NEW BRUNSWICK'S HIERARCHAL DRAINAGE SYSTEM

NB Aquatic Data Warehouse, Canadian Rivers Institute

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OVERVIEW: The New Brunswick Department of Natural Resources and Energy first developed a provincial drainage system in the late 1960's. It was a two level system, which divided the province into eleven drainage basins/composites. The second level represented the major watercourses within each drainage area. As such, there were 232 second level sub-drainage areas. The drainage unit boundaries were defined on a 1:500,000 scale provincial map.

The original drainage system has been revised to a six level hierarchal system. The size and complexity of a river system determines the number of levels required. Only a few of the more complex river systems require six levels - most have two or three. As there are no concise terms which can be used to name the levels, they are referred to as Level 1 through Level 6 drainage units, rather than drainage, subdrainage, sub-subdrainage, etc.

As in the original system, the first level represents the major drainage areas within the province. Six basins are defined by large river systems - Saint John, Miramichi, Restigouche, St. Croix, Nepisiguit and Petitcodiac. The remaining drainage areas are composites or collections of smaller streams.

The adjacent table lists the first level drainage basins and their associated drainage areas within New Brunswick. It does not include the

1st LEVEL DRAINAGE BASIN / COMPOSITE		DRAINAGE AREA in N.B. (km2)
01	Saint John River Basin	28,860.15
02	Miramichi River Basin	13,546.65
03	Restigouche River Basin	6,603.91
04	St. Croix River Basin	1,653.34
05	Nepisiguit River Basin	3,091.97
06	Petitcodiac River Basin	2,831.93
07	Northumberland Strait Comp.	4,707.44
08	West Fundy Composite	3,727.74
09	Acadian Peninsula Comp.	3,188.45
10	Chaleur Bay Composite	2,195.59
11	East Fundy Composite	1,515.16
12	Fundy Isles Composite	237.32
13	Inner Bay of Fundy Comp.	494.39
PROVINCIAL TOTAL		**72,656.04**

drainage areas outside the province where river systems cross the provincial boundary, e.g. Saint John, Restigouche and St. Croix rivers.

Second level drainage units represent major watercourses (5th order or higher and > 100 km^2 drainage area) within the first level basins. These sub-basins can be subdivided into third level units if they contain streams which meet or exceed the minimum size criteria: a combination of 4th order and 100 km^2 drainage area. Similarly, third level drainage units are further subdivided into fourth level units if they contain streams meeting or exceeding the minimum size criteria. In a few cases where streams exhibit extreme dichotomy, sixth level drainage units are created. Stream order is based on the Strahler's (1952) modified Horton method. Please refer to **Water Resource Inventory** for a discussion of the stream ordering methodology.

Cains River within the Miramichi basin illustrates five levels within the drainage system hierarchy. Please note not all the drainage units for Cains or the Miramichi basin are presented below. A complete drainage system listing is provided in Appendix A.

Level 1 02 MIRAMICHI
Level 2 01 Inner Miramichi Bay Composite
02 Bartibog River
03 Black Brook Composite
04 Southwest Miramichi River
....
Level 3 08 Cains River
Level 4 01 Salmon Bk Composite
02 Sabbies River
Level 5 01 "N of E Br Sabbies" Composite
02 E Br Sabbies
03 W Br Sabbies
03 Finn Brook Composite
.....

A GIS layer containing the boundaries of the 446 drainage units was created using Service New Brunswick's (SNB) digital elevation data.

DATA SOURCES: The New Brunswick Department of Natural Resources & Energy provided the original version of the provincial drainage system listing and a 1:500,000 scale map illustrating the boundaries. The new six level drainage system is based on SNB's hydrographic data.

METHODOLOGY: Regardless of the level within the drainage system, the first step is the delineation of the primary streams which meet the criteria for the given level. Second level drainage units are streams which are 5th order or higher with a drainage area greater than 100 km^2. Third to sixth level units represent streams meeting or exceeding the minimum size criteria: 4th order with a drainage area greater than 100 km^2.

Once the primary streams for a given level are delineated, the remaining areas represent composites or collections of smaller streams. As such, composites vary in size, meeting no predetermined standard. They are always denoted by the word "composite" in the drainage unit name, e.g. Northumberland Strait Composite. When a composite is a unit within a primary river drainage unit, the composite encompasses both sides of the stream which is being divided into drainage units (Figure 1). There are three exceptions to this rule:

1) First level drainage basin composites that flow into the ocean;
2) Collections of streams between the major tributaries flowing into Grand Lake and other large lakes have been combined into single composites;
3) Similarly, composites at the mouth of large streams like the Miramichi River have been combined in single composites.

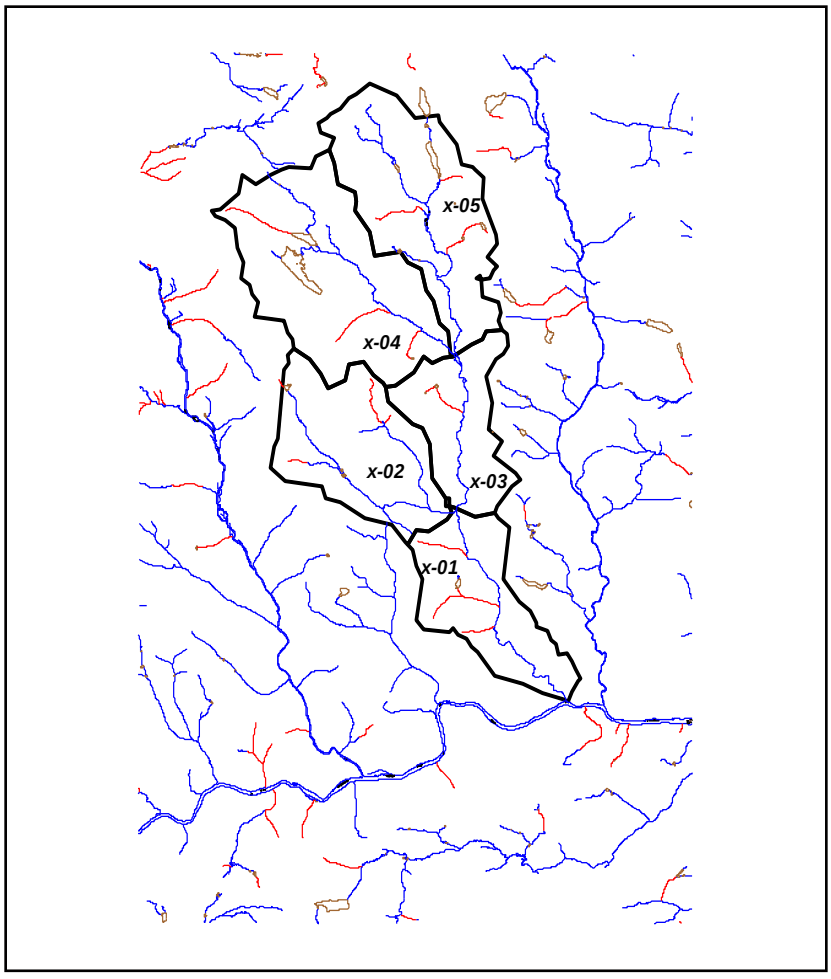


Figure 1. Drainage unit delineation and numbering scheme. X represents preceding drainage codes.

It should be noted that some drainage basins are incomplete as they contain streams which originate in Maine, Quebec or Nova Scotia. Partial basins include the Restigouche, Saint John, and St. Croix. Conversely, New Brunswick contains small drainage areas along its borders which drain into adjacent states or provinces, representing approximately 14.5 km^2.

Numeric codes are assigned to each drainage unit at every level. First level drainage units have the original codes (01 through 13) as assigned by the New Brunswick Department of Natural Resources and Energy. Each subsequent drainage level begins numbering at 01 again.

Drainage units always alternate between a primary stream and a composite. Second to sixth level composites encompass small streams on both sides of the stream. In some cases, composites can be very small; in fact some may not have any streams, but still

represent actual drainage area. The method of ordering or sequencing the drainage units (i.e. the order they appear on a list) within a particular level varies between composites and non-composite drainage units. Drainage units within a composite are numbered in a clockwise direction while drainage units within a large stream are ordered beginning at the mouth of the stream and moving upwards (Figure 1). The general rule for drawing drainage boundaries for single stream drainage units (not composites) is as follows: the boundary line begins at the mouth of the stream, circles its tributaries and headwaters and returns to the mouth of the stream on the other side of the channel. A "head of land" rule was adopted for determining the mouth of a stream channel. This is fairly obvious for inland waters, but in coastal streams, the head of land is not always clear. Therefore, the following rules were used:

- In estuarial locations where a primary river extends in a straight and relatively narrow channel, the head of land is at the furthermost points of land. Examples include the Miramichi and St. Croix Rivers (Figure 2).

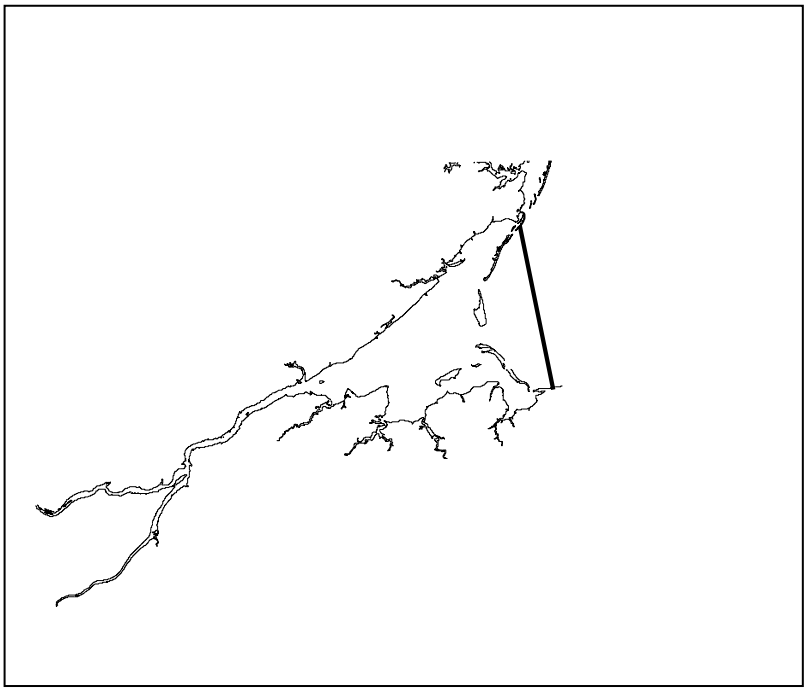
- In estuarial locations where a wide bay or pocket has been formed and several streams of equal order and size enter into the area, each stream has a head of land within the bay area. In this case the streams flow into the bay rather than into a primary stream. An example is Lepreau and Little Lepreau Rivers within Maces Bay (Figure 2).

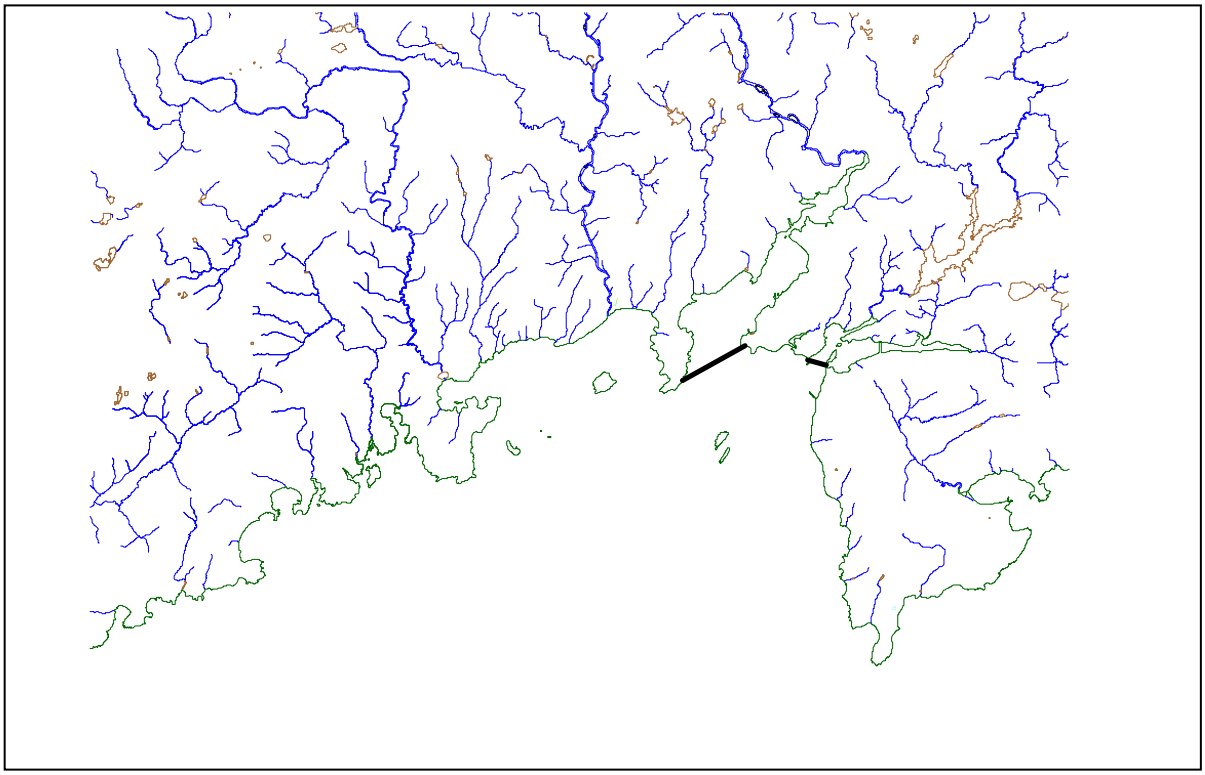
Since this process is somewhat subjective, several coastal watersheds are represented by multiple polygons within the GIS layer. Seaward drainage areas are coded as "Harbour" so users can choose whether to include these areas in their study.

Please refer to the **DTM Watershed Final Report** for details on the methods used to generate the watershed boundaries using Service New Brunswick's digital elevation data.

DATA FILES: There is a table listing the 446 drainage units, plus 3 GIS layers representing the first, second and sixth level watersheds.

Figure 2. Illustrations of the two types of coastal stream confluences and how head of land is determined.





References:

Strahler, , A. N. 1952. Hypsometric (area-altitude) analysis of erosional topography. Bull. Geol. Soc. Am. 63: 1117-1142.

APPENDIX A

Drainage Unit Listing

01 - ST. JOHN RIVER BASIN
(NB Portion Only)

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Grand Bay Composite								
02	Kennebecasis River *(6th Order)*	01	Taylors Brook Composite						
		02	Hammond River *(5th Order)*						
		03	Moosehorn Creek Composite						
		04	Millstream River *(5th Order)*						
		05	Thompson Brook Composite						
		06	Trout Creek *(5th Order)*						
		07	“North of Trout Creek” Composite						
		08	Smiths Creek *(4th Order)*						
		09	Kennebecasis River Headwaters						
03	Milkish Creek Composite								
04	Nerepis River *(5th Order)*								
05	Back Brook Composite								
06	Belleisle Creek *(4th Order)*								
07	Jones Brook Composite								
08	Washademoak Creek *(5th Order)*	01	Washademoak Creek Composite						
		02	Washademoak Lake Composite						
		03	Long Creek *(4th Order)*						
		04	Canaan River *(5th Order)*	01	Porcupine Brook Composite				
				02	Miller Brook *(4th Order)*				
				03	Watts Brook Composite				

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
				04	Forks Stream *(4th Order)*				
				05	Alward Brook Composite				
				06	Thornes Brook *(4th Order)*				
				07	Ridge Brook Composite				
				08	Nevers Brook *(4th Order)*				
				09	Canaan River Headwaters				
09	Otnabog Stream Composite	01	"South of Otnabog Stream" Composite						
		02	Otnabog Stream *(4th Order)*						
		03	MacAlpine Brook Composite						
10	Jemseg River *(6th Order)*	01	Jemseg River Composite						
		02	Grand Lake	01	Grand Lake Composite				
				02	Maquapit Lake	01	Maquapit Lake Composite		
						02	French Lake Composite		
						02	Portabello Stream *(4th Order)*		
						03	Mill Cove Composite		
						04	Indian Lake	01	Indian Lake Composite
						04	Indian Lake	02	Burpee Millstream *(4th Order)*
						04	Indian Lake	03	Little River *(5th Order)*
				03	Newcastle Creek *(5th Order)*				
				04	Salmon River *(6th Order)*	01	Iron Bound Cove Stream Composite		
						02	Salmon Creek *(5th Order)*		
						03	"East of Salmon Creek" Composite		

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
						04	Gaspereau River *(5th Order)*		
						05	Castaway Stream Composite		
						06	Big Forks Stream *(5th Order)*		
						07	Cherry Brook Composite		
						08	Lake Stream *(5th Order)*		
						09	Grey Brook Composite		
						10	Little Forks Stream *(5th Order)*		
						11	Salmon River Headwaters		
				05	Coal Creek *(4th Order)*				
				06	Cumberland Bay Stream *(4th Order)*				
11	Swan Creek Composite								
12	Oromocto River *(6th Order)*	01	Friars Brook Composite						
		02	Rusagonis Stream *(5th Order)*						
		03	Three Tree Creek Composite						
		04	South Branch Oromocto River *(5th Order)*	01	Fitch Creek Composite				
				02	Back Creek *(4th Order)*				
				03	Pete Brook Composite				
				04	Shinn Creek *(4th Order)*				
				05	South Branch Oromocto River Headwaters				
		05	North Branch Oromocto River *(5th Order)*	01	Meransey Brook Composite				
				02	Yoho Stream *(4th Order)*				
				03	North Branch Oromocto River Headwaters				
13	Baker Brook Composite								

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
14	Nashwaak River *(5th Order)*	01	Campbell Creek Composite						
		02	Penniac Brook *(4th Order)*						
		03	Manzer Brook Composite						
		04	Dunbar Stream *(4th Order)*						
		05	McBean Brook Composite						
		06	Tay River *(4th Order)*						
		07	Porters Brook Composite						
		08	Youngs Brook *(5th Order)*						
		09	“North of Porter Brook” Composite						
		10	Cross Creek *(5th Order)*						
		11	Grand John Brook Composite						
		12	Napodogan Brook *(4th Order)*						
		13	Nashwaak River Headwaters						
15	Nashwaaksis Stream Composite	01	Grieves Creek Composite						
		02	Nashwaaksis Stream *(4th Order)*						
		03	Garden Creek Composite						
16	Keswick River *(5th Order)*								
17	Indian Brook Composite								
18	Mactaquac Stream *(5th Order)*								
19	Longs Creek Composite								
20	Nackawic Stream *(5th Order)*	01	Buttermilk Creek Composite						
		02	East Branch Nackawic Stream *(4th Order)*						
		03	“North of East Branch Nackawic Stream” Composite						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
		04	West Branch Nackawic Stream *(4th Order)*						
		05	Nackawic Stream Headwaters						
21	"East of Pokiok Stream" Composite								
22	Pokiok Stream *(5th Order)*								
23	Pokiok Reach Composite								
24	Shogomoc Stream *(5th Order)*	01	Cann Brook Composite						
		02	West Branch Shogomoc Stream *(4th Order)*						
		03	Shogomoc Stream Headwaters						
25	Sullivan Creek Composite								
26	Eel River *(5th Order)*								
27	Bulls Creek Composite	01	Lilly Brook Composite						
		02	Gibson Creek *(4th Order)*						
		03	"North of Gibson Creek" Composite						
		04	Bulls Creek *(4th Order)*						
		05	Peabody Brook Composite						
28	Meduxnekeag River *(4th Order)*								
29	Philips Creek Composite								
30	Becaguimec Stream *(5th Order)*	01	McLean Brook Composite						
		02	Cold Stream *(4th Order)*						
		03	Craig Brook Composite						
		04	North Branch Becaguimec Stream *(4th Order)*						
		05	South Branch Becaguimec Stream *(4th Order)*						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
31	Big Presque Isle Stream Composite	01	"South of Little Presque Isle Stream" Composite						
		02	Little Presque Isle Stream *(4th Order)*						
		03	Hales Brook Composite						
		04	Big Presque Isle Stream *(4th Order)*						
		05	White Marsh Brook Composite						
32	Shikatehawk Stream *(5th Order)*								
33	Murray Lake Composite								
34	Monquart Stream *(5th Order)*								
35	Muniac Stream Composite								
36	Tobique River *(7th Order)*	01	Pokiok River Composite						
		02	Odell River *(5th Order)*						
		03	Hamilton Brook Composite						
		04	Three Brooks *(5th Order)*						
		05	Crouse Brook Composite						
		06	Wapske River *(5th Order)*						
		07	Sisson Brook Composite						
		08	Gulquac River *(6th Order)*	01	Mouth of Gulquac River Composite				
				02	North Branch Gulquac River *(5th Order)*				
				03	Gulquac River Headwaters				
		09	Philips Brook Composite						
		10	Two Brooks *(5th Order)*						
		11	Haley Brook Composite						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
		12	Little Tobique River *(6th Order)*	01	Mouth of Little Tobique River Composite				
				02	Sisson Branch *(5th Order)*				
				03	Cedar Brook Composite				
				04	Big Cedar Brook *(5th Order)*				
				05	Little Tobique River Headwaters				
		13	Right Hand Branch Tobique River *(6th Order)*	01	Mouth of Right Hand Branch Tobique River Composite				
				02	Mamozekel River *(5th Order)*				
				03	Rocky Brook Composite				
				04	Serpentine River *(5th Order)*				
				05	Neary Brook Composite				
				06	River Don *(5th Order)*				
				07	Right Hand Branch Tobique River Headwaters				
37	Curry Brook Composite								
38	Aroostock River *(4th Order)*								
39	Little River Composite								
40	Salmon River *(6th Order)*								
41	Boutot Brook Composite								
42	Little River *(5th Order)*								
43	Grande Rivière Composite	01	Millstream Composite						
		02	Grande Rivière *(4th Order)*						
		03	“North of Grande Riviere” Composite						
		04	Rivière Siegas *(4th Order)*						
		05	“North of Riviere Siegas” Composite						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
44	Rivière Quisibis *(5th Order)*								
45	"North of Rivière Quisibis" Composite								
46	Green River *(5th Order)*	01	Big Brook Composite						
		02	Lillte Forks Branch Green River *(4th Order)*						
		03	Halfway Brook Composite						
		04	Lake Branch *(4th Order)*						
		05	Right Hand Branch Green River *(5th Order)*	01	Belone Brook Composite				
				02	Wild Goose Branch *(4th Order)*				
				03	Right Hand Branch Green River Headwaters				
47	Ruisseau Lavoie Composite								
48	Rivière Iroquois *(5th Order)*								
49	"West of Rivière Iroquois" Composite								
50	Madawaska River *(5th Order)*								
51	Rivière Baker-Brook Composite	01	Ruiseau Deux-Milles Composite						
		02	Rivière Baker-Brook *(4th Order)*						
		03	Ruisseau Dugal Composite						
		04	Rivière des Crocs *(4th Order)*						
		05	Grew Brook Composite						
		05	St. Francis River *(3rd+ Order)* *						

* Exception to 4th order rule.

02 - MIRAMICHI RIVER BASIN

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Miramichi Bay	01	Miramichi Bay Composite						
		02	Eel River *(4th Order)*						
		03	Bay Du Vin River *(4th Order)*						
		04	Black River *(5th Order)*						
		05	Napan River *(4th Order)*						
		06	Burnt Church River *(4th Order)*						
02	Bartibog River *(5th Order)*	01	Mill Brook Composite						
		02	Little Bartibog River *(4th Order)*						
		03	"North of Little Bartibog" Composite						
		04	Green Brook *(4th Order)*						
		05	Bartibog Headwaters						
03	Black Brook Composite								
04	Southwest Miramichi River *(7th Order)*	01	Mouth of the Southwest Miramichi River Composite						
		02	Barnaby River *(5th Order)*						
		03	Doyles Brook Composite						
		04	Renous River *(5th Order)*	01	Pine Island Brook Composite				
				02	Dungarvon River *(4th Order)*				
				03	Crown Point Brook Composite				
				04	South Branch Renous River *(4th Order)*				
				05	North Branch Renous River *(5th Order)*				
		05	Gray Rapids Brook Composite						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
		06	Bartholomew River *(5th Order)*						
		07	McKenzie Brook Composite						
		08	Cains River *(6th Order)*	01	Salmon Brook Composite				
				02	Sabbies River *(5th Order)*	01	"North of E Br Sabbies" Composite		
						02	East Branch Sabbies *(4th Order)*		
						03	West Branch Sabbies *(4th Order)*		
				03	Finn Brook Composite				
				04	Muzroll Brook *(3rd Order)* *				
				05	"South of Muzroll" Composite				
				06	Six Mile Brook *(5th Order)*				
				07	Gordon Brook Composite				
				08	Cains River Headwaters				
		09	Morses Brook Composite						
		10	Big Hole Brook *(4th Order)*						
		11	Betts Mill Brook Composite						
		12	Burnt Land Brook *(4th Order)*						
		13	"West of Burnt Land" Composite						
		14	Taxis River *(5th Order)*						
		15	McBean Brook Composite						
		16	Rocky Brook *(5th Order)*						
		17	Sisters Brook Composite						
		18	Clearwater Brook *(5th Order)*						
		19	Buttermilk Brook Composite						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
		20	Burnthill Brook *(6th Order)*						
		21	McLean Brook Composite						
		22	McKiel Brook *(4th Order)*						
		23	Lake Brook Composite						
		24	South Branch Southwest Miramichi River *(5th Order)*						
		25	North Branch Southwest Miramichi River *(4th Order)*						
05	Northwest Miramichi River *(7th Order)*	01	Stewart Brook Composite						
		02	Northwest Millstream *(4th Order)*						
		03	Sutherland Brook Composite						
		04	Little Southwest Miramichi River *(6th Order)*	01	Catamaran Brook Composite				
				02	Lwr N Br Little Southwest Miramichi River *(5th Order)*				
				03	Libbies Brook Composite				
				04	North Pole Stream *(4th Order)*				
				05	Little North Pole Brook Composite				
				06	Tuadook River *(4th Order)*				
				07	Little Southwest Miramichi River Headwaters				
		05	Castor Brook Composite						
		06	Little Sevogle River *(4th Order)*						
		07	"South of Big Sevogle River" Composite						
		08	Big Sevogle River *(5th Order)*	01	Whitney Brook Composite				
				02	South Branch Sevogle River *(5th Order)*	01	Stairs Brook Composite		
						02	Mullin Stream *(4th Order)*		

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
						03	S Br Big Sevogle Headwaters		
				03	North Branch Big Sevogle River *(4th Order)*				
		09	Copps Brook Composite						
		10	Portage River *(5th Order)*	01	Mouth of Portage River Composite				
				02	East Branch Portage River *(4th Order)*				
				03	Portage River Headwaters				
		11	"North of Portage River" Composite						
		12	Tomogonops River *(4th Order)*						
		13	Northwest Miramichi River Headwaters						

* Exception to 4th order rule - large drainage area

03 - RESTIGOUCHE RIVER BASIN
(NB Portion Only)

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Walker Brook Composite								
02	Christopher Brook *(5th Order)*								
03	Rafting Ground Brook Composite								
04	Upsalquitch River *(6th Order)*	01	Meadow Brook Composite						
		02	Grog Brook *(5th Order)*						
		03	Berry Brook Composite						
		04	Boland Brook *(5th Order)*						
		05	McDougall Brook Composite						
		06	Popelogan River *(5th Order)*						
		07	Stillwater Brook Composite						
		08	Southeast Upsalquitch River *(6th Order)*	01	Little Popelogan Brook Composite				
				02	Jerry Ferguson Brook *(5th Order)*				
				03	Basket Brook Composite				
				04	Little Southeast Upsalquitch *(5th Order)*				
				05	McCormack Brook Composite				
				06	Ramsey Brook*(4th Order)*				
				07	Southeast Upsalquitch Headwaters				
		09	Northwest Upsalquitch River *(5th Order)*	01	Nine Mile Brook Composite				
				02	Oxford Brook*(4th Order)*				
				03	Northwest Upsalquitch Headwaters				
05	Cheuters Brook Composite								

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
06	Patapedia River *(5th Order)* (NB Portion Only)								
07	"South of Patapedia River" Composite								
08	Whites Brook *(5th Order)*								
09	Stillwater Brook Composite								
10	Tracy Brook *(5th Order)*	01	Beaver Brook Composite						
		02	South Branch Tracy Brook *(4th Order)*						
		03	North Branch Tracy Brook *(4th Order)*						
11	Hailes Brook Composite								
12	Little Main Restigouche River *(6th Order)*	01	Mouth of Little Main Restigouche River Composite						
		02	Five Finger Brook *(5th Order)*						
		03	Lower Four Mile Brook Composite						
		04	Jardine Brook *(5th Order)*						
		05	Boston Brook Composite						
		06	Gounamitz River *(5th Order)*						
		07	Little Main Restigouche River Headwaters						
13	Kedgwick River *(5th Order)*	01	Whitewater Brook Composite						
		02	Falls Brook *(4th Order)*						
		03	Clearwater Brook Composite						
		04	McDougall Brook *(4th Order)*						
		05	Fogs Brook Composite						
		06	States Brook *(4th Order)*						
		07	"West of States Brook" Composite						

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
		08	South Branch Kedgwick River *(5th Order)*						
		09	North Branch Kedgwick River *(4th Order)*						

04 - ST. CROIX RIVER BASIN
(NB Portion Only)

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Johnson Cove Composite								
02	Waweig River *(5th Order)*								
03	Canoose Stream Composite	01	Gallop Stream Composite						
		02	Dennis Stream *(4th Order)*						
		03	Strachan Brook Composite						
		04	Mohannes Stream *(4th Order)*						
		05	King Brook Composite						
		06	Canoose Stream *(4th Order)*						
		07	Trout Brook Composite						
04	Spednic Lake	01	Spednic Lake Composite						
		02	Diggity Stream *(4th Order)*						
		03	Big La Coote Stream *(4th Order)*						
05	Forest City Stream	01	Forest City Stream Composite						
		02	Grand Lake Composite						
		03	North Lake Composite						

05 - NEPISIGUIT RIVER BASIN

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Bathurst Harbour	01	Bathurst Harbour Composite						
		02	Tetagouche River *(5th Order)*						
		03	Middle River *(5th Order)*	01	Carters Brook Composite				
				02	Little River *(4th Order)*				
				04	Middle River Headwaters				
02	Pabineau River Composite	01	Round Rock Brook Composite						
		02	Pabineau River *(4th Order)*						
		03	Red Pine Brook Composite						
		04	Gordon Meadow Brook *(4th Order)*						
		05	Nepisiquit Brook Composite						
		06	Nine Mile Brook *(4th Order)*						
		07	Taylor Brook Composite						
03	Forty Mile Brook *(5th Order)*								
04	Otter Brook Composite								
05	Forty Four Mile Brook *(5th Order)*								
06	Moody Brook Composite								
07	South Nepisiquit River *(5th Order)*								
08	Portage Brook Composite								
09	Little South Branch Nepisiquit River *(5th Order)*								
10	Nepisiquit River Headwaters								

06 - PETITCODIAC RIVER BASIN

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	South Channel	01	South Channel Composite						
		02	Shepody River *(5th Order)*	01	Sawmill Creek Composite				
				02	Crooked Creek *(4th Order)*				
				03	Shepody River Headwaters				
02	Memramcook River *(5th Order)*								
03	Turtle Creek Composite	01	Weldon Creek Composite						
		02	Halls Creek *(4th Order)*						
		03	Jonathan Creek Composite						
		04	Turtle Creek *(4th Order)*						
		05	Somers Creek Composite						
04	Little River *(5th Order)*								
05	Bannister Brook Composite								
06	Pollett River *(5th Order)*								
07	O'Blenis Brook Composite								
08	Anagance River *(4th Order)*								
09	North River *(5th Order)*								

07 - NORTHUMBERLAND STRAIT COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Black River Composite	01	Rivière au Portage-sud Composite						
		02	Black River *(4th Order)*						
		03	"South of Black River" Composite						
02	Kouchibouguac River *(5th Order)*								
03	Ruisseau des Major Composite								
04	Kouchibouguacis River *(5th Order)*								
05	Jardine Lake Composite								
06	Richibucto River *(6th Order)*	01	Richibucto Harbour Composite	01	Gaspereau Creek Composite				
				02	Rivière Saint-Charles *(4th Order)*				
		02	Beatties Creek Composite						
		03	St. Nicholas River *(5th Order)*						
		04	Molus River Composite						
		05	Bass River *(4th Order)*						
		06	Waterloo Brook Composite						
		07	Coal Branch River *(4th Order)*						
		08	Richibucto River Headwaters						
07	Buctouche River Composite	01	Rivière Chockpish Composite						
		02	Buctouche River *(4th Order)*						
		03	Biggs Brook Composite						
08	Cocagne River *(5th Order)*								
09	"South of Cocagne River" Composite								

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
10	Shediac River *(5th Order)*								
11	Cape Tormentine Peninsula Composite	01	"South of Shediac River" Composite						
		02	Scoudouc River *(4th Order)*						
		03	Lac des Boudreau Composite						
		04	Aboujagane River *(4th Order)*						
		05	Kouchibouguac River Composite						
		06	Oulton Brook Composite						
		07	Gaspereau River *(4th Order)*						
		08	Baie Verte Creek Composite						

08 - WEST FUNDY COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	"East of Musquash River" Composite								
02	Musquash River *(6th Order)*	01	Goose Creek Composite						
		02	W Br Musquash River *(5th Order)*						
		03	E Br Musquash River *(5th Order)*						
03	Little Lepreau River Composite								
04	Lepreau River *(5th Order)*								
05	"East of New River" Composite								
06	New River *(5th Order)*								
07	Pocalogan River Composite								
08	Magaguadavic River *(5th Order)*	01	Bonny River Composite						
		02	McDougall Outlet *(4th Order)*						
		03	Meadow Brook Composite						
		04	Piskahegan River *(4th Order)*						
		05	Kedron Stream Composite						
		06	Northeast Branch Magaguadavic River *(4th Order)*						
		07	"South of Magaguadavic River" Composite						
		08	Magaguadavic Lake						
09	"East of Didgequash River" Composite								
10	Didgeguash River *(5th Order)*								
11	Bocabec River Composite								

09 - ACADIAN PENINSULA COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Baie de Caraquet Composite	01	"West of Bass River" Composite						
		02	Bass River *(4th Order)*						
		03	Teagues Brook Composite						
		04	Rivière Caraquet *(4th Order)*						
		05	St-Simon River Composite						
02	Acadian Islands Composite	01	Pokesudie Island Composite						
		02	Lameque Island Composite						
		03	Miscou Island Composite						
03	Big Tracadie / Pokemouche Composite	01	"East of Pokemouche River" Composite						
		02	Pokemouche River *(4th Order)*						
		03	"South of Pokemouche River" Composite						
		04	Little Tracadie River *(4th Order)*						
		05	Ruisseau à McLaughlin Composite						
		06	Big Tracadie River *(4th Order)*						
		05	Ruisseau du Portage Composite						
04	Tabusintac River *(5th Order)*	01	Trout Brook Composite						
		02	Big Hole Brook *(4th Order)*						
		03	Tabusintac River Headwaters						
05	Lufsbury Brook Composite								

10 - CHALEUR BAY COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Tait Brook Composite								
02	Eel River *(5th Order)*								
03	Upper Charlo Composite								
04	Charlo River *(5th Order)*	01	Mouth of Charlo River Composite						
		02	South Charlo River *(4th Order)*						
		03	Charlo River Headwaters						
05	Blackhead Brook Composite								
06	Benjamin River *(5th Order)*								
07	Louison River Composite								
08	Jacquet River *(5th Order)*								
09	Elmtree River Composite								
10	Nigadoo River *(5th Order)*								
11	Millstream River Composite	01	North Millstream Composite						
		02	Millstream River *(4th Order)*						
		03	Grants Brook Composite						

11 - EAST FUNDY COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Chignecto Bay Composite	01	Alcorn Brook Composite						
		02	Upper Salmon River *(4th Order)*						
		03	"West of Upper Salmon River" Composite						
		04	Point Wolfe River *(4th Order)*						
		05	Quiddy River Composite						
02	Big Salmon River *(5th Order)*								
03	Mispec River Composite	01	Irish River Composite						
		02	Black River *(4th Order)*						
		03	Balls Lake Composite						
		04	Mispec River *(4th Order)*						
		05	"West of Mispec River" Composite						

12 - FUNDY ISLANDS COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Deer Island Composite								
02	Campobello Island								
03	Grand Manan Island Composite								
04	The Wolves Composite								

13 - INNER BAY OF FUNDY COMPOSITE

LEVEL 2 (≥5th Order & >100 km2 OR Composite)		LEVEL 3 (≥4th Order & >100 km2 OR Composite)		LEVEL 4 (≥4th Order & >100 km2 OR Composite)		LEVEL 5 (≥4th Order & >100 km2 OR Composite)		LEVEL 6 (≥4th Order & >100 km2 OR Composite)	
No.	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**	**No.**	**Name**
01	Misaquash River Composite								
02	Tantramar River								
03	Johnson Creek Composite								