

Aquifer Classification Map 1: Saanich Peninsula, Capital Regional District, BC



DESCRIPTION OF THE BC AQUIFER CLASSIFICATION SYSTEM

What is the BC Aquifer Classification System?
The BC Aquifer Classification System classifies aquifers according to their level of development and vulnerability to contamination. The aquifer classification system has two components: the Classification component and the Ranking Value component.

1) the Classification component - characterizes the aquifer on the basis of level of development (supply versus demand) of the aquifer and the vulnerability of the aquifer to contamination. Vulnerability is based on type, thickness and extent of confining geologic materials overlying the aquifer, depth to water table (or top of confined aquifers) and type of aquifer. The combination of the three development and three vulnerability sub-classes results in nine aquifer classes (see Table below). For example, a class IA aquifer would be heavily developed with high vulnerability to contamination, while a IIC aquifer would be lightly developed with low vulnerability.

		Greater Development		
		I	II	III
Greater Vulnerability	A	IA: heavily developed, high vulnerability aquifer	IIA: moderately developed, high vulnerability aquifer	IIIA: lightly developed, high vulnerability aquifer
	B	IB: heavily developed, moderate vulnerability aquifer	IIIB: moderately developed, moderate vulnerability aquifer	IIIB: lightly developed, moderate vulnerability aquifer
	C	IC: heavily developed, low vulnerability aquifer	IIIC: moderately developed, low vulnerability aquifer	IIIC: lightly developed, low vulnerability aquifer

2) the Ranking Value component - assigns a value (expressed as a number) which indicates the relative importance of an aquifer. This value assists in prioritizing an aquifer for groundwater protection and management. Seven criteria are used: aquifer productivity, aquifer vulnerability, size of the aquifer, demand, type of use and known quantity and quality concerns. Aquifers with higher ranking values indicate higher priority. Possible ranking values range from a minimum of 5 to a maximum of 21 (see Table below).

	Point Value				
Criteria	0	1	2	3	Rationale
(1) Productivity	N/A	low	moderate	high	abundance of the resource
(2) Vulnerability	N/A	low	moderate	high	potential for water quality degradation
(3) Aquifer Area	N/A	< 5 km ²	5 - 25 km ²	> 25 km ²	regionality of the resource
(4) Demand for Water	N/A	low	moderate	high	level of reliance on the resource for supply
(5) Type of Water Use	N/A	non-drinking	drinking	multiple / drinking	variability / diversity of the resource for supply
(6) Quality concerns	unknown	isolated	local	regional	actual documented concerns
(7) Quantity concerns	unknown	isolated	local	regional	actual documented concerns

How are aquifers delineated?

The location of aquifer boundaries are derived from numerous sources of information, including: surficial and bedrock geology maps, water well logs, and the location of physiographic features, such as, lakes, rivers, or mountains.

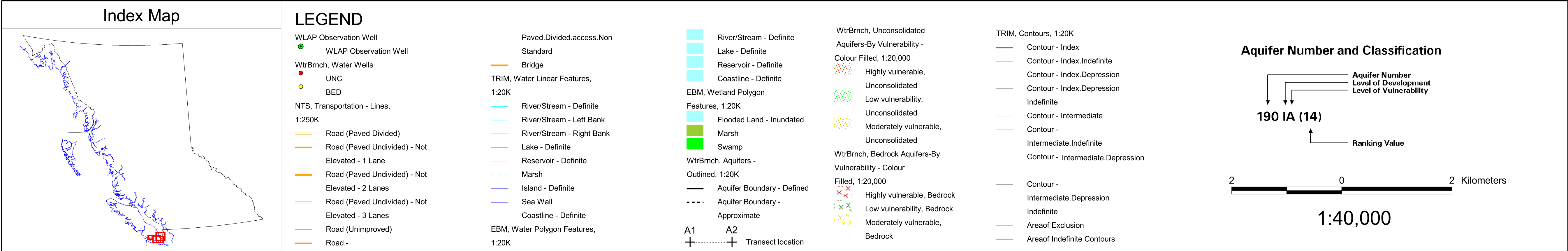
- Solid lines are used to delineate aquifer boundaries when there is a degree of certainty associated with where to draw the boundary.
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Further information on the BC Aquifer Classification System can be found on the internet site: <http://wapwww.gov.bc.ca/wat/aquifers/index.html> or by contacting the Water Protection Section, P.O. Box 9341 Stn., Prov. Gov't., Victoria, BC, V8W 9M1.

SUMMARY OF AQUIFERS

Appl#	Location	Classification	Ranking	Size (km ²)	Productivity	Vulnerability	Desired	Water Use	Quality Concerns	Quantity Concerns
0007	North end of Santa Francisca	III	8	9.1	Low	Moderate	Low	No Drinking Water	None	Isolated
0009	Llufreño Rd. N of Victoria Inlet Access	III	7	6.6	Moderate	Moderate	Low	No Drinking Water	None	None
0010	North end of Santa Francisca	III	9	1.0	Moderate	Moderate	Low	No Drinking Water	None	Isolated
0012	Central Spanish	III	9	6.5	Moderate	Moderate	Low	No Drinking Water	None	None
0013	Diamond Rd. Spanish	III	7	0.1	Low	Low	Low	No Drinking Water	None	None
0014	Spanish between Central and Ironwood Bay	III	7	1.57	Low	Moderate	Low	No Drinking Water	None	None
0015	Low end of Spanish Peninsula	III	8	1.4	Moderate	Low	Low	No Drinking Water	Isolated	None
0016	LA Rd. N of Victoria Inlet	III	11	7.8	Moderate	Moderate	Low	No Drinking Water	Isolated	None
0017	LA Rd. N of Victoria Inlet	III	7	0.1	Low	Low	Moderate	No Drinking Water	None	None
0001	Willapa Point, SE side of Spanish Island	IIA	10	7.9	Low	High	Moderate	None	Isolated	None
0004	Goldblow River mouth, Falschaffs At.	III	10	0.3	High	Low	Low	Drinking Water	None	None
0005	Goldblow River mouth, Falschaffs At.	III	13	Moderate	Low	Moderate	Low	Drinking Water	Isolated	None
0011	Spanish, Central Spanish	III	8	2.1	Low	Moderate	Moderate	No Drinking Water	Isolated	None
0006	Victoria S of ELR, Lake C of Falschaffs At.	III	12	26.9	Low	Moderate	Moderate	Marine	Isolated	None



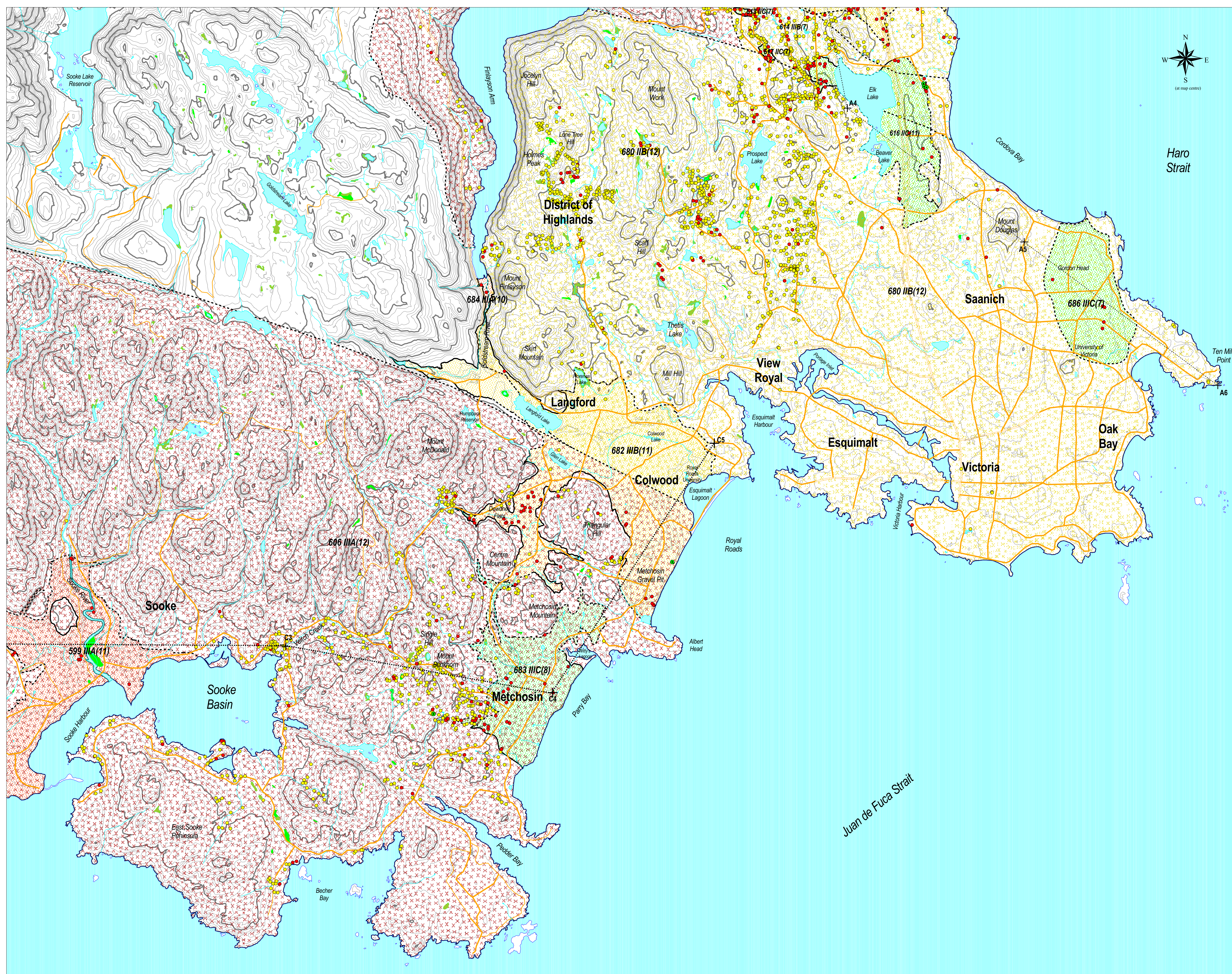
Aquifer Classification Mapping by: S.Kenny

Province of British Columbia
Ministry of Water, Land and Air Protection
Water, Air, Climate Change Branch

September 14, 2004



Aquifer Classification Map 2: Sooke to Victoria, Capital Regional District, BC



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		← Greater Development →		
		I	II	III
Greater Vulnerability	A	IA-heavily developed, high vulnerability aquifer	IIA-moderately developed, high vulnerability aquifer	IIIA-lightly developed, high vulnerability aquifer
	B	IB-heavily developed, moderate vulnerability aquifer	IIB-moderately developed, moderate vulnerability aquifer	IIIB-lightly developed, moderate vulnerability aquifer
	C	IC-heavily developed, low vulnerability aquifer	IIC-moderately developed, low vulnerability aquifer	IIIC-lightly developed, low vulnerability aquifer

2) the Ranking Value component - assigns a value (expressed as a number) which indicates the relative importance of an aquifer. This value assists in prioritizing an aquifer for groundwater protection and management. Seven criteria are used: aquifer productivity, aquifer vulnerability, size of the aquifer, demand, type of use and known quantity and quality concerns. Aquifers with higher ranking values indicate higher priority. Possible ranking values range from a minimum of 5 to a maximum of 21 (see Table below).

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(4) Demand for Water	N/A	low	moderate	high	level of reliance on the resource for supply
(5) Type of Water Use	N/A	non-drinking	drinking	multiple / drinking	variability / diversity of the resource for supply
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How are aquifers delineated?

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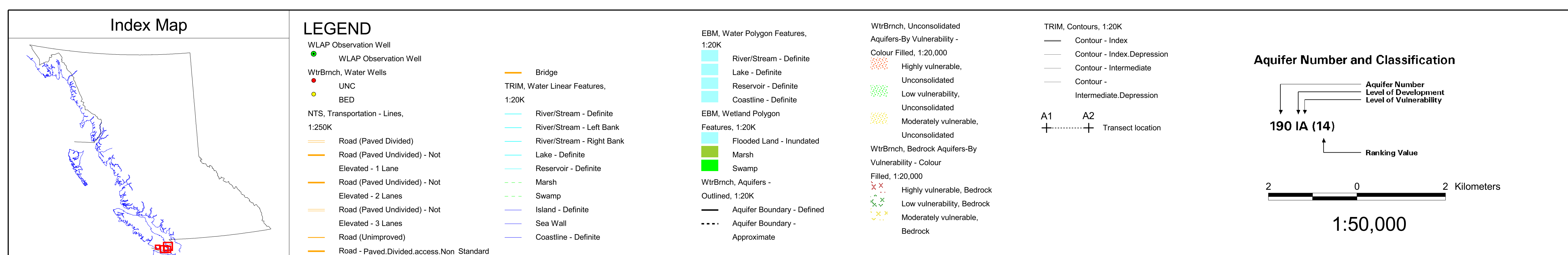
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SUMMARY OF AQUIFERS

Apple ID	Location	Classification	Rating	Size (MB)	Privacy	Usability	Demand	Warm Use	Quality Concern	Identical
9006	Slovakia-Mechelen	IB-C	12	237.6	Low	High	Moderate	Multiple	None	Isolated
9013	Durham Rd, Richmond BC	IB-C	7	0.1	Low	Low	Low	Drinking Water	None	None
9014	Search between Cdn and International Bay	IB-C	7	15.7	Low	Moderate	Low	Not Drinking Water	None	None
9019	ER Lake in London Bay, Search	IB-C	11	7.8	Moderate	Low	Moderate	Multiple	None	Isolated
9020	Wm Search Bay in London Bay	IB-C	7	0.1	Low	Low	Moderate	Drinking Water	None	None
9021	Wm Search Bay in London Bay	IB-A	10	7.8	Low	High	Moderate	Drinking Water	None	None
9022	Colwood, Langford, Malahat	IB-C	11	24.1	Moderate	Moderate	Low	Multiple	Isolated	None
9023	Mechelen, from Perry Bay (noted) Inc	IB-C	8	8.8	Moderate	Low	Low	Drinking Water	None	None
9024	Childrens Rm, Mal., Palawan Bay	IB-A	10	0.3	High	High	Low	Drinking Water	None	None
9025	Vietnam S of Br. Lake, Palawan Bay	IB-C	12	209.9	Low	Moderate	Moderate	Multiple	Isolated	None



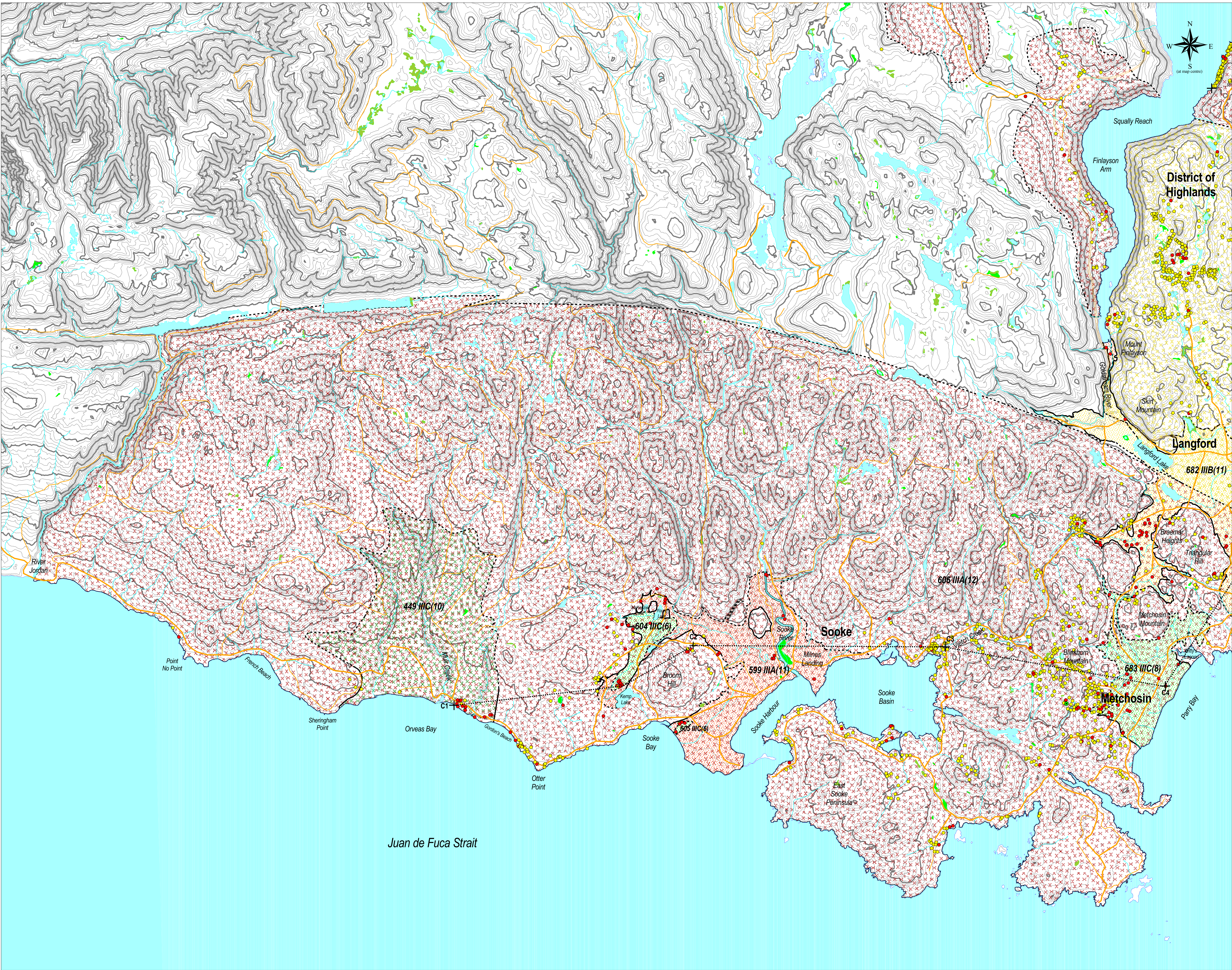
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Aquifer Classification Map 3: Sooke to Metchosin, Capital Regional District, BC



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	C	IC:heavily developed, low vulnerability aquifer	IIC:moderately developed, low vulnerability aquifer	IIIC:lightly developed, low vulnerability aquifer

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(3) Aquifer Area	N/A	< 5 km ²	5 - 25 km ²	> 25 km ²	regionality of the resource
(4) Demand for Water	N/A	low	moderate	high	level of reliance on the resource for supply
(5) Type of Water Use	N/A	non-drinking	drinking	multiple / drinking	variability / diversity of the resource for supply
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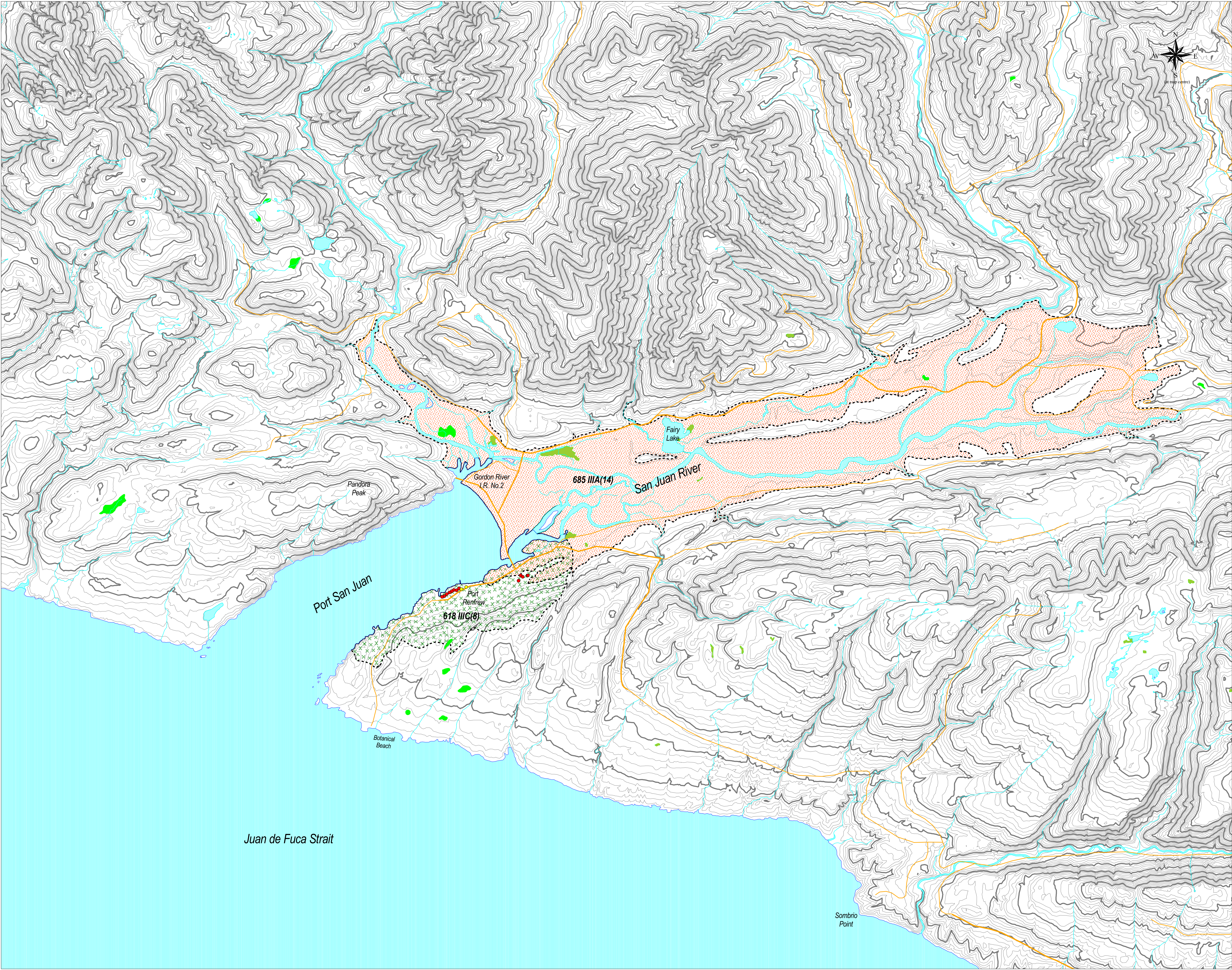
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0001	Metchosin, from Parry Bay Island 3 km	IBC	8	8.8	Moderate	Low	Low	Drinking Water	None	None
0004	Cadboroan River mouth, Finlayson Arm	IIIA	10	0.3	High	High	Low	Drinking Water	None	None
0040	East of Sooke at Cowichan Bay	IBC	10	28.1	Moderate	Low	Low	Drinking Water	None	Isolated
0050	Sooke at Sookeville, west to Sooke LA	IIIA	11	19.3	Moderate	High	Low	Drinking Water	None	Isolated
0004	East of Sooke at Young Lake	IBC	6	19.3	Low	Low	Low	Drinking Water	None	None
0005	South of Brown Hill, NE of Sooke Bay	IBC	6	0.1	Low	Low	Low	Drinking Water	None	None
0006	Cadboro, Langford, Metchosin, Sooke	IIIA	12	537.6	Low	High	Low	Multiple	None	Isolated



Aquifer Classification Map 4: Port Renfrew, Capital Regional District, BC



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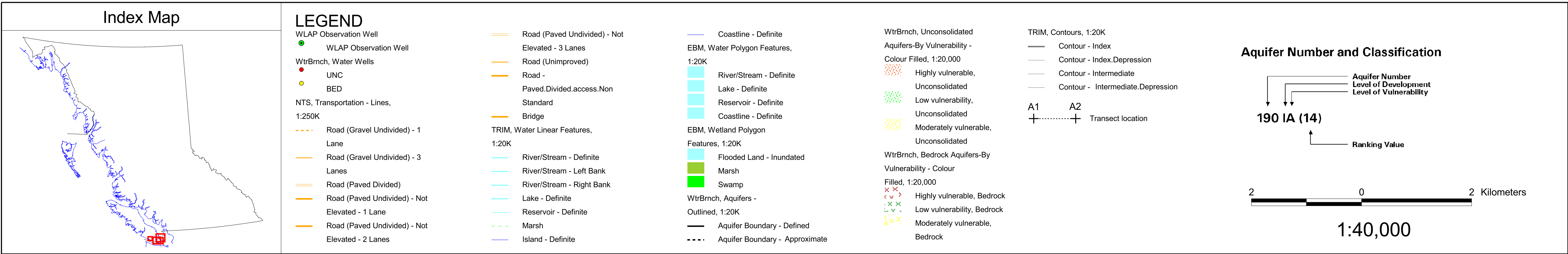
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SUMMARY OF AQUIFERS

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0618	Port Renfrew, S of San Juan River	IBC	8	5.8	Low	Low	Low	Drinking Water	Isolated	None
0685	San Juan River floodplain, Port Renfrew	IIIA	13	41.2	High	High	Low	Multiple	Isolated	None



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