

Irrigation FACTSHEET



BRITISH
COLUMBIA

Ministry of Agriculture and Food

Order No. 550.100-1
Revised Sept. 2000
Agdex: 560

Irrigated Area in British Columbia

As part of a national strategy on Environmental Indicators, British Columbia was asked to provide an estimate of the total area irrigated in the province and what type of systems were used. The following approach was used to calculate the irrigated acreage in British Columbia.

Establish Geographic Regions

The province is divided into geographical regions. Figure 1 shows the regions that have been identified. The regions are based on the amalgamation of several water licencing districts.

Private Water Licences

Water licence data was used to obtain total amount of surface water licenced and the corresponding land base for each region.

Irrigation Districts

The irrigated land base within irrigation districts was calculated by using the licenced irrigation withdrawal and dividing this by the average irrigation duty for the region as determined from the water licence and land base data from step 2. These figures were then adjusted based on information supplied by the Water Supply Association of B.C. and other surveys.

Groundwater

Total groundwater figures were available for the Fraser Valley in 1986. Irrigated area by groundwater in the Fraser Valley was estimated to be 15% of the total area water irrigation in the Fraser Valley. The rest of the province was calculated by estimating that the Fraser Valley was 35% of the total provincial use in 1986. The percentages for the other regions were calculated based on best estimates.

The groundwater use for 1995 were calculated by estimating a 2% growth in irrigated groundwater use per year in the Fraser Valley and 1% in the other regions of the province.

Corresponding acreages were calculated by using an appropriate water duty for each region.

The total irrigated acreage by water source type for each region is shown in Table 1.

Irrigated Crops

BCMAF figures for crop acreages were used to determine total crops grown in each region. The percentage of each crop irrigated was used to determine the irrigated area for each crop. The totals had to coincide with the total based on water licencing and groundwater estimates.

The total area irrigated for each crop by region is shown in Table 2.

Irrigation Systems Used

Taking into account the irrigated area for each crop, a percentage was used to calculate irrigation systems used for each crop in each region.

The type of system used to irrigate each crop is shown in Table 3.

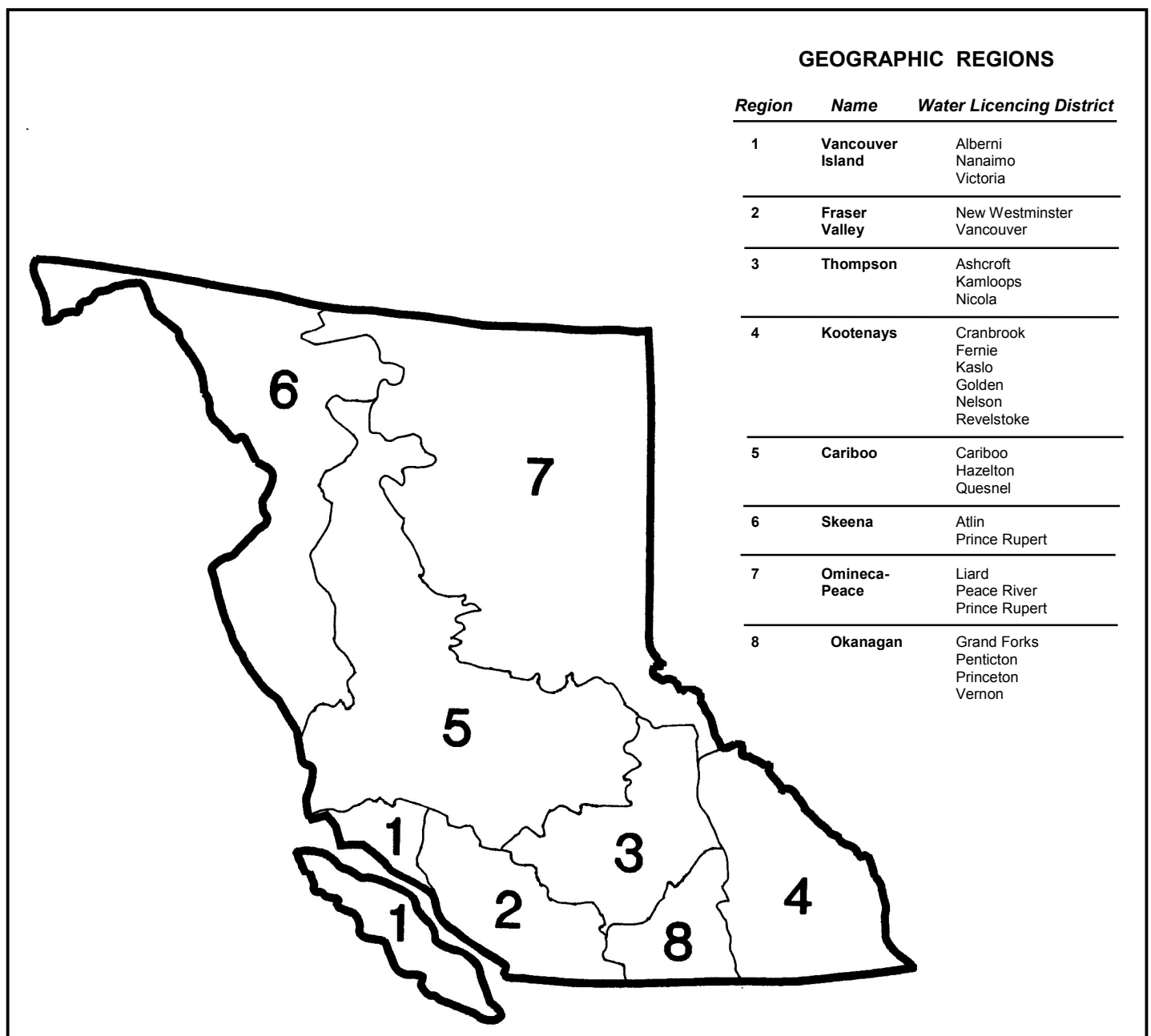


Figure 1

Geographic Regions

Table 1 Crops Irrigated by Region in Hectares (1995)

REGION	Forage	Tree Fruits	Berries	Grapes	Nursery	Vegetables	Ginseng	Grain	Greenhouse	Total
Vancouver Island	5066	81	101	24	202	486	0	162	2	6125
Fraser Valley	3210	202	4298	0	1680	3370	0	162	57	12980
Thompson	51606	81	0	0	283	136	810	283	0	53199
Kootenays	18089	405	40	0	121	324	0	202	1	19182
Cariboo	40117	0	24	0	0	0	0	607	0	40749
Skeena	4062	0	0	0	0	0	0	405	0	4467
Omineca-Peace	671	0	12	0	0	0	0	607	1	1292
Okanagan	37987	9312	227	891	1012	810	202	121	0	50562
Total Hectares	160808	10081	4702	915	3300	5126	1012	2551	61	188555

Table 2 Irrigation Water Supply by Region in Hectares (1995)

REGION	IRRIGATION SUPPLY		AREA IRRIGATED			Groundwater	Total
	District ha-fm	Private ha-fm	Surface Water				
			District	Private	District & Private		
Vancouver Island	0	1603	0	5255	5255	870	6125
Fraser Valley	287	3150	40	11048	11089	1891	12980
Thompson	5382	35835	975	51982	52957	243	53199
Kootenays	1832	10383	1721	17070	18791	392	19182
Cariboo	1	19428	0	40531	40531	218	40749
Skeena	0	1339	0	4418	4418	49	4467
Omineca-Peace	0	370	0	1194	1194	98	1292
Okanagan	30766	19778	21427	28482	49909	653	50562
Total Hectare-meters	38269 ha-fm	91887 ha-fm					
Total Hectare			24163	159980	184143	4412	188555

Table 3**Irrigation Methods by Region in Hectares (1995)**

	REGION								Total
	Vancouver Island	Fraser Valley	Thompson	Kootenays	Cariboo	Skeena	Peace	Okanagan	
TOTAL AREA IRRIGATED:	6125	12980	53199	19182	40749	4467	1292	50562	188555
SYSTEM TYPE									
Contour / Wild Flooding	659	0	8257	1628	10430	853	340	1709	23877
Spring Backflood	101	1202	3612	362	5635	227	13	190	11342
Center Pivot - LPDT	0	0	258	94	207	49	0	224	832
CP - Sprinkler / Spray Head	0	0	258	670	316	41	0	570	1854
Handmove	2622	3910	18351	8472	12157	1705	484	17650	65351
Wheelmove	1396	1761	14696	6471	10303	1360	441	15719	52146
Solid Set Sprinkler	186	3158	3215	249	12	0	0	5932	12752
Microsprinkler	20	168	306	47	0	0	0	1217	1757
Travelling Gun	623	1046	3641	573	1246	142	0	2334	9604
Stationary Gun	212	578	530	362	432	89	0	1162	3365
Trickle - Drip	266	1010	51	215	12	0	13	2229	3796
Trickle - Spray	39	147	24	40	0	0	0	1628	1878

FOR FURTHER INFORMATION CONTACT

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