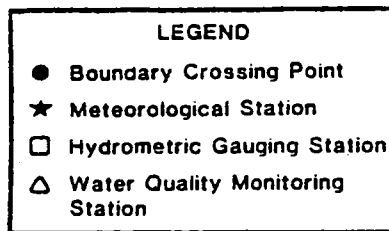
I.M.W. Map number(s): NO-12

General Topography: marsh area

General Location: south of Great Slave Lake and west of the Slave River.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Fort Smith
AES 2202200



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 51

River Name: Dog River tributary

Gross Drainage Area (km²): 106

*Average Annual Flow Volume (1000's dam³): Total 27
Contributed 27

Boundary Crossing: N.W.T. to Alberta

Latitude; Longitude: 60° 00'; 110° 58'

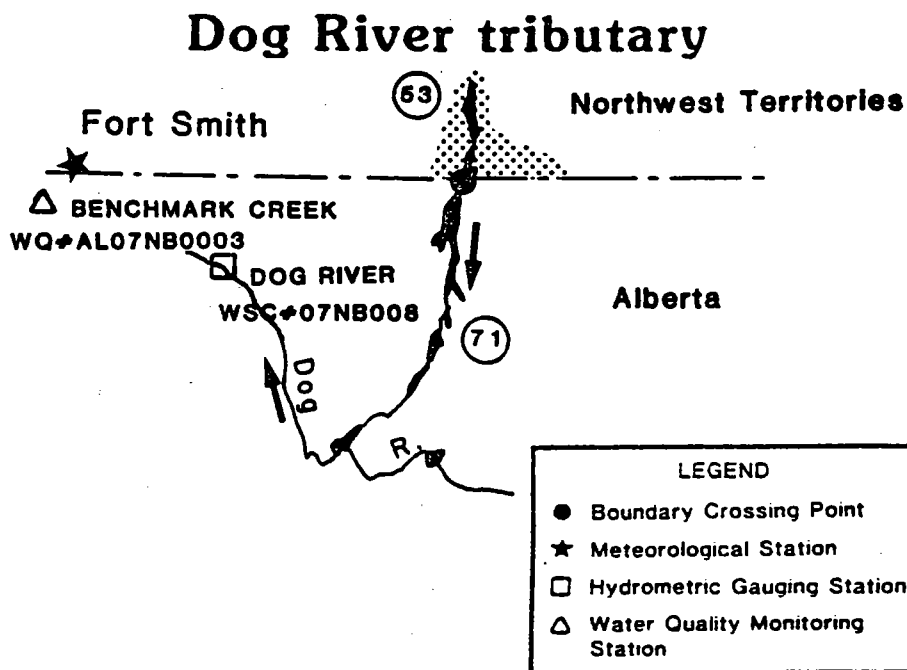
I.M.W. Map number(s): NP-12/13

General Topography: marshy

General Location: southwest of Great Slave Lake.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort Smith
AES 2202200



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 52

River Name: Tethul River

Gross Drainage Area (km²): 220

*Average Annual Flow Volume (1000's dam³): Total 728
Contributed 56

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 111° 29'

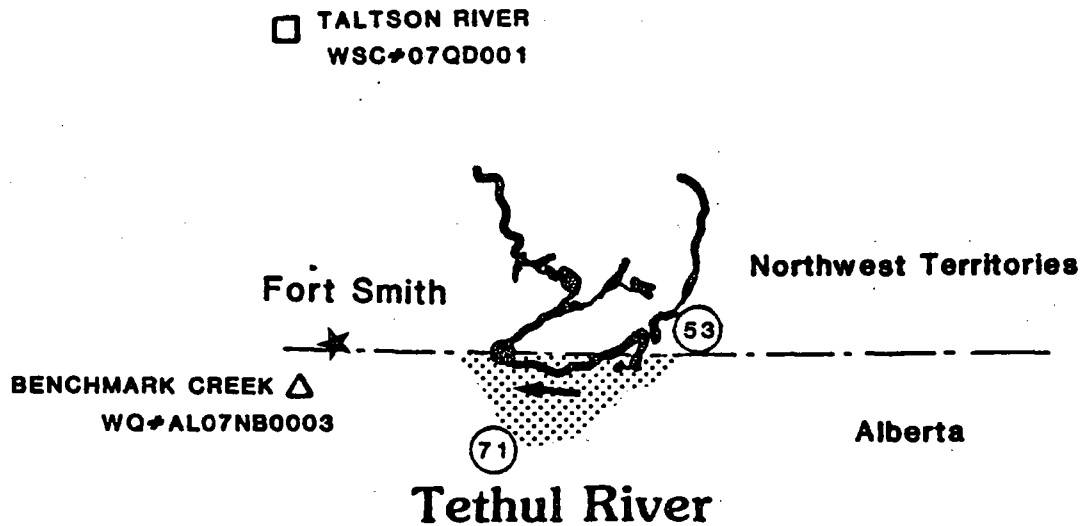
I.M.W. Map number(s): N0-12

General Topography: marshy

General Location: east of Fort Smith.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Fort Smith
AES 2202200



LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 53

River Name: Tethul River

Gross Drainage Area (km²): 1072

*Average Annual Flow Volume (1000's dam³): Total 672
 Contributed 270

Boundary Crossing: N.W.T. to Alberta
 Latitude; Longitude: 60° 00'; 111° 13'
 I.M.W. Map number(s): NP-12/13

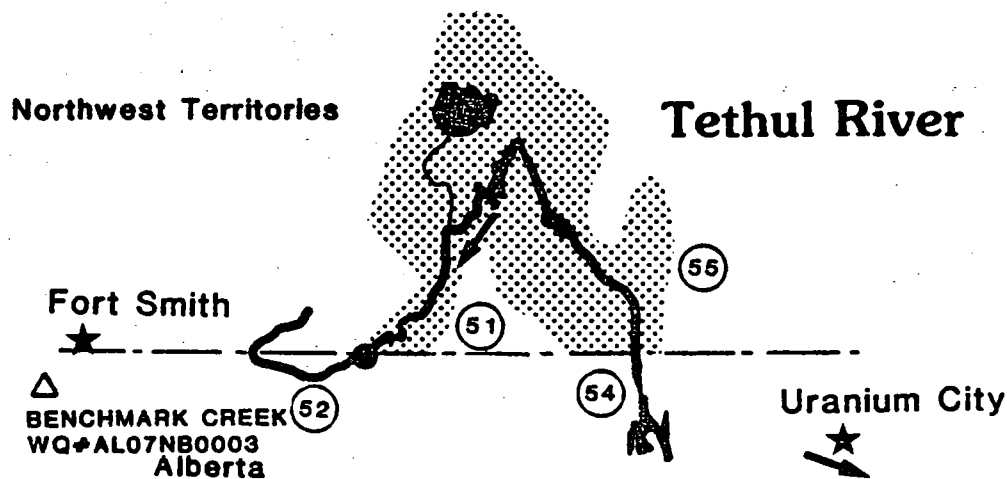
General Topography: flat with numerous small lakes

General Location: north of the west end of Lake Athabasca.

This basin contributes to subbasin number: 52

Meteorologic station(s) applicable to the basin: Fort Smith (70%) AES 2202200
 Uranium City (30%) AES 4068340

TALTSON RIVER
 -- WSC#07QD001



LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hyarometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 54

River Name: Tethul River

Gross Drainage Area (km²): 681

*Average Annual Flow Volume (1000's dam³): Total 402
Contributed 172

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 110° 36'

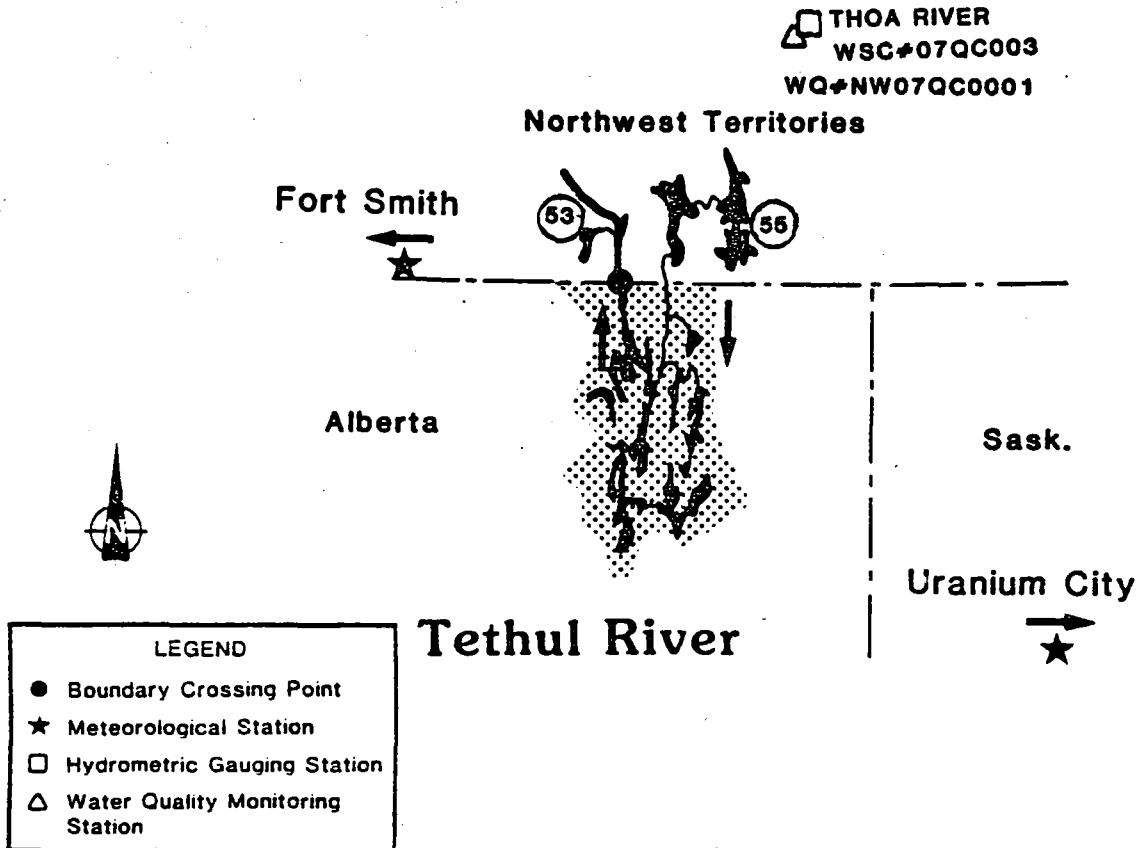
I.M.W. Map number(s): N0-12

General Topography: flat with numerous small lakes

General Location: north of Lake Athabasca and west of the
Alberta-Saskatchewan border.

This basin contributes to subbasin number: 52 and 53

Meteorologic station(s) applicable to the basin: Fort Smith (60%) AES 2202200
Uranium City (40%) AES 4068340



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 55

River Name: Tethul River

Gross Drainage Area (km²): 391

*Average Annual Flow Volume (1000's dam³): Total 230
Contributed 99

Boundary Crossing: N.W.T. to Alberta

Latitude; Longitude: 60° 00'; 110° 29'

I.M.W. Map number(s): NO-12

General Topography: flat with numerous small lakes

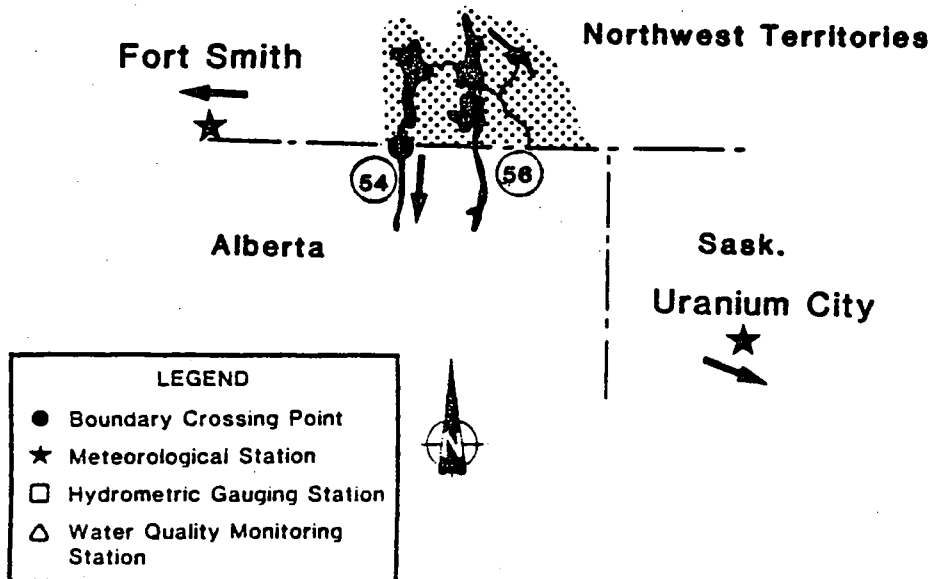
General Location: north of Lake Athabasca and west of the
Alberta-Saskatchewan border.

This basin contributes to subbasin number: 52, 53 and 54

Meteorologic station(s) applicable to the basin: Fort Smith (60%) AES 2202200
Uranium City (40%) AES 4068340

□ THOA RIVER
WSC#07QC003
WQ#NW07QC0001

Tethul River



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 56

River Name: Tethul River

Gross Drainage Area (km²): 458

*Average Annual Flow Volume (1000's dam³): Total 131
Contributed 116

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 110° 18'

I.M.W. Map number(s): NO-12

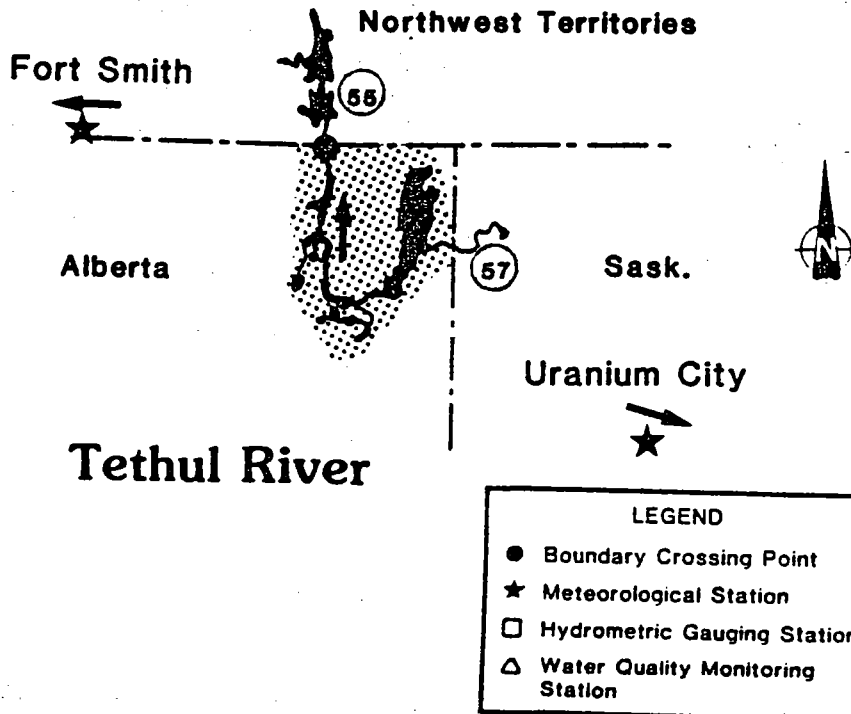
General Topography: many small lakes

General Location: in the extreme northeast corner of Alberta.

This basin contributes to subbasin number: 52, 53, 54 and 55

Meteorologic station(s) applicable to the basin: Fort Smith (50%) AES 2202200
Uranium City (50%) AES 4068340

□ THOA RIVER
WSC#07QC003
WQ#NW07QC0001



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 57

River Name: Tethul River

Gross Drainage Area (km²): 60

*Average Annual Flow Volume (1000's dam³): Total 15
Contributed 15

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 59° 52'; 110° 00'

I.M.W. Map number(s): NO-12

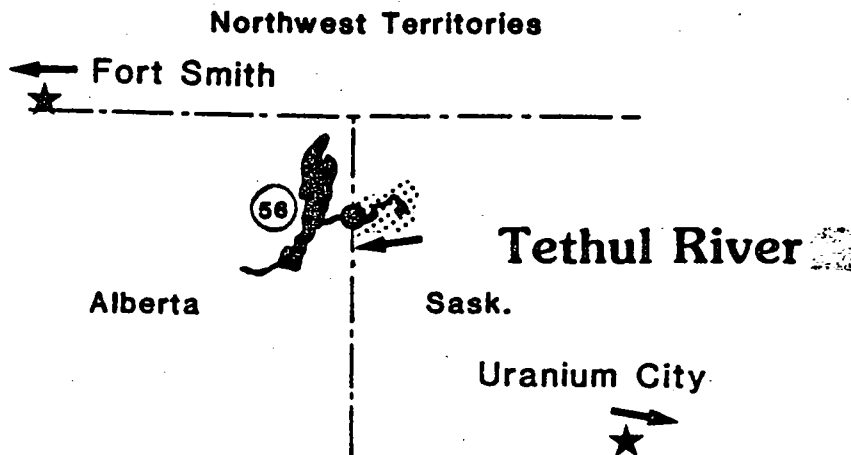
General Topography: many small lakes

General Location: north of Lake Athabasca.

This basin contributes to subbasin number: 52, 53, 54, 55 and 56

Meteorologic station(s) applicable to the basin: Fort Smith (50%) AES 2202200
Uranium City (50%) AES 4068340

□ THOA RIVER
WSC#07QC003
WQ#NW07QC0001



LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station

*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 58

River Name: Colin Lake

Gross Drainage Area (km²): 878

*Average Annual Flow Volume (1000's dam³): Total 222
Contributed 222

Boundary Crossing: Alberta to Saskatchewan

Latitude; Longitude: 59° 32'; 110° 00'

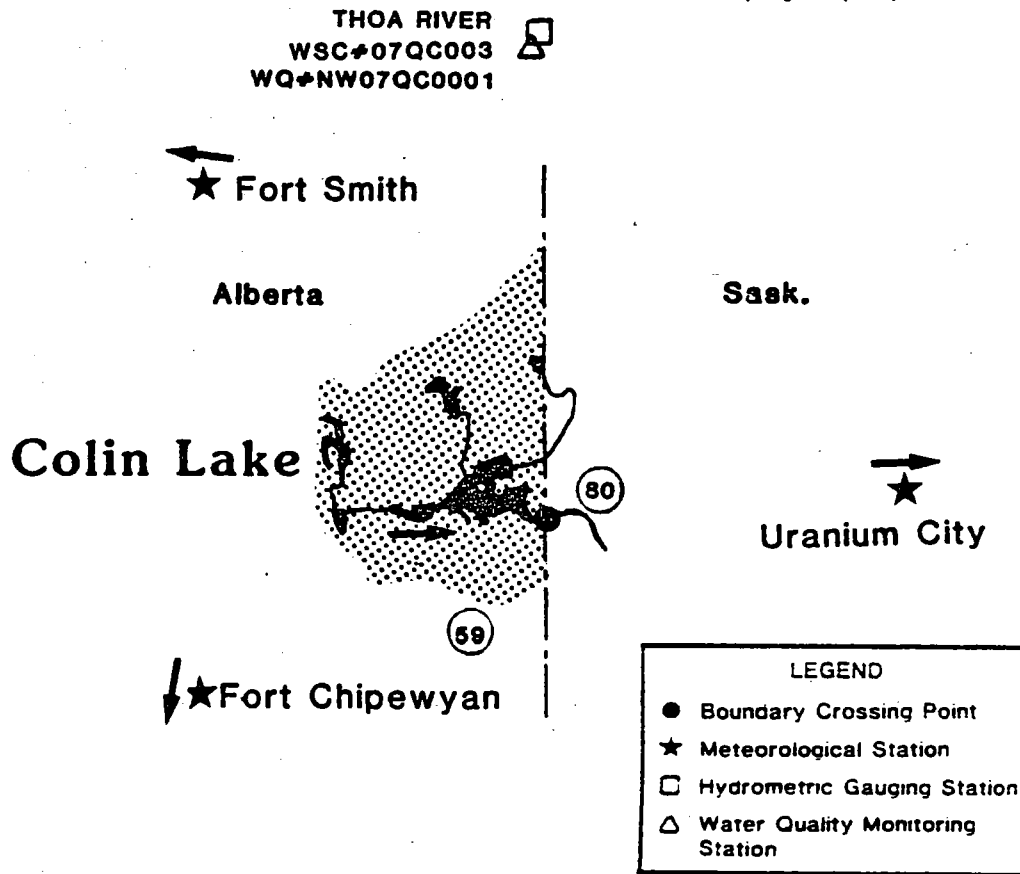
I.M.W. Map number(s): NO-12

General Topography: many small lakes

General Location: northwest of Lake Athabasca.

This basin contributes to subbasin number: 80 and 71

Meteorologic station(s) applicable to the basin: Fort Smith (33%) AES 2202200
Uranium City (34%) AES 4068340
Fort Chipewyan (33%) AES 3072657



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 59

River Name: Lake Athabasca tributaries

Gross Drainage Area (km²): 228

*Average Annual Flow Volume (1000's dam³): Total 58
 Contributed 58

Boundary Crossing: Alberta to Saskatchewan

Latitude; Longitude: 59° 22'; 110° 00'

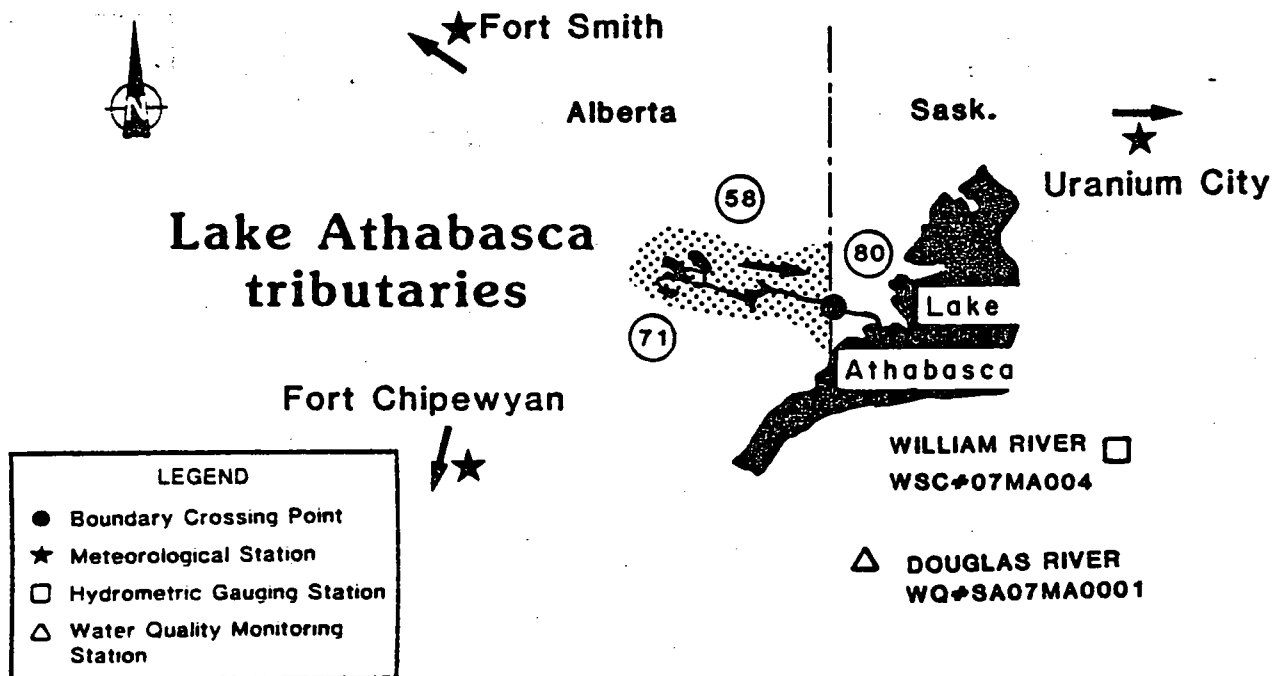
I.M.W. Map number(s): N0-12

General Topography: many small lakes

General Location: northwest of Lake Athabasca.

This basin contributes to subbasin number: 80 and 71

Meteorologic station(s) applicable to the basin: Fort Smith (33%) AES 2202200
 Uranium City (34%) AES 4068340
 Fort Chipweyan (33%) AES 3072657



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 60

River Name: Lake Athabasca tributaries

Gross Drainage Area (km²): 1658

*Average Annual Flow Volume (1000's dam³): Total 418
Contributed 418

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 58° 57'; 110° 00'

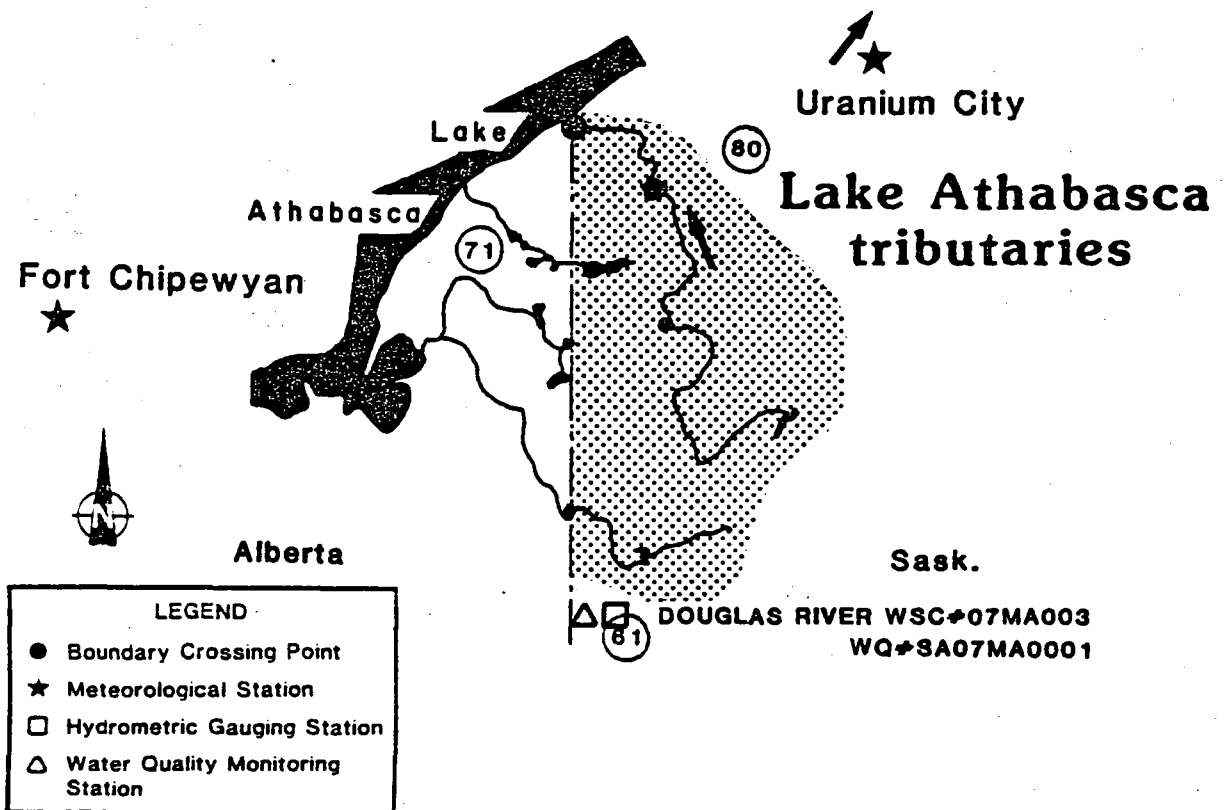
I.M.W. Map number(s): NO-12

General Topography: many small lakes

General Location: south of Lake Athabasca.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort Chipweyan (50%) AES 3072657
Uranium City (50%) AES 4068340



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 61

River Name: Douglas River

Gross Drainage Area (km²): 1802

*Average Annual Flow Volume (1000's dam³): Total 275
Contributed 275

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 58° 22'; 110° 00'

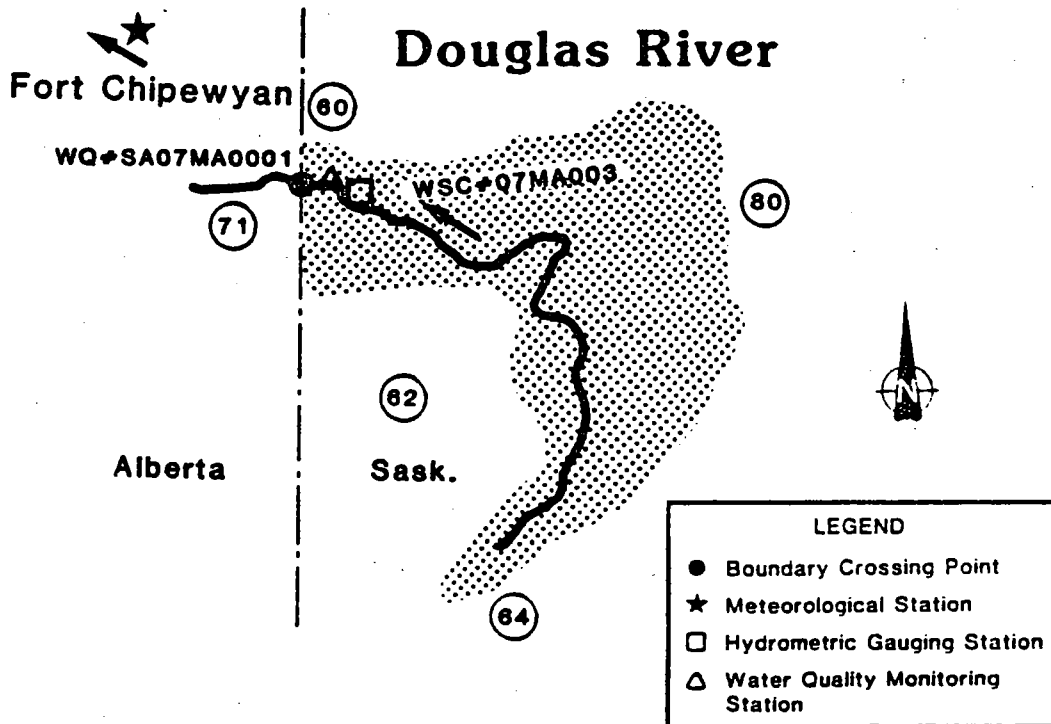
I.M.W. Map number(s): NO-12

General Topography: numerous lakes and several large eskers

General Location: south of Lake Athabasca.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort Chipewyan
AES 3072657



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 62

River Name: Old Fort River

Gross Drainage Area (km²): 935

*Average Annual Flow Volume (1000's dam³): Total 236
Contributed 236

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 58° 12'; 110° 00'

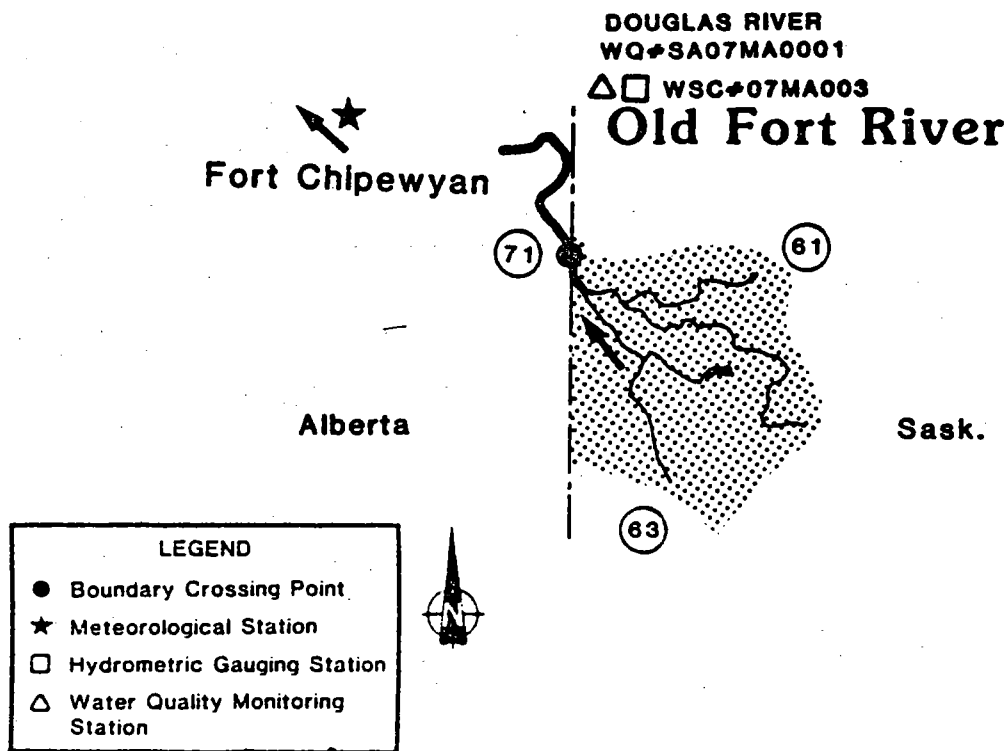
I.M.W. Map number(s): NO-12

General Topography: many small lakes and several eskers

General Location: south of Lake Athabasca.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort Chipewyan
AES 3072657



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 63

River Name: Maybelle River

Gross Drainage Area (km²): 269

*Average Annual Flow Volume (1000's dam³): Total 68
Contributed 68

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 57° 57'; 110° 00'

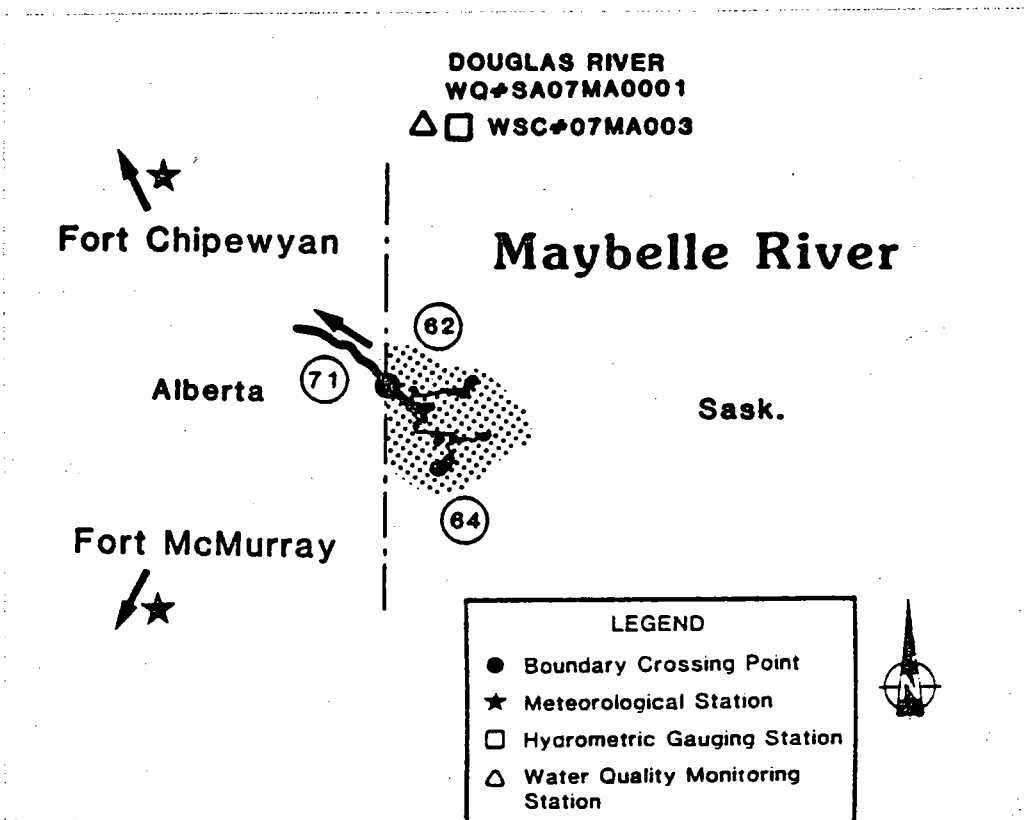
I.M.W. Map number(s): NO-12

General Topography: many small lakes

General Location: south of Lake Athabasca.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort Chipewyan (50%) AES 3072657
Fort McMurray (50%) AES 3062693



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 64

River Name: Richardson River

Gross Drainage Area (km²): 1593

*Average Annual Flow Volume (1000's dam³): Total 402
Contributed 402

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 57° 44'; 110° 00'

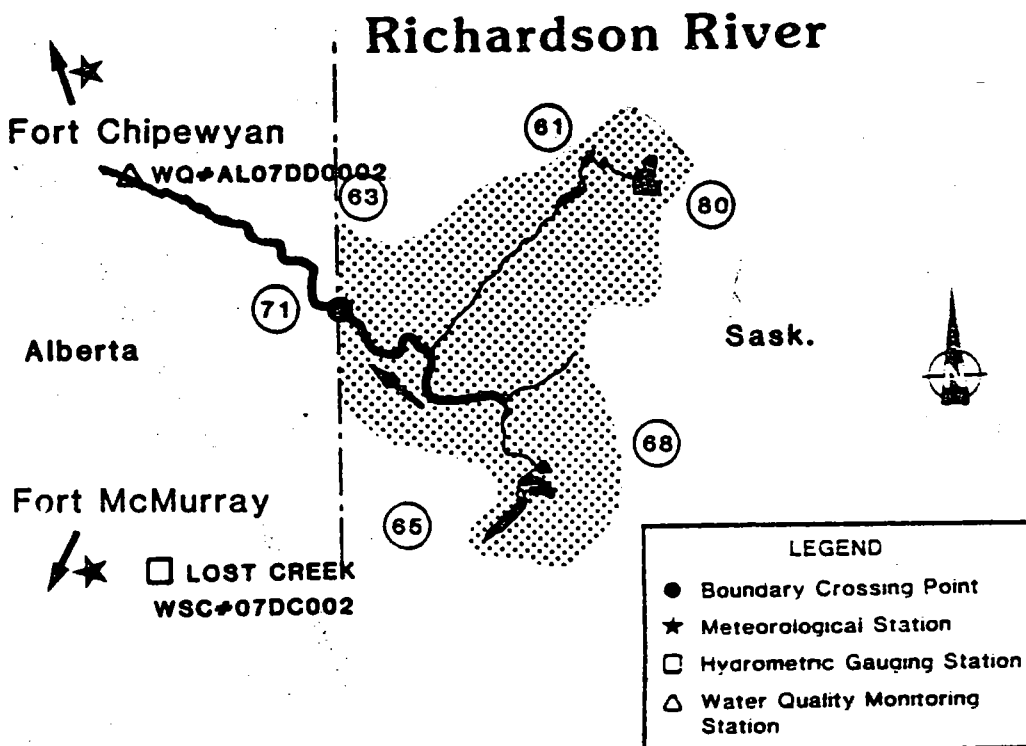
I.M.W. Map number(s): NO-12

General Topography: many small lakes

General Location: south of Lake Athabasca.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort Chipweyan (50%) AES 3072657
Fort McMurray (50%) AES 3062693



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 65

River Name: Firebag River

Gross Drainage Area (km²): 751

*Average Annual Flow Volume (1000's dam³): Total 189
Contributed 189

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 57° 21'; 110° 00'

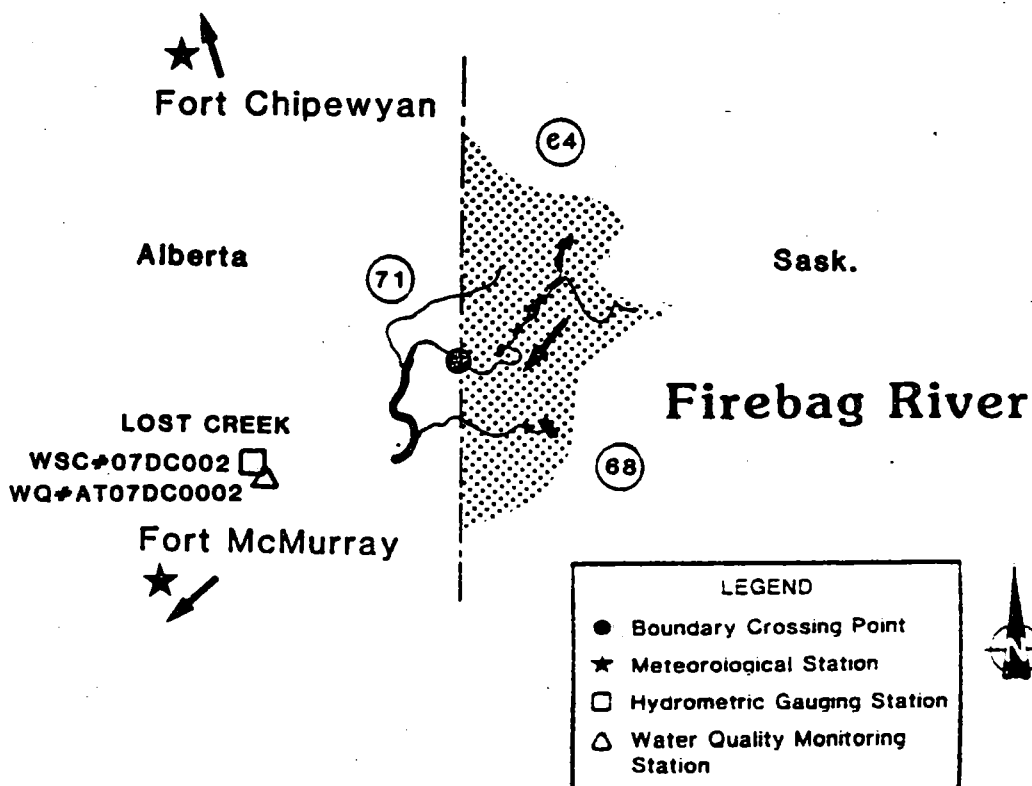
I.M.W. Map number(s): NO-12

General Topography: many small lakes

General Location: south of Lake Athabasca.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort McMurray (60%) AES 3062693
Fort Chipewyan (40%) AES 3072657



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 66

River Name: Descharme River

Gross Drainage Area (km²): 34

*Average Annual Flow Volume (1000's dam³): Total 9
Contributed 9

Boundary Crossing: Alberta to Saskatchewan

Latitude; Longitude: 57° 07'; 110° 00'

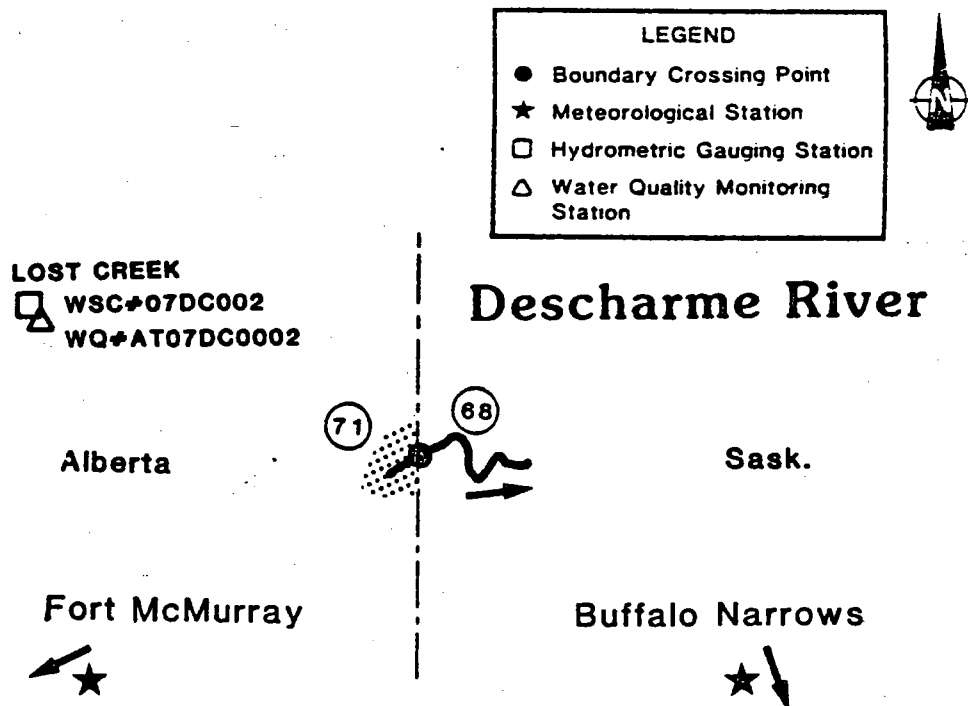
I.M.W. Map number(s): NO-12

General Topography: hilly land

General Location: north of the Clearwater River.

This basin contributes to subbasin number: 71 and 68

Meteorologic station(s) applicable to the basin: Fort McMurray (60%) AES 3062693
Buffalo Narrows (40%) AES 4060981



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 67

River Name: High Hill River

Gross Drainage Area (km²): 383

*Average Annual Flow Volume (1000's dam³): Total 97
Contributed 97

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 56° 50'; 110° 00'

I.M.W. Map number(s): NO-12

General Topography: several small lakes

General Location: west of Fort McMurray, Alberta.

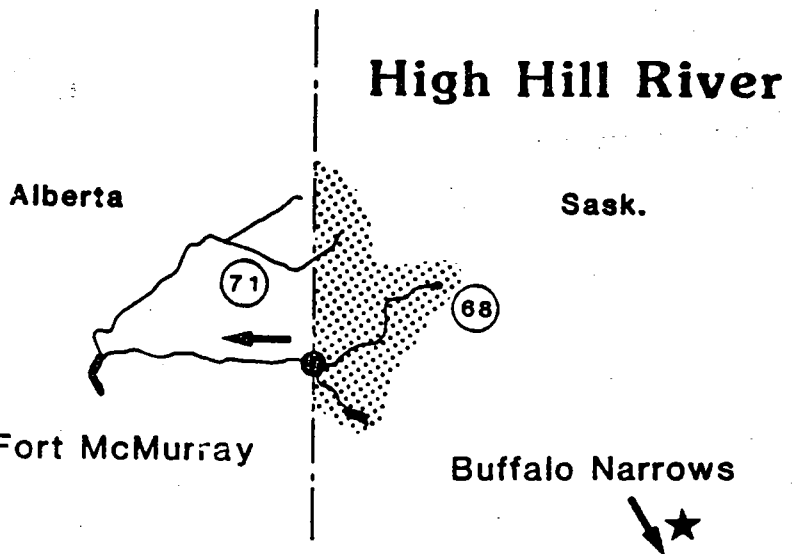
This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort McMurray (50%) AES 3062693
Buffalo Narrows (50%) AES 4060981

LOST CREEK
WSC#07DC002
WQ#AT07DC0002

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 69

River Name: Clearwater River tributary

Gross Drainage Area (km²): 98

*Average Annual Flow Volume (1000's dam³): Total 25
Contributed 25

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 56° 34'; 110° 00'

I.M.W. Map number(s): NO-12

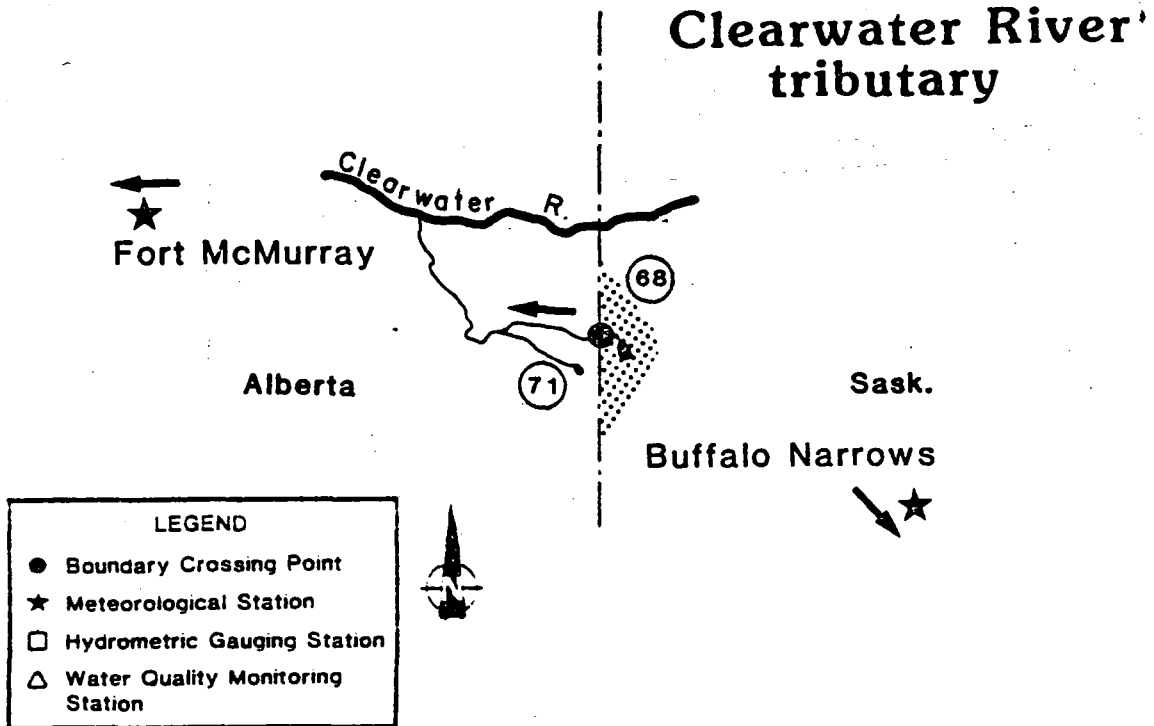
General Topography: several small lakes

General Location: west of Lac La Locke, Saskatchewan.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort McMurray (50%) AES 3062693
Buffalo Narrows (50%) AES 4060981

LOST CREEK □ WSC#07DC002
△ WQ#AT07DC0002



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 68

River Name: Clearwater River

Gross Drainage Area (km²): 14,185

*Average Annual Flow Volume (1000's dam³): Total 2195
Contributed 2186

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 56° 42'; 110° 00'

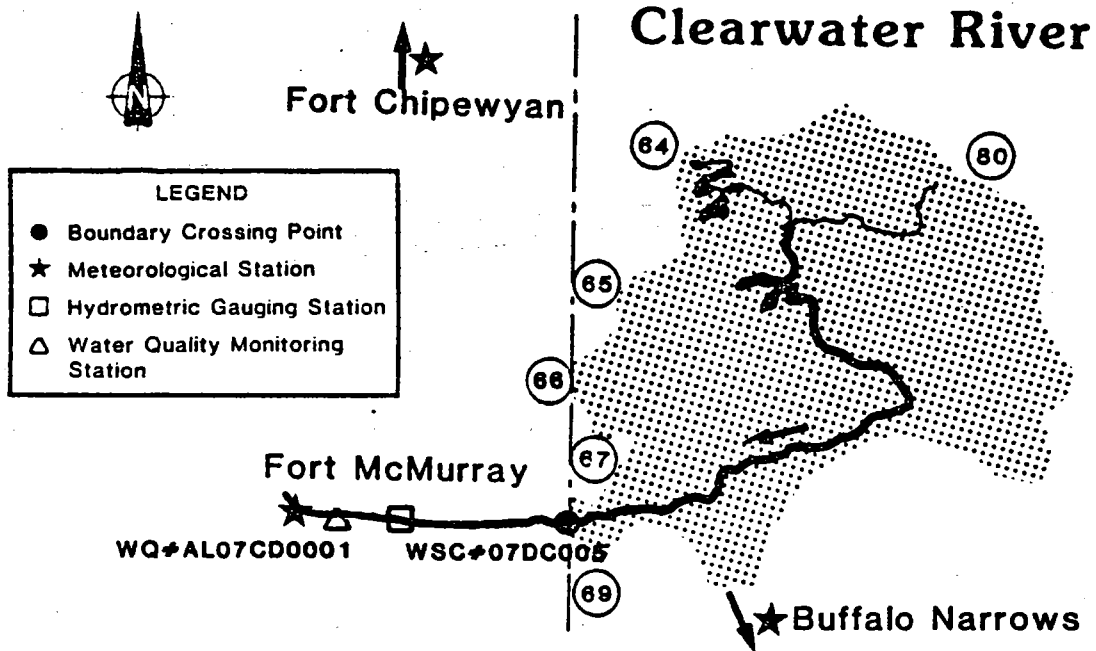
I.M.W. Map number(s): NO-12; NO-13

General Topography: numerous small lakes and creeks

General Location: west of Fort McMurray, Alberta.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort McMurray (40%) AES 3062693
Buffalo Narrows (40%) AES 4060981
Fort Chipweyan (20%) AES 3072657



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 70

River Name: Winefred River

Gross Drainage Area (km²): 298

*Average Annual Flow Volume (1000's dam³): Total 75
Contributed 75

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 56° 06'; 110° 00'

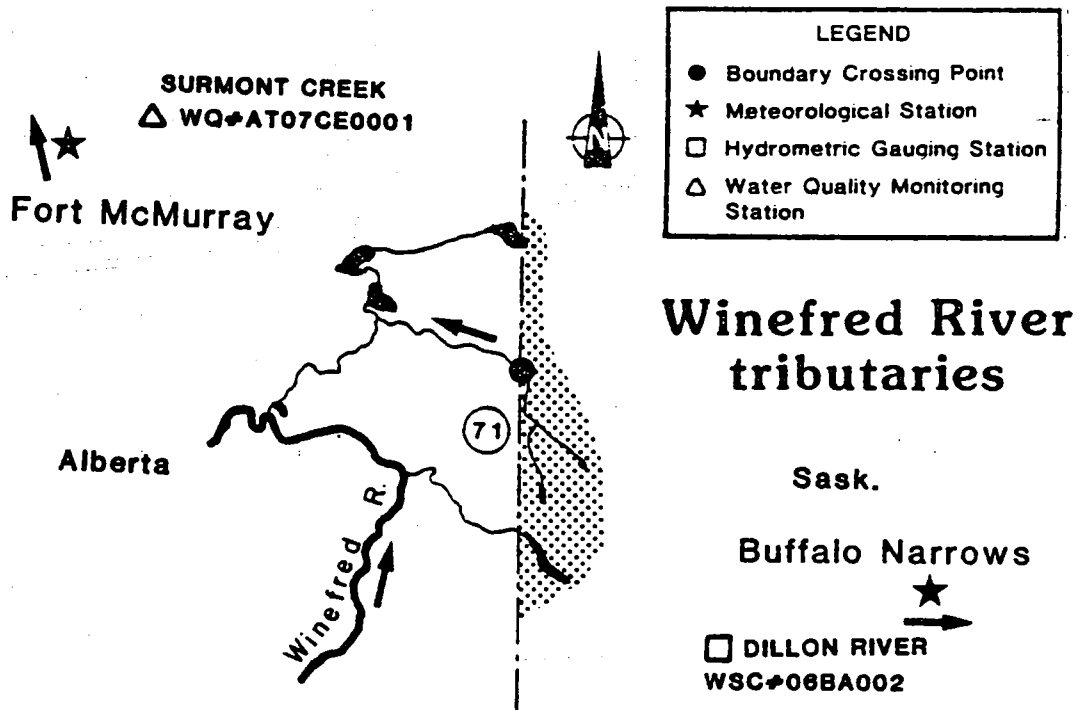
I.M.W. Map number(s): NO-12; NN-12

General Topography: flat land

General Location: west of Peter Pond Lake.

This basin contributes to subbasin number: 71

Meteorologic station(s) applicable to the basin: Fort McMurray (50%) AES 3062693
Buffalo Narrows (50%) AES 4060981



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 71

River Name: Slave River

Gross Drainage Area (km²): 355,562

*Average Annual Flow Volume (1000's dam³): Total 108,361
 Contributed 83,457

Boundary Crossing: Alberta to N.W.T.

Latitude; Longitude: 60° 00'; 111° 49'

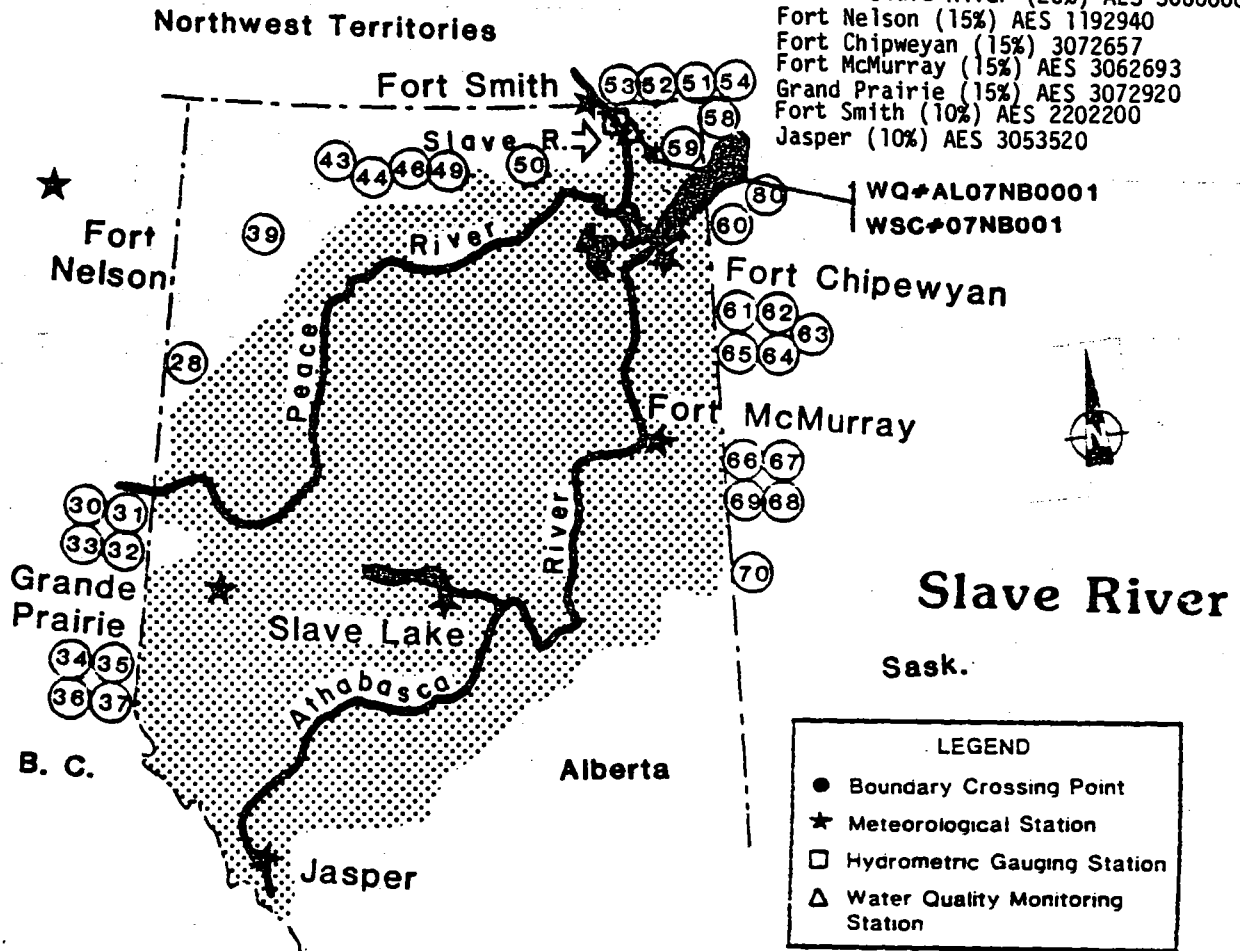
I.M.W. Map number(s): NO-11; NO-12; NN-11; NN-12

General Topography: varies from mountainous to a delta area

General Location: north of Edmonton.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Slave River (20%) AES 3066000
 Fort Nelson (15%) AES 1192940
 Fort Chipewyan (15%) 3072657
 Fort McMurray (15%) AES 3062693
 Grand Prairie (15%) AES 3072920
 Fort Smith (10%) AES 2202200
 Jasper (10%) AES 3053520



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 72

River Name: Nolan River

Gross Drainage Area (km²): 878

*Average Annual Flow Volume (1000's dam³): Total 222
Contributed 222

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 109° 06'

I.M.W. Map number(s): NP-12/13

General Topography: many small lakes and creeks

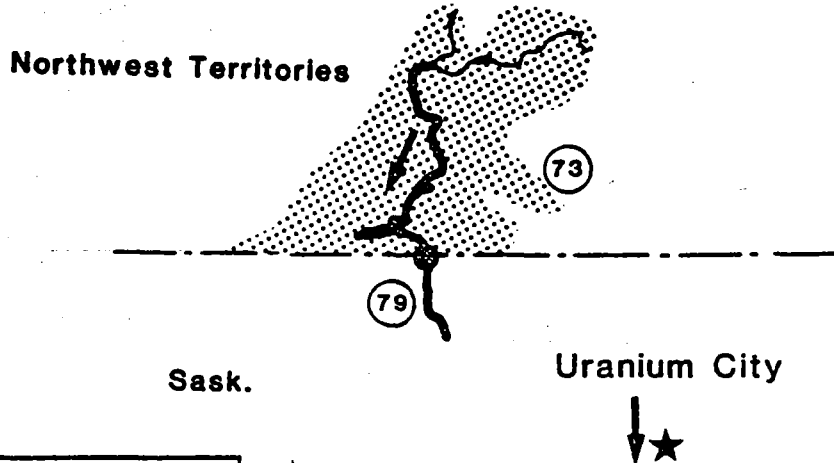
General Location: north of Lake Athabasca.

This basin contributes to subbasin number: 79

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340

THOA RIVER
WSC#07QC003
WQ#NW07QC0001

Nolan River



LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station

*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 73

River Name: Abitau River

Gross Drainage Area (km²): 2929

*Average Annual Flow Volume (1000's dam³): Total 739
Contributed 739

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 108° 36'

I.M.W. Map number(s): NP-12/13

General Topography: many small lakes and creeks

General Location: north of Lake Athabasca.

This basin contributes to subbasin number: 79

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340

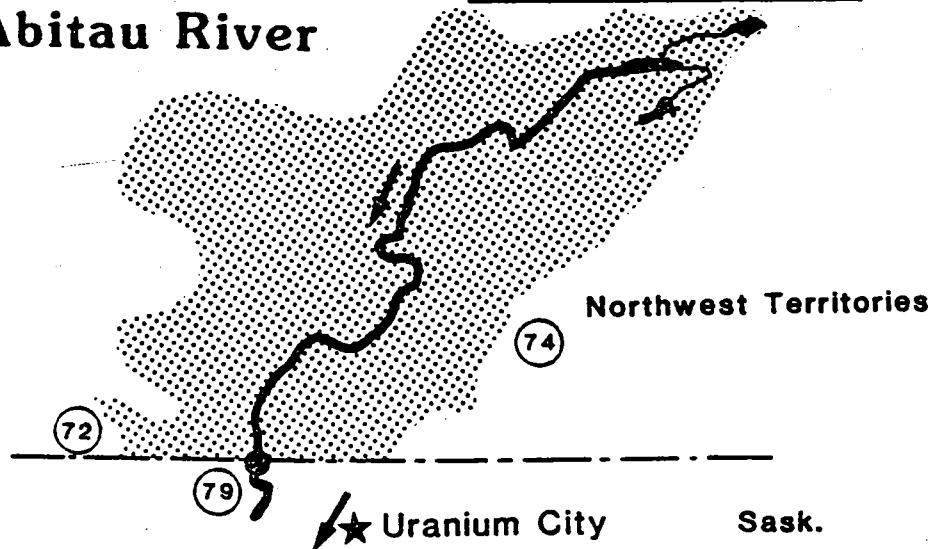
□ THOA RIVER
WSC#07QC003
WQ#NW07QC0001

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



Abitau River



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 74

River Name: Ena River

Gross Drainage Area (km²): 575

*Average Annual Flow Volume (1000's dam³): Total 145
Contributed 145

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 108° 10'

I.M.W. Map number(s): NP-12/13

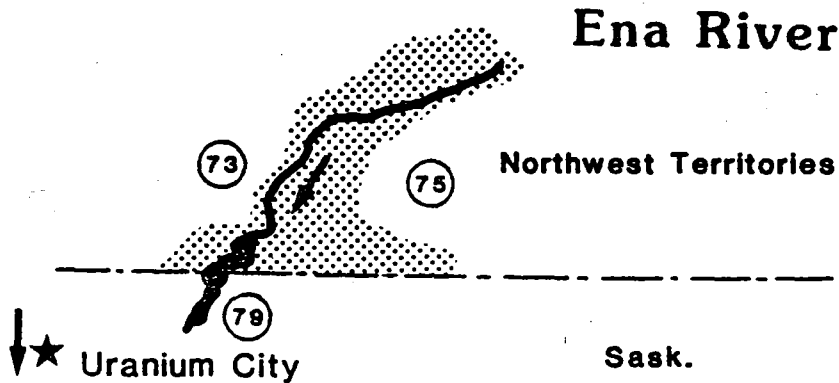
General Topography: many small lakes and creeks

General Location: north of Uranium City.

This basin contributes to subbasin number: 79

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340

□ THOA RIVER
△ WSC#07QC003
WQ#NW07QC0001



LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 75

River Name: Tazin River

Gross Drainage Area (km²): 1463

*Average Annual Flow Volume (1000's dam³): Total 369
Contributed 369

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 107° 36'

I.M.W. Map number(s): NP-12/13

General Topography: many small lakes and creeks

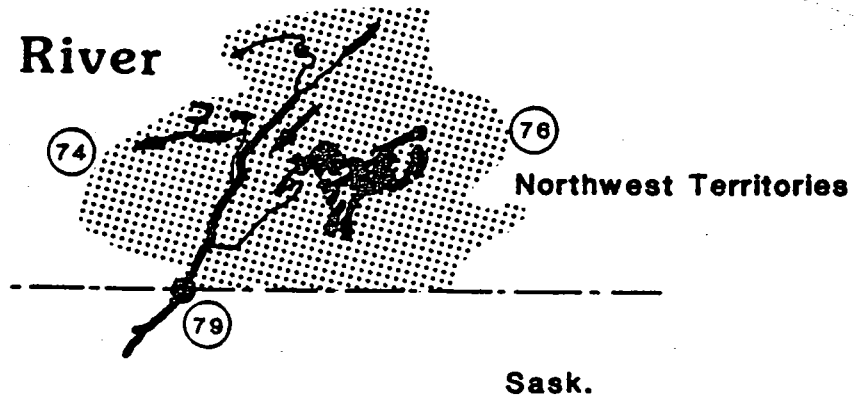
General Location: north of the town of Fond-du-Lac.

This basin contributes to subbasin number: 79

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340

△ THOA RIVER
WQ#NW07QC0001

Tazin River



Uranium City



GREASE RIVER
□ WSC#07LE0003

LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 76

River Name: Grease River

Gross Drainage Area (km²): 2846

*Average Annual Flow Volume (1000's dam³): Total 718
Contributed 718

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 106° 05'

I.M.W. Map number(s): NP-12/13

General Topography: many small lakes and creeks

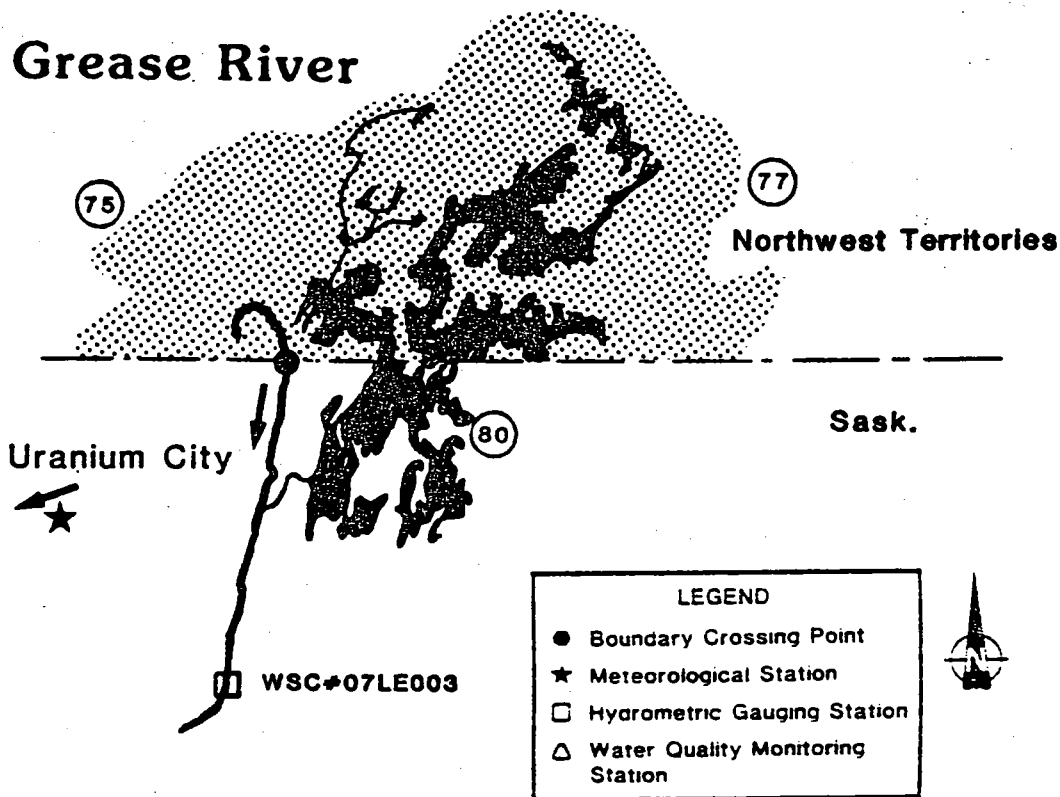
General Location: north of the town of Black Lake.

This basin contributes to subbasin number: 80 and 71

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340

△ THOA RIVER
WQ#NW07QC0001

Grease River



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 77

River Name: Selwyn Lake

Gross Drainage Area (km²): 3222

*Average Annual Flow Volume (1000's dam³): Total 813
Contributed 813

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 104° 40'

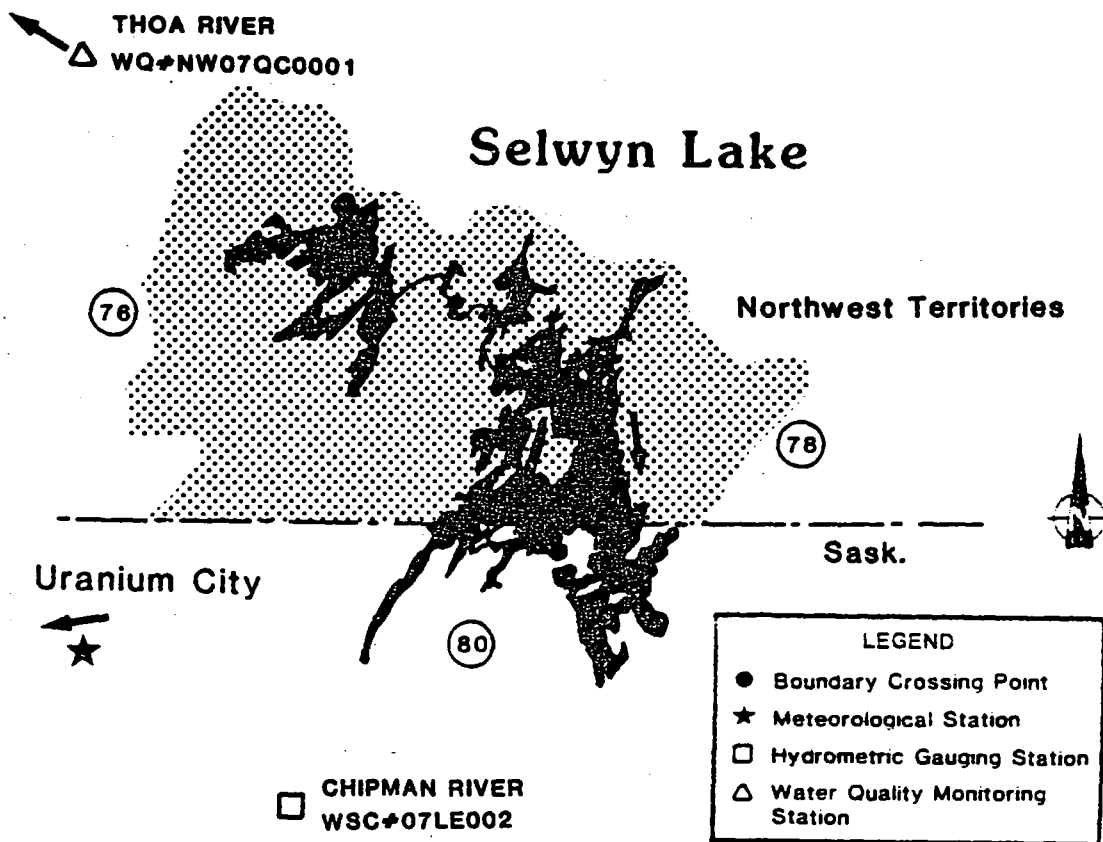
I.M.W. Map number(s): NP-12/13; NP-13/14

General Topography: approximately 50% of the area covered by 2
large lakes and many small lakes

General Location: north of the town of Black Lake.

This basin contributes to subbasin number: 80 and 71

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 78

River Name: Striding River

Gross Drainage Area (km²): 521

*Average Annual Flow Volume (1000's dam³): Total 131
Contributed 131

Boundary Crossing: N.W.T. to Saskatchewan

Latitude; Longitude: 60° 00'; 103° 59'

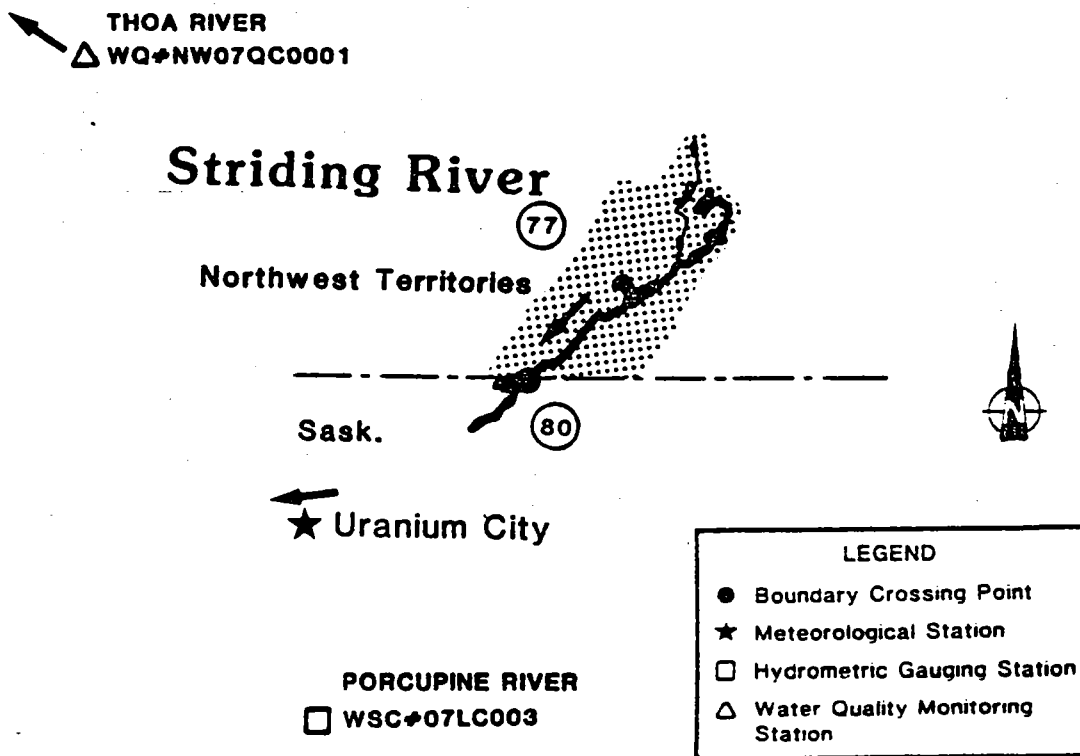
I.M.W. Map number(s): NP-12/13; NP-13/14

General Topography: many small lakes and creeks

General Location: northeast of the town of Black Lake.

This basin contributes to subbasin number: 80 and 71

Meteorologic station(s) applicable to the basin: Uranium City
AES 4068340



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 79

River Name: Tazin River

Gross Drainage Area (km²): 4216

*Average Annual Flow Volume (1000's dam³): Total 2539
 Contributed 1064

Boundary Crossing: Saskatchewan to N.W.T.

Latitude; Longitude: 60° 00'; 109° 48'

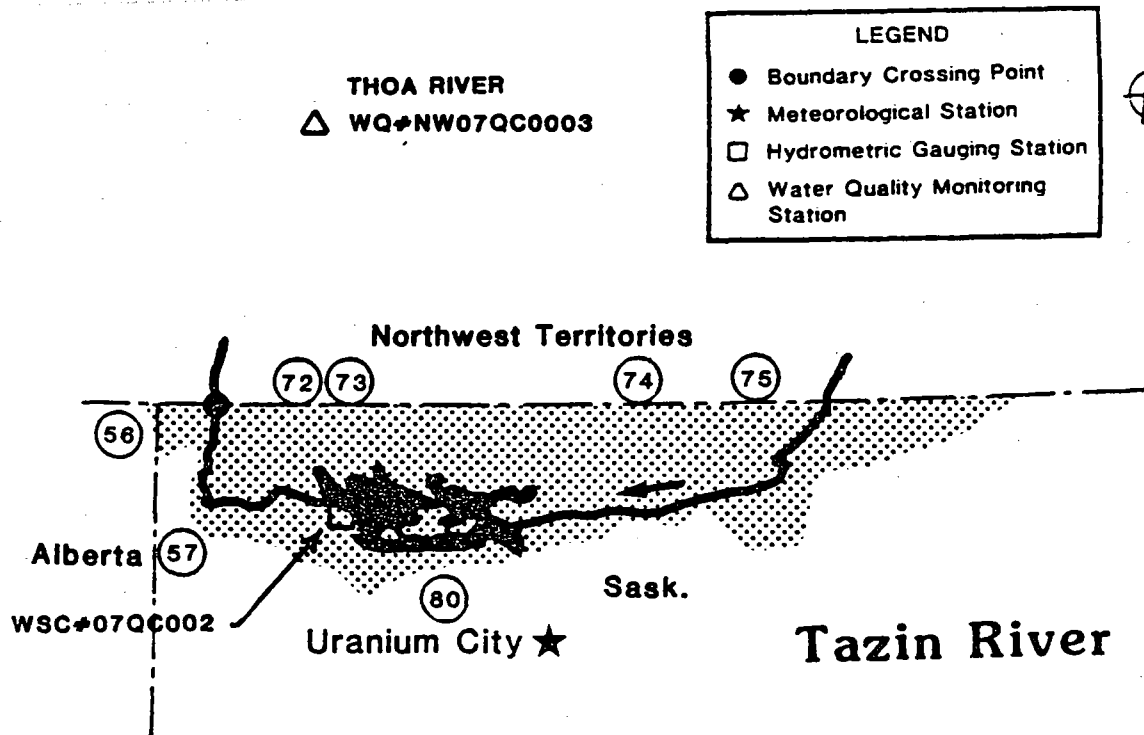
I.M.W. Map number(s): NO-12; NO-13

General Topography: many lakes and small creeks

General Location: north of Lake Athabasca.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Uranium City
 AES 4068340



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 80

River Name: Lake Athabasca

Gross Drainage Area (km²): 93,305

*Average Annual Flow Volume (1000's dam³): Total 25,482
 Contributed 23,540

Boundary Crossing: Saskatchewan to Alberta

Latitude; Longitude: 59° 10'; 110° 00'

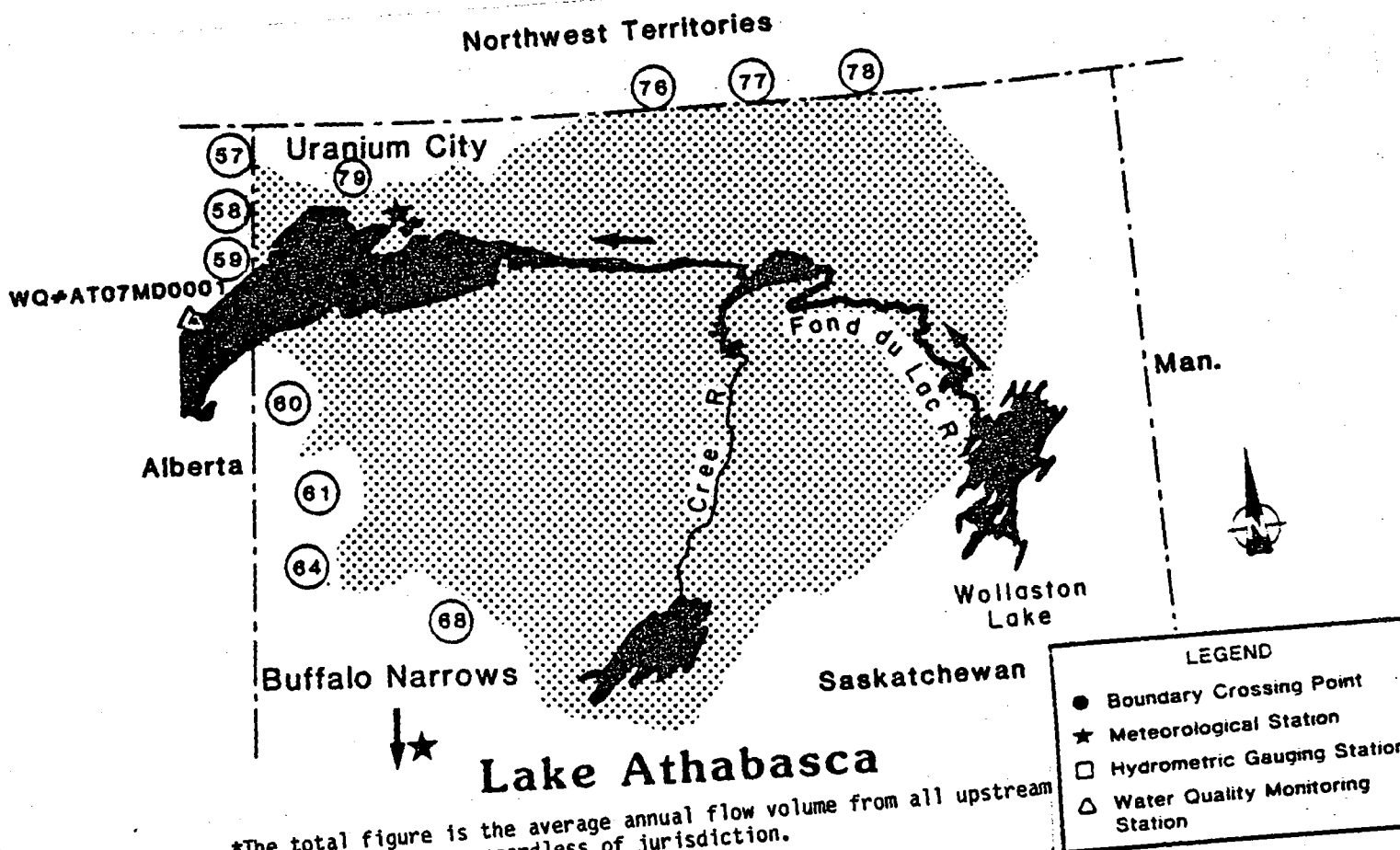
I.M.W. Map number(s): NO-12; NO-13

General Topography: many lakes and creeks with sand dunes south of Lake Athabasca

General Location: northern Saskatchewan.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Uranium City (85%) AES 4068340
 Buffalo Narrows (15%) AES 4060981



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 81

River Name: Big Fish River

Gross Drainage Area (km²): 668
 *Average Annual Flow Volume (1000's dam³): Total 169
 Contributed 169

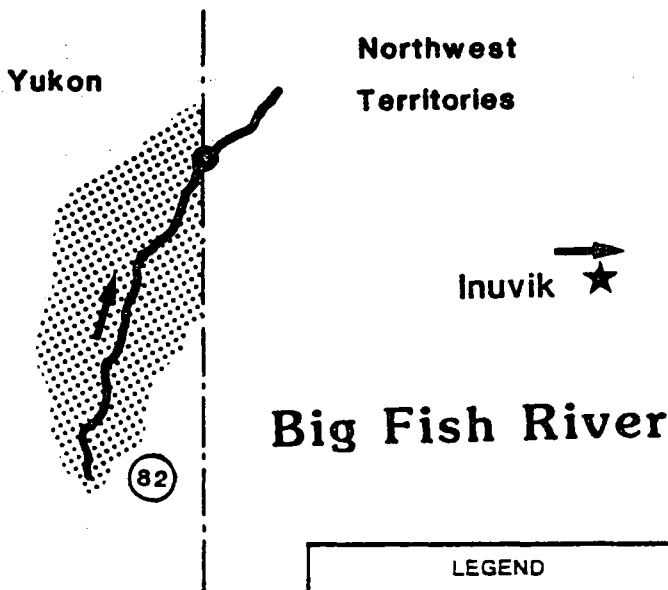
Boundary Crossing: Yukon to N.W.T.
 Latitude; Longitude: 68° 30'; 136° 27'
 I.M.W. Map number(s): NR-7/8/9

General Topography: mountainous
 General Location: west of the Mackenzie River Delta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Inuvik AES 2202570

BABBAGE RIVER
 WSC#10MD002 **△ WEST CHANNEL**
WQ#NW10MC0004



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 82

River Name: Little Fish Creek

Gross Drainage Area (km²): 308

*Average Annual Flow Volume (1000's dam³): Total 78
Contributed 78

Boundary Crossing: Yukon to N.W.T.

Latitude; Longitude: 68° 14'; 136° 27'

I.M.W. Map number(s): NR-7/8/9; NQ-7/8/9

General Topography: mountainous

General Location: west of the Mackenzie River Delta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Inuvik AES 2202570

□ BABBAGE RIVER
WSC#10MD002

△ WEST CHANNEL
WQ#NW10MC0004

Yukon Northwest
Territories

Inuvik ★

81

83

Little Fish Creek

LEGEND

- Boundary Crossing Point
- ★ Meteorological Station
- Hydrometric Gauging Station
- △ Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
 Interjurisdictional Subbasin Number 83

River Name: Rat River

Gross Drainage Area (km²): 179

*Average Annual Flow Volume (1000's dam³): Total 45
 Contributed 45

Boundary Crossing: Yukon to N.W.T.

Latitude; Longitude: 67° 53'; 136° 27'

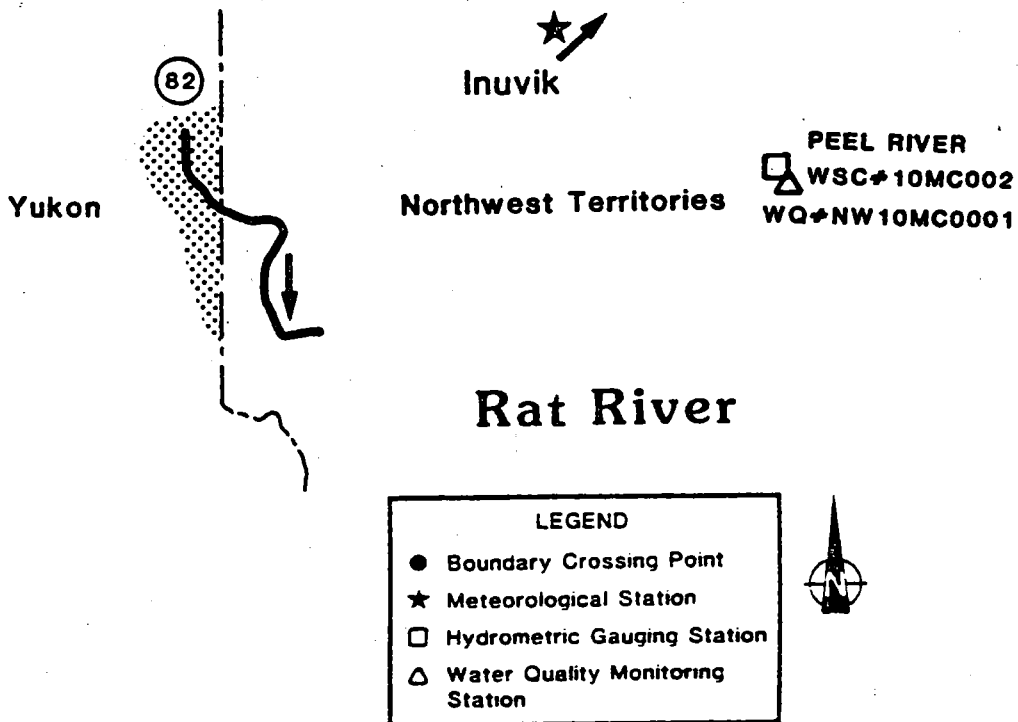
I.M.W. Map number(s): NQ-7/8/9

General Topography: mountainous

General Location: west of the Mackenzie River Delta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Inuvik AES 2202570



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 84

River Name: Vittrekwa River

Gross Drainage Area (km²): 679

*Average Annual Flow Volume (1000's dam³): Total 171
Contributed 171

Boundary Crossing: Yukon to N.W.T.

Latitude; Longitude: 67° 00'; 135° 35'

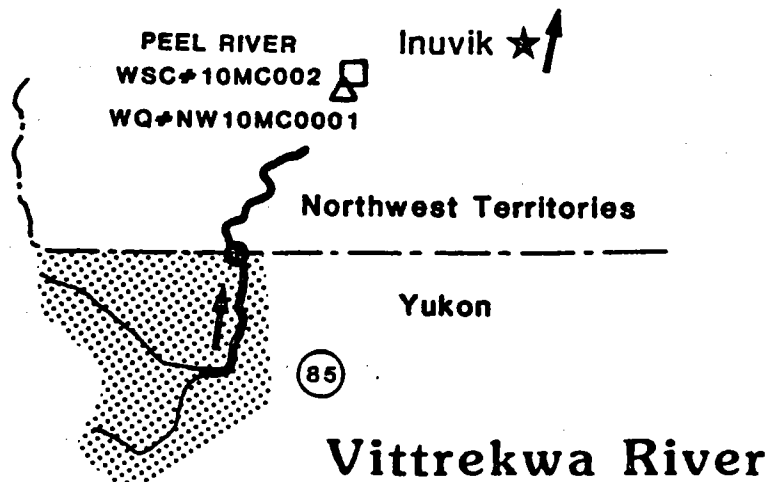
I.M.W. Map number(s): NQ-7/8/9

General Topography: mountainous

General Location: west of the Mackenzie River Delta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Inuvik AES 2202570



LEGEND	
●	Boundary Crossing Point
★	Meteorological Station
□	Hydrometric Gauging Station
△	Water Quality Monitoring Station



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 85

River Name: Peel River

Gross Drainage Area (km²): 67,343

*Average Annual Flow Volume (1000's dam³): Total 23,622
Contributed 23,622

Boundary Crossing: Yukon to N.W.T.

Latitude; Longitude: 67° 00'; 135° 00'

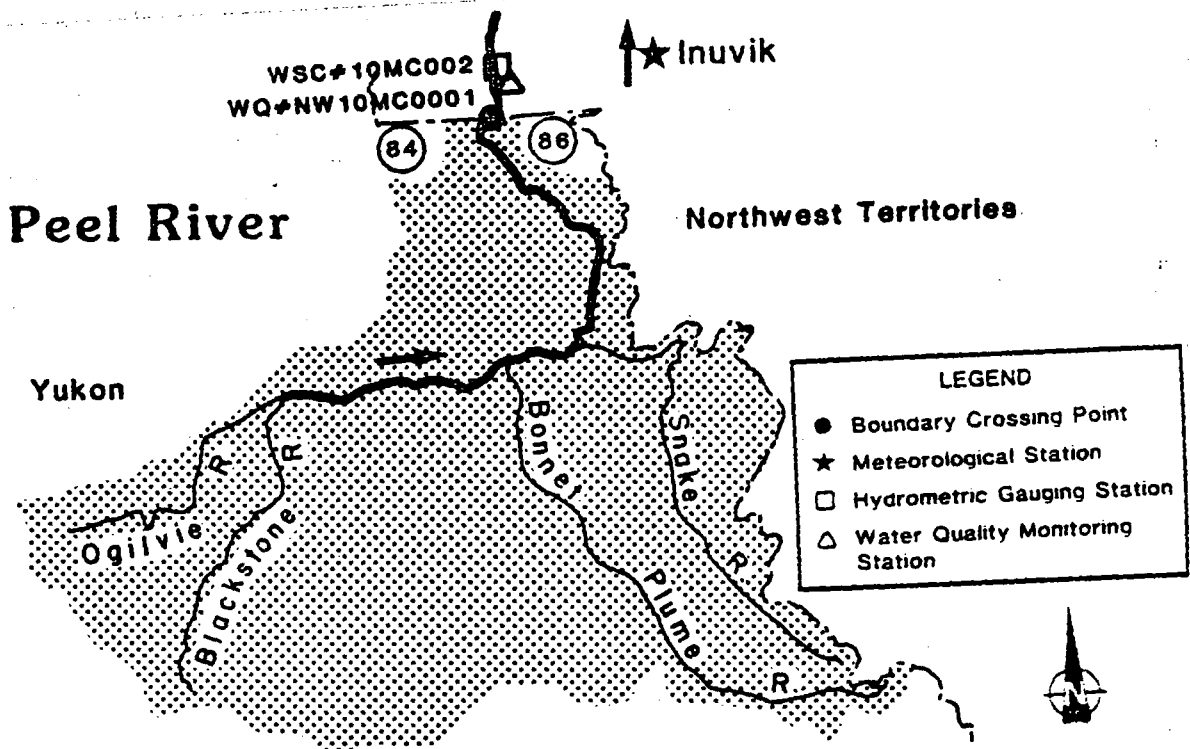
I.M.W. Map number(s): NQ-7/8/9

General Topography: sloping from mountainous to foothills

General Location: south of the Mackenzie River Delta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Inuvik AES 2202570



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Subbasin Number 86

River Name: Satah River

Gross Drainage Area (km²): 940

*Average Annual Flow Volume (1000's dam³): Total 237
Contributed 237

Boundary Crossing: Yukon to N.W.T.

Latitude; Longitude: 67° 00'; 134° 29'

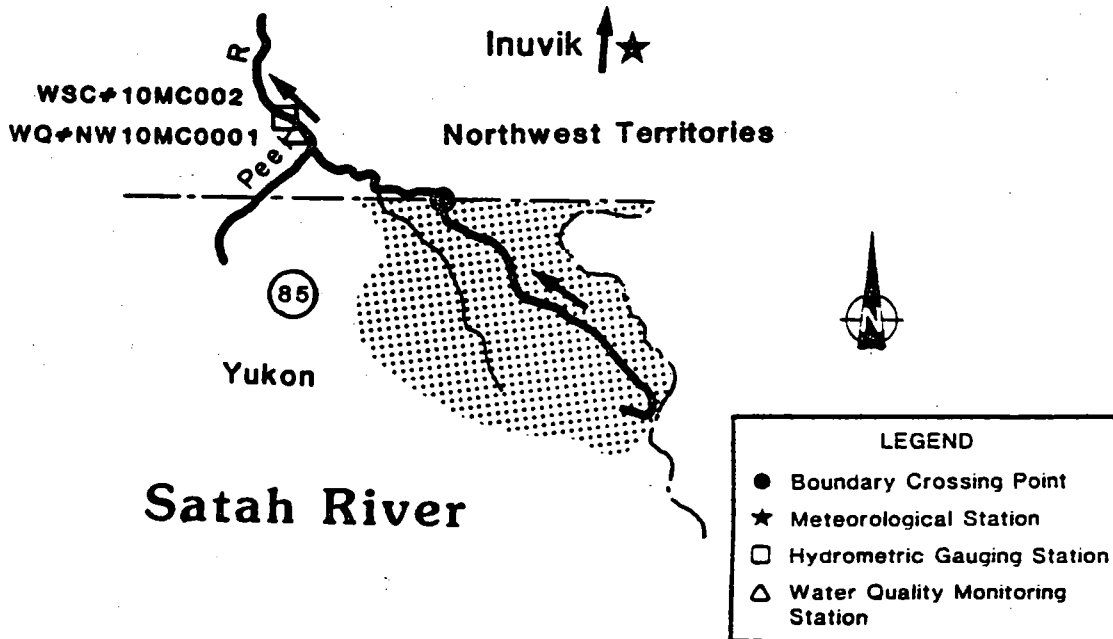
I.M.W. Map number(s): NQ-7/8/9

General Topography: flat marsh land

General Location: south of the Mackenzie River Delta.

This basin contributes to subbasin number:

Meteorologic station(s) applicable to the basin: Inuvik AES 2202570



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

Mackenzie River Basin
Interjurisdictional Sub-basin Number 87

River Name: Kakisa River Tributary

Gross Drainage Area (km²): 252

*Average Annual Flow Volume (1000's dam³): Total 64
Contributed 64

Boundary Crossing: N.W.T. to Alberta

Latitude; Longitude: 60° 00'; 119° 16'

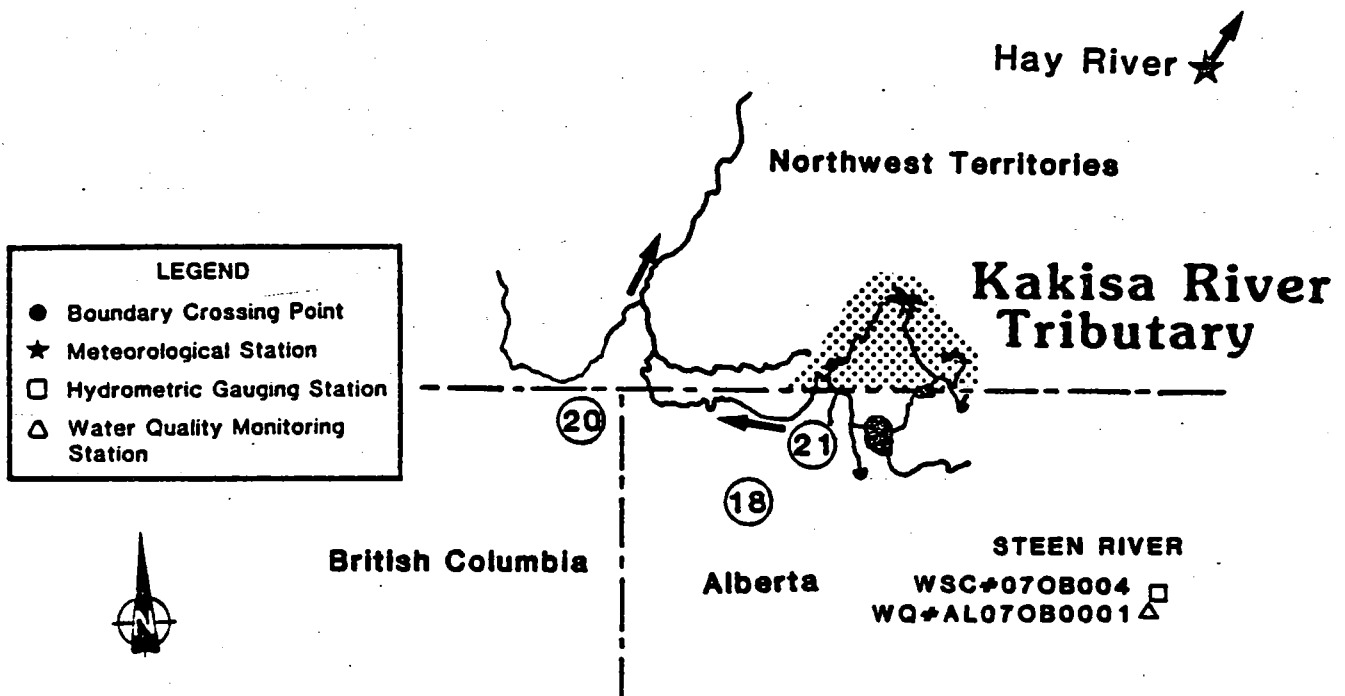
I.M.W. Map number(s): NP-11/12

General Topography: flat land with small lakes

General Location: near the northwest corner of Alberta.

This basin contributes to subbasin number: 21

Meteorologic station(s) applicable to the basin: Hay River
AES#2202400



*The total figure is the average annual flow volume from all upstream contributing areas, regardless of jurisdiction.

The contributed average annual flow volume is that volume contributed only by the drainage area immediately upstream of the crossing point. This does not include flow contributed from any other upstream jurisdictions.

HD
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W54

Wiens, L.H.

Background paper on a negotiating
strategy for recommendation #1
Mackenzie River Basin Study -
Supplement A - Geographic
Overview.

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