PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENVIRONMENT, LANDS AND PARKS
VANCOUVER ISLAND REGION

LASQUETI ISLAND

WATER ALLOCATION PLAN

December 1992

written by:

George Bryden
&
Lyn Barnett

Regional Water Management
Vancouver Island Region
Nanaimo, B.C.

Approved

Regional Water Manager
Vancouver Island Region

Date: 14 DECEMBER 1992

Table of Contents

List of Tables

List of Figures

Appendices

LASQUETI ISLAND WATER ALLOCATION PLAN

1.0 INTRODUCTION

The Water Management Program's goals are to sustain a healthy water resource through anticipating and planning for water uses. Water Allocation Plans are a means of identifying water demands and ensuring that water use is compatible with the goals of a sustainable environment. The many advantages include:

1. Knowing our position in advance for standard applications (pro-active management, information available to applicants and public);

2. Reducing our response time by having plans in place prior to applications;

3. Eliminating separate studies and reports on each application (presently some duplication);

4. Improving the consistency of our approach and decisions, regardless of individual staff;

5. Replacing or reducing most Water Licence Application Reports by pre-defining specific allocation directions and decisions;

6. Being more comprehensive in the plan than in present reports;

7. And, eliminating the need for many referrals.

The following regional policy was developed to provide direction:

Regional Policy:

The region shall be subdivided into watershed areas and a water allocation plan shall be prepared for each watershed area. Water licence decisions will be made in accordance with approved plans.

Assessments undertaken as part of the water allocation planning process include identifying the surface water resources available, the instream requirements for fish, the existing and potential licensable water demands and providing direction regarding further water licence allocations.

Input may be sought from other agencies. Referrals go to Federal & Provincial Fisheries agencies and to Water Management in Victoria. The Lasqueti Island Water Allocation Plan is one of the first of a series of allocation plans. There are over 45 pending water licence application demands as of December 1992.

2.0 GENERAL WATERSHED INFORMATION

The Lasqueti Island Water Allocation Plan area is located off Vancouver Island's east coast in the Strait of Georgia, north of Parksville and south of Texada Island. With an area of 72.5 square kilometres, it includes surrounding Jervis, Paul, Boho, Jedediah, Bull, Jenkins, Linberg, Sangster and Finnerty Islands. Public access is by passenger ferry from French Creek, north-west of Parksville on Vancouver Island, to the False Bay community centre on Lasqueti Island. Lasqueti Island is approximately 17 kilometres long by 5 kilometres at its widest point, with a maximum elevation of 328.6 metres on Trematon Mountain near the centre of the island. The plan area is illustrated in Figure 1.

Lasqueti Island covers 91% of the Allocation Plan area or 66.3 square kilometres. Small adjoining islands add 6.23 square kilometres, making up the remaining 9% of the Water Allocation Plan area as shown below:

Lasqueti and Surrounding Islands - Size in Km^2

Islands	Drainage Area in Km2
Lasqueti Island	66.30
Boho Island	0.16
Bull Island	0.77
Finnerty Islands	0.28
Jedediah Island	2.77
Jenkins Island	0.75
Jervis Island	0.95
Linberg Island	0.10
Paul Island	0.23
Sangster Island	0.22
TOTAL ALLOCATION PLAN AREA	72.53

Ogden, Hadley and Lambert are the three largest lakes on Lasqueti Island, with a cumulative surface water area of roughly 0.22 square kilometres. Oben Swamp (0.11 square kilometres) and other small lakes, ponds and swamps account for another 0.33 square kilometres surface area. Overall, these surface water areas represent less than one percent of the Island.

Land use on Lasqueti Island is predominantly rural residential and small farms. B.C. Hydro does not service the island with electric power. Current population is estimated at 350 people.

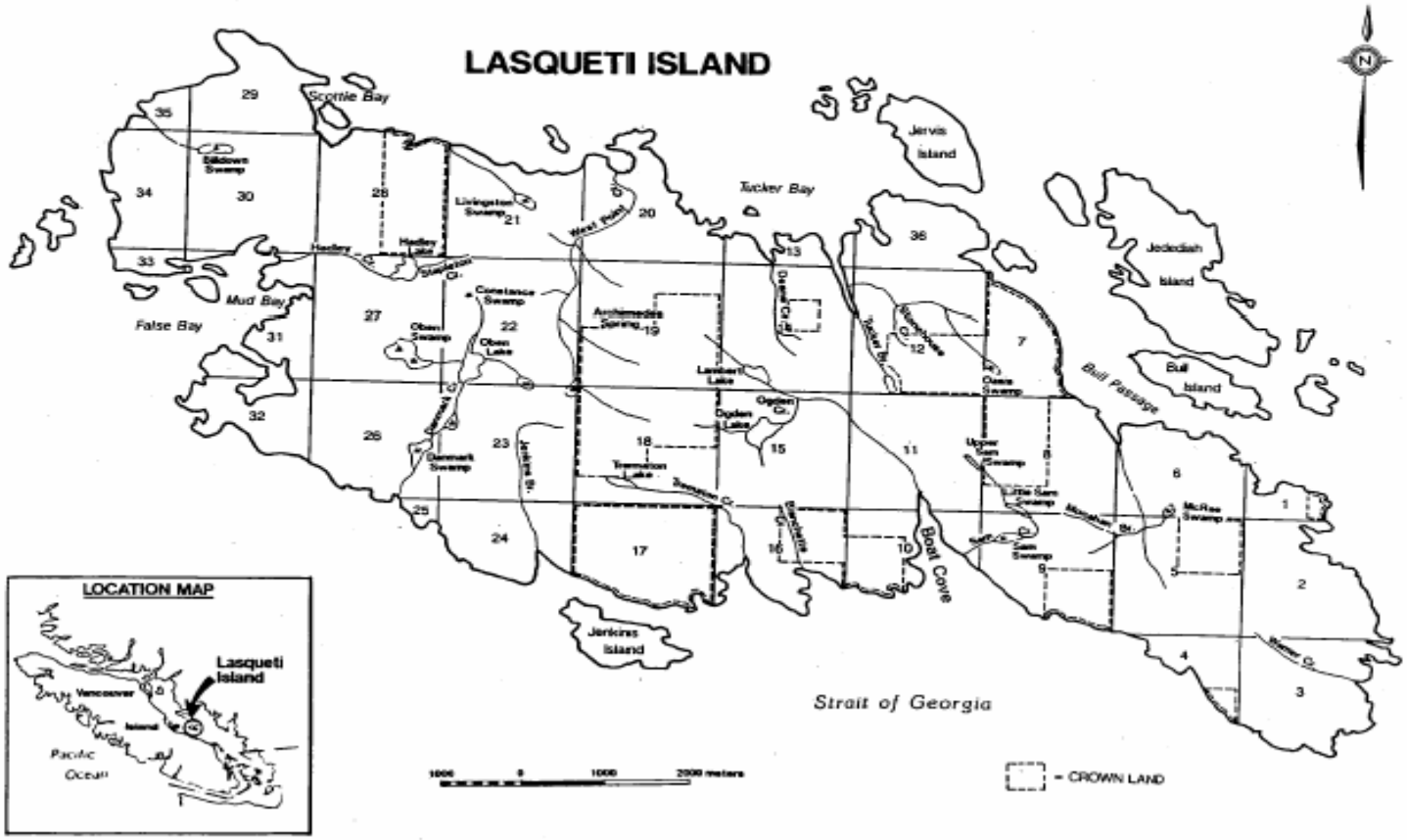
LASQUETI ISLAND
Scottie Bay
Tucker Bay
Jervis Island
Jedediah Island
Bull Island
Bull Passage
Mud Bay
False Bay
Boat Cove
Jenkins Island
Strait of Georgia
= CROWN LAND
LOCATION MAP
Lasqueti Island
Vancouver
Pacific Ocean

Figure 1.

Islands Trust records suggest that the current slow rate of growth will continue; undoubtedly influenced by the community's decision to limit services available on the island.

For the purpose of assessing water supplies for allocation demands, the watershed and drainage areas in the following table were identified and are illustrated in Figure 2.

Lasqueti Island Drainage Areas

Drainage	Area (km^2)
Lambert Creek	5.03
Ogden Lake	1.86
Blanchette Creek	0.26
Trematon Creek	2.15
Trematon Lake	0.52
Unnamed (Jenkins) Creek	2.46
Danmark Creek	4.12
Hadley Creek	2.24
Stapleton Creek	0.52
Unnamed (Billdown Swamp) Creek	0.74
Unnamed (Livingston) Brook	0.97
Unnamed (West Point) Creek	5.42
Deane Creek	0.99
Tucker Brook	1.66
Stonehouse Creek	1.95
Unnamed (Monahan) Creek	2.95
Wamer Creek	1.86
Sam Creek	1.67

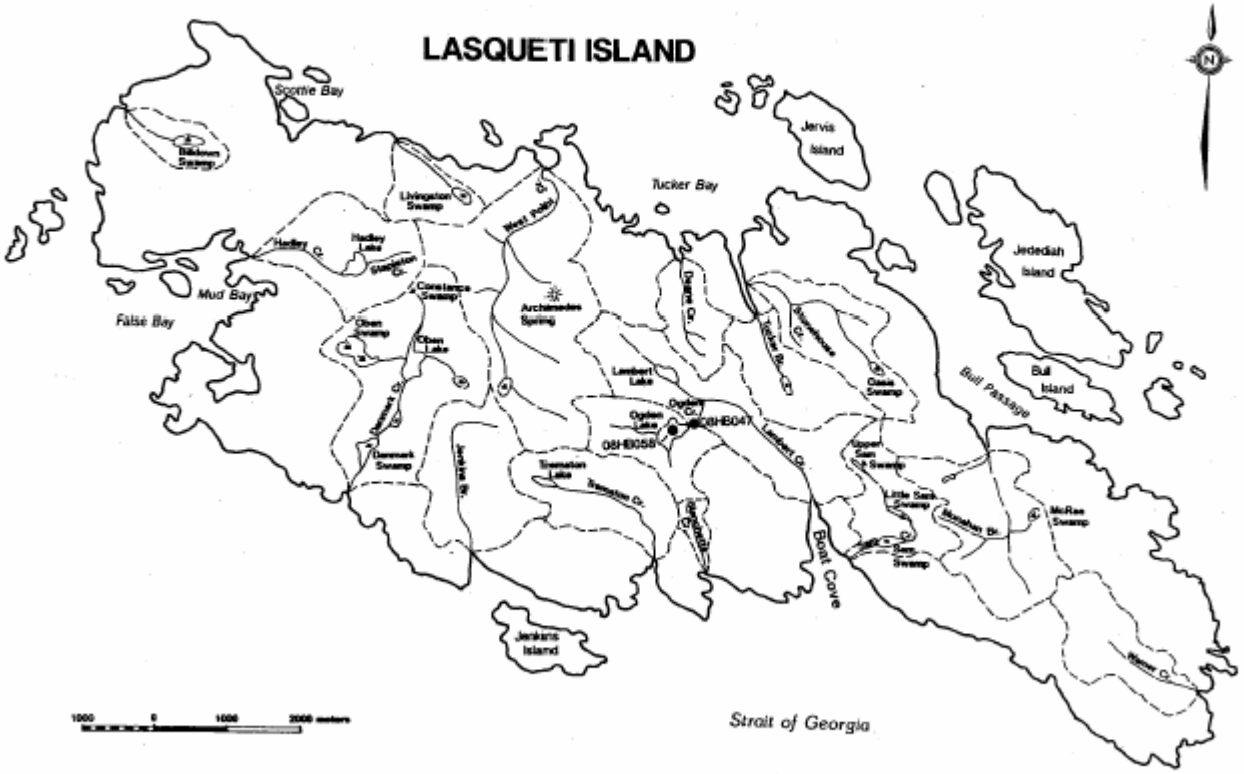

Figure 2. Lasqueti Island drainage areas.

3.0 HYDROLOGY

3.1 Hydrometric Information

There are two hydrometric stations (on Ogden Creek and Ogden Lake) and no precipitation stations on Lasqueti Island. In addition to the hydrometric stations, further information related to stream flows and water volumes are available from past site inspections, reports and observations related to water licence applications.

3.1.1 Lambert Creek Drainage Area

Lambert Lake, Ogden Lake through Ogden Creek and Evans Creek all flow into Lambert Creek and thus into Boat Cove (ocean). These lakes and creeks comprise the main components of the Lambert Creek Drainage Area. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 5.03 km^2 (1,243 acres).

Lambert Lake, according to LaSalle and Odynsky's report in 1974 on file 0310406, has a surface area of 6 acres and a maximum depth of 12 feet with no inflow or outflow during the summer months. They also estimated that the usable depth is only 5 feet and therefore the estimated available volume is (5 feet X 6 acres) 30 acre-feet. The planimetered surface area of Lambert Lake, from 1:50,000 topographic mapping, is 0.05 square kilometres (12 acres) in size. Using the planimetered area and assuming an average depth of approximately 1.5 metres (5.0 feet), this lake may have a volume estimated at 75 dam^3 (60 acre-feet). This lake is listed as fully recorded except for irrigation purposes.

Ogden Lake, according to Odynsky's report in 1968 on files 0277105, 0277330 and 0305194, had a 2 cfs outflow on May 9, 1968. He also noted that the lake reportedly drops 1 foot and there is no outflow from the lake during the summer months. He estimated that the lake surface area was 25 acres. The largest lake on Lasqueti Island, the Ogden Lake surface area was planimetered from 1:50,000 topographic maps to be 0.10 square kilometres (25 acres). Observations noted in the above file reports indicate that the lake is shallow. Connected to Lambert Creek by Ogden Creek, the outflow is to Boat Cove (ocean). This lake is noted in the stream register as "fully recorded except for domestic and waterworks purposes".

Also this lake is reportedly stocked with trout by the riparian land owner.

Hydrometric station 08HB058 on "Ogden Lake on Lasqueti Island" has daily water levels for April through October in 1977 and April through September in 1988 (see Appendix D).

Ogden Creek flows from Ogden Lake into Lambert Creek and thence into Boat Cove (ocean). **Hydrometric station 08HB047 on "Ogden Creek at the Outlet of Ogden Lake"** has complete daily flow records for 1974 to 1977 inclusive and daily flow records for parts of 1972, 1973 and 1978 (see Appendix D). The drainage area to this hydrometric station is 1.86 km^2 (460 acres).

Evans Brook, according to LaSalle's report in 1974 on file 0310592, had an estimated flow of 1.0 c.f.s. on March 27, 1973.

3.1.2Blanchette Creek Drainage

Blanchette Creek, according to Moore's report in 1984 on file 0368012, had an estimated flow of 0.25 c.f.s. on May 16, 1984. He reported that it was observed by locals that there was no flow during the months of July, August and September. He estimated the drainage area to be 48 acres to the point of diversion. Using 50% of the precipitation at the Parksville Precipitation Station, he estimated the runoff available to be approximately 66.5 acre-feet. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 0.26 km^2 (64 acres).

3.1.3Trematon Creek Drainage

Trematon Lake, according to Moore's report in 1984 on file 100187, has an estimated surface area of 7.4 acres with a mean depth of 12 feet, for a total volume of approximately 90 acre-feet. The estimated drainage area to the lake outlet was 128 acres (0.52 km^2).

Trematon Creek, according to Moore's report in 1984 on file 1000187, has an estimated drainage area (to a small dam near the mouth of the creek) of 480 acres. According to Blecic and Ford's report in 1978 on file 0340431 and 0365220, the estimated flow was 5000 gpd (0.01 cfs) on April 29, 1975 and was 1.5 cfs on November 2, 1978. They also note that the creek ceases to flow in July and August each year. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 2.15 km^2 (531 acres).

3.1.4Unnamed (Jenkins) Creek Drainage

Unnamed (Jenkins) Creek has no flow records or observations at this time. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 2.46 km^2 (531 acres).

3.1.5 Danmark Creek Drainage

Constance Swamp, according to Kudrick's report in 1982 on file 0367028, had no outflow on August 18, 1982 and has no outflow during the summer months of July, August and September.

Oben Lake, according to Blecic and Ford's report in 1978 on file 0330782, had an estimated 10 gpm (0.17 cfs) outflow on November 1, 1978. They estimated the surface area of the lake to be approximately 4 acres and 8 feet deep for a total volume of 32 acre-feet.

Danmark Creek was dry on August 18, 1982, according to Kudrick's report in 1982 on file 0367354, and is reportedly dry during the summer months of July, August and September. The estimated total drainage area is 4.12 km^2 (1,018 acres), planimetered from 1:50,000 topographic maps.

3.1.6 Hadley Creek Drainage

Stapleton Creek, according to Moore and Kudrick's report in 1982 on file 0355442, is dry for the summer months of July, August and September. The drainage area of the creek to Hadley Lake was estimated to be 128 acres (0.52 km^2).

Hadley Lake's surface area is 0.07 km^2 (17 acres), planimetered from 1:50,000 topographic maps. Providing the primary source of community water, Hadley Lake is fed by Stapleton Creek and is listed as fully recorded except for domestic and waterworks.

Hadley Creek flows from Hadley Lake to the ocean. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 2.24 km^2 (554 acres).

3.1.7 Unnamed (Billdown Swamp) Creek Drainage

Billdown Swamp, according to Blecic and Ford's report in 1978 on file 0340463, had no outflow on November 1, 1978. With a 2 foot high beaver dam at the outlet, the estimated surface area of 7.5 acres and average depth of 3.5 feet, the volume of the lake was 26 acre-feet. However if the beaver dam were removed the lake volume would be approximately 10 acre-feet. Billdown Swamp Measurements taken in the winter of 1978 by a Mr.Fisher varied between 20-40 gpm (28,800-57,600 gpd) or approximately 0.1 cfs. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 0.74 km^2 (183 acres).

3.1.8 Unnamed (Livingston) Brook Drainage

Unnamed (Livingston) Brook has no flow records or observations at this time. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 0.97 km^2 (240 acres).

3.1.9 Unnamed (West Point) Creek Drainage

Archimedes Spring, according to LaSalle's report in 1975 on file 0323737 and 0323433, flow was estimated at 800-1000 gpd on April 29, 1975 and the outflow from the spring is seasonal.

Unnamed West (Point) Creek has no flow records or observations at this time. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 5.42 km^2 (1,339 acres).

3.1.10 Deane Creek Drainage

Deane Creek, according to Blecic and Ford's report in 1978 on file 0330696, had an estimated flow of 25 gpm on November 1, 1978 and the flow is seasonal. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 0.99 km^2 (245 acres).

3.1.11 Tucker Brook Drainage

Tucker Brook, according to LaSalle's report in 1975 on file 0328421, had no flow on April 29, 1975 and the flow is seasonal. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 1.66 km^2 (410 acres).

3.1.12 Stonehouse Creek Drainage

Oasis Swamp, according to Blecic and Ford's report in 1978 on file 0340998 and Moore's report in 1984 on file 0355312, had an estimated flow of 60 gpm (0.2 cfs) on November 1, 1978 and no outflow in the summer months. The applicant for a power licence on this source measured the outflow from Oasis Swamp from October 1977 to May 1978. The mean discharge for this period was 0.24 cfs. The unit drainage area runoff yield, for this 137.7 acres drainage area is 0.002 cfs/acre (0.95 acft/acre). The natural swamp size was estimated to be approximately 1.5 acres by 2 feet average depth for an estimated volume of 3 acre-feet. However a 15 foot high dam stores an estimated 27.5 acre-feet of water. There is no natural flow from this swamp from May through September in most years.

Amundsen Spring, according to LaSalle's report in 1975 on file 0328240, had no outflow on August 18, 1975. The flow is seasonal.

Stonehouse Creek, according to LaSalle's report in 1975 on file 0329342, had no outflow on August 18, 1975 and an estimated flow at 2 cfs on November 18, 1975. The flow is seasonal. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 1.95 km^2 (482 acres).

3.1.13 Unnamed (Monahan) Creek Drainage

Big Snag Pond, according to Damberg's report in 1990 on file 1000751, had no flow on October 15, 1987 and flows only seasonally. This pond had an estimated 5.5 acre drainage area.

McRae Swamp, according to Moore's report in 1984 on file 1000020, drainage area was approximately 50 acres. The swamp surface area was estimated as 4 acres with an average depth of 2.5 feet for a volume of 10 acre-feet.

Monahan Brook, according to LaSalle's report in 1975 on file 0328913 and 0328914, had no flow on August 12, 1975 and the flow is seasonal. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 2.95 km^2 (729 acres).

3.1.14 Wamer Creek Drainage

Wamer Creek, according to Damberg's report in 1990 on file 1000761, had no flow on November 15, 1987 and flows only seasonally. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 1.86 km^2 (460 acres).

3.1.15 Sam Creek Drainage

Sam Swamp, according to LaSalle's report in 1975 on file 0329605 and Blecic and Ford's report in 1978 on file 0330165, outflow estimates were 4 cfs on December 22, 1975 and no outflow on November 2, 1978. The flow 600 feet downstream of the swamp was estimated as 10 gpm on November 2, 1978. The swamp was estimated at 2.75 acres in area with an average depth of 8 feet for a volume of 22 acre-feet with a 6 foot high dam at the outlet. Without the storage dam, the swamp may only have 5.5 acre-feet of water.

Sam Creek, according to LaSalle's report in 1975 on file 0328879, had no flow on August 12, 1975. The estimated total drainage area, planimetered from 1:50,000 topographic maps, is 1.67km^2 (413 acres).

3.1.16 Other Small Drainages

Lotzer Creek, according to Moore's report in 1982 on file 0365516, had no flow on August 19, 1982. He indicates that the creek flows into a cave. No drainage area was determined.

Ravenscar Swamp, according to Boom's report in 1989 on file 1000864, outflow dries up by July 1 of each year. The watershed area of the source could not be determined.

Tawny Gold Swamp , according to Blecic's report in 1978 on file 0342744, had no flow on November 15, 1978. This was a small swamp with little drainage, used like a cistern to catch rainfall.

3.2 Water Supply

Hydrometric station 08HB058 on "Ogden Lake on Lasqueti Island" and **Hydrometric station 08HB047 on "Ogden Creek at the Outlet of Ogden Lake"**, in conjunction with precipitation records from the nearest precipitation gauging stations, have been used to estimate water supplies at ungauged sources on Lasqueti Island.

3.2.1 Low Flows

Available information indicates there is no flow in any Lasqueti Island streams during August and September in most years. Also, in extreme low flow years, and where records exist, zero flows have been observed or recorded for the months of June, July, August, September and October.

For Ogden Creek at Outlet of Ogden Lake (Station No. 08HB047), the flow record for 1977 indicates there was no flow in the creek for the 5 month period of June through October. Other Vancouver Island hydrometric stations with a longer period of record indicate that the 1977 low flows were between a 1 in 5 and a 1 in 10 year recurrent low flow record.

Therefore, any water demand during the low flow period of June through October must be supported by storage reservoir development (dams and/or dugouts) or by the use of natural lakes, ponds and swamps.

3.2.2 Lakes, Ponds and Swamps

Using Ogden Lake on Lasqueti Island (Station No. 08HB058), the lake level record for 1977 indicates the lake level declined by 1.16 feet between April 1st (3.54 feet) and the lowest level on September 16-18th (2.38 feet). From the Ogden Creek at Outlet of Ogden Lake (Station No. 08HB047) flow record for 1977, 0 outflow commenced on June 8th when the water level in the lake was at 3.08 feet. Therefore the lake level declined a further 0.70 feet after outflow ceased, primarily due to lake evaporation. In 1978 the lake level declined by 1.18 feet between April 22-23rd (3.78 feet) and the lowest level on August 21-31th (2.60 feet).

These records indicate that over 1.0 foot of water may be lost to evaporation and other losses from water bodies on Lasqueti Island.

The following table summarizes the estimated water volumes for lakes and swamps on Lasqueti Island.

Lakes and Swamps - Estimated Volumes

Lakes and Swamps	Surface Area (Acres)	Depth (Feet)	Volume acft	Volume dam^3
Lambert Lake	12*	5	60*	74
Ogden Lake	25*			
Trematon Lake	7.4	12	90	111
Oben Lake	4	8	32	39
Oben Swamp	27*			
Hadley Lake	17*			
Billdown Swamp**	7.5	3.5	26	32
Oasis Swamp**	2.75	10	27.5	34
McRae Swamp	4	2.5	10	12
Sam Swamp**	2.75	8	22	27

* Planimetered area from 1:50,000 topographic map.
** Dammed

3.2.3 Storage

For any water demand during the low flow period of June through October, storage must be maintained. Where there are no natural lakes or marshes, or where these natural water bodies are inadequate for water demands, storage reservoirs (dams and/or dugouts) may be developed.

The flow records for Ogden Creek at Outlet of Ogden Lake (Station No. 08HB047) indicate there are no significant water

flows to support storage demands during the period from April through October. Water diversion for storage and small hydro power demands is available only during the period from November through March.

Water available for storage on Lasqueti Island can be estimated from the mean monthly discharge of Ogden Creek at Outlet of Ogden Lake (Station No. 08HB047). Using the high flow months of November to March for Ogden Creek, water available for storage can be estimated as follows:

Nov. Dec. Jan. Feb. Mar.
(.061 x 30) + (.077 x 31) + (.067 x 31) + (.041 x 28) + (.037 x 31)

= 8.589 cms days = 742,090 m^3 = 742 dam^3

This hydrometric station has a drainage area of 1.86 km^2 and therefore the unit discharge is:

742,090 m^3/1.86 = 398,973 m^3 say 3.99 dam^3/ha^2 (1.3 acre feet/acre)

Comparing precipitation stations and assuming that 50% of the precipitation during high flow periods is available as discharge, water available for storage may be estimated as follows:

Estimated Annual Runoff - From Precipitation Records

Precipitation Station	50% Nov-Mar Precip ($metres^3/square\ km^2$)	Est. Annual Runoff dam^3/ha	ac.ft/acre
Texada Island	284,300	2.8	0.9
Parksville	312,350	3.1	1.0
Qualicum	453,000	4.5	1.5
Denman Island	482,600	4.8	1.6
Average		3.8	1.3

Therefore **3.9 dam^3/hectare (1.3 acre feet/acre)** is a reasonable estimate of runoff water available for storage on Lasqueti Island.

LASQUETI ISLAND WATER ALLOCATION PLAN

The following table summarizes the water supply for the identified drainage areas on Lasqueti Island.

Estimated Water Supplies on Lasqueti Island

Drainage Basin	Drainage Area km^2	Water Available		
		Jun-Oct	Nov-Mar	
		l/sec	dam^3	acft
Lambert Creek	5.03	0.0	1961.7	1615.8
Blanchette Creek	0.26	0.0	101.4	83.5
Trematon Creek	2.15	0.0	838.5	690.6
Unnamed (Jenkins) Creek	2.46	0.0	959.4	790.2
Danmark Creek	4.12	0.0	1606.8	1323.5
Hadley Creek	2.24	0.0	873.6	719.6
Unnamed (Billdown Swamp) Cr.	0.74	0.0	288.6	237.7
Livingston Brook	0.97	0.0	378.3	311.6
Unnamed (West Point) Creek	5.42	0.0	2113.8	1741.1
Deane Creek	0.99	0.0	386.1	318.0
Tucker Brook	1.66	0.0	647.4	533.2
Stonehouse Creek	1.95	0.0	760.5	626.4
Unnamed (Monahan) Creek	2.95	0.0	1150.5	947.6
Wamer Creek	1.86	0.0	725.4	597.5
Sam Creek	1.67	0.0	651.3	536.5

An average monthly unit area discharge (cms/sq.km.) estimated for Lasqueti Island from Ogden Creek records is provided below:

Average Monthly Runoff Per Unit Drainage Area (cms/sq.km.)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
.036	.022	.020	.008	.003	.001	.000	.000	.000	.005	.033	.041

4.0 INSTREAM FLOW REQUIREMENTS

There has been no concerns identified by fisheries agencies regarding significant impacts on the fish resource by water use in the Lasqueti Island Water Allocation Plan area . However, a UBC Zoologist, Dr. Don McPhail, is studying the possible presence of rare and endangered fish species on the island (per. com. P. Law, Regional Fisheries) and recent efforts to enhance fisheries in Lasqueti Island's Boat Cove area have been successful. Now, anadromous and sport fish exist in two lakes (Ogden Lake and Lambert Lake) and migrate up the creeks from Boat Cove. As more knowledge concerning resident fish species in the lakes and as fish enhancement efforts increase there may be a potential for greater concern regarding the affects of water use on the fish resources. However, at present, there is no identified fish resource at risk and the creeks and brooks have no flow and therefore do not support fish naturally during the summer months.

The land around Ogden Lake is privately owned and the land owner holds a licence from fisheries agencies to stock rainbow trout in the lake. A similar stocking application exists for Trematon Lake.

5.0 WATER DEMAND

5.1 Licensed Demand

The low flow licensed demand by drainage area for Lasqueti Island is summarized below and detailed in Appendix B:

Low Flow Licensed Demand by Drainage Area

	Water Demand* Jun-Oct	
Drainage Basin	**(l/sec)**	**dam³****
Lambert Creek	4.174	32.5
Blanchette Creek	-0.132	-1.0
Trematon Creek	0.146	1.1
Unnamed (Jenkins) Creek	0.000	0.0
Danmark Creek	3.066	23.8
Hadley Creek	-4.423	-34.4
Unnamed (Billdown Swamp) Creek	0.079	0.6
Livingston Brook	0.000	0.0
Unnamed (West Point) Creek	0.026	0.2
Deane Creek	-0.080	-0.6
Tucker Brook	0.005	0.0
Stonehouse Creek	10.351	80.5
Unnamed (Monahan) Creek	0.100	0.8
Wamer Creek	-0.741	-5.9
Sam Creek	-0.515	-4.0
Other (Tawny Gold Swamp)	-0.053	-0.4
Total	12.002	93.3

* A negative number indicates that licensed storage volume is in excess of the licensed demand over 90 days.

** Based on an estimated 90 day irrigation period demand.

A summary of the existing licensed demand by purpose/use follows:

Low Flow Licensed Demand by Purpose

		Equivalent Low Flow & Volume	
Purpose	**Quantity/Units**	**litres/second**	**dam^3 ***
Waterworks	9,125,000 gal/yr	1.315	10.2
Domestic	25,950 gpd	1.364	10.6
Irrigation	150.5 acft	23.843*	185.4
Power	0.5 cfs	14.158	110.1
Industrial	1,000 gpd	0.053	0.4
	Total Demand	40.733	316.7
Storage	181.29 acft	-28.720	-223.3
	Unsupported Demand	12.013	93.4

* Based on an estimated 90 day irrigation period demand

Existing licensed water demand on Lasqueti Island is summarized below by the percentage each use represents of the total water demand:

Percent Low Flow Licensed Demand by Purpose

Purpose/Use	**% of Total Licensed Demand**
Domestic	3.4 %
Waterworks	3.0 %
Industrial (& Commercial)	0.1 %
Irrigation	61.3 %
Power (Residential)	32.2 %

Although the largest number of licences are for domestic use, licensed irrigation demand is the greatest water demand from island surface water sources. Storage of winter flows supports all irrigation licenses and much of the related domestic demand. A single hydro power water licence represents 32.2% of the total water demand.

5.2 Projected Demand

Over 45 water licence demands are pending as of December 1992. A summary of the pending applications by purpose/use follows and is detailed in Appendix C:

Water Licence Application Low Flow Demand by Purpose

		Equivalent Demand*	
Purpose	**Quantity/Units**	**litres/sec**	**dam³**
Domestic	21,000 gpd	1.106	8.6
Irrigation	81.5 acft	12.946	100.6
Industrial	1,000 gpd	0.053	0.4
Power	2.9 cfs	82.128	638.6
	Total	96.233	748.3
Storage	70.7 acft	-11.215	-87.2
	Unsupported	85.002	661.1

* Based on an estimated 90 day irrigation period demand.

Pending water licence applications date back approximately three years. During this period, new domestic demand nearly equals existing demand.

New irrigation demand represents about one third of the existing total irrigation demand, with most applications including offsetting storage.

Several residential hydro power water licence applications are pending at this time. Most of the pending water licence applications are for residential power (small hydro) use during the high flow winter months. Because Lasqueti is unlikely to connect to B.C. Hydro in the foreseeable future, we expect small hydro demand to continue. Hydro power demand is a non-consumptive water use in most cases.

No water licences or pending water licence applications exist on any of the smaller islands adjoining Lasqueti Island in the plan area.

The conclusions and recommendations found in the following sections outline the requirements, limitations and acceptance criteria necessary for approval of the applications discussed above.

6.0 CONCLUSIONS

The following conclusions were derived:

1. Streamflow during the low flow months of July and August is zero in most years and may be zero for the months of June to October in a low flow year for all creeks.

2. All water demands for the period between April and October must be supported by storage of higher winter flows occurring between November 1 and March 31.

3. Water for hydro electric power is only available for use from November to May. Although supporting storage may be developed to extend the period of water availability through the low flow period, the amount of storage required and the cost of developing the storage would be prohibitive in most cases.

4. Nearly all existing licensed water supplies on Lasqueti Island have some level of supporting storage to ensure supply during the low flow periods.

5. The water available for storage and hydro power development estimated for Lasqueti Island is 3.9 dam^3/ha (1.3 acre-feet/acre).

6. No further significant community waterworks demands on Lasqueti Island are anticipated at this time. However, the sole waterworks demand on Hadley Lake should be protected from further allocations affecting the existing and potential community water supply.

7. No significant increase in industrial demand is anticipated for Lasqueti Island. Existing industrial demands are primarily commercial ventures associated with resort uses.

8. Lands available for farming, and thus irrigation demand, are relatively small. Also, there is no soil information readily available to calculate irrigation duties.

7.0 RECOMMENDATIONS

As no flow occurs during the summer low flow period, all streams within the Lasqueti Island Water Allocation Plan area should be noted as **"Fully recorded for All Purposes Unless Storage is Provided"**.

Fish and debris screens on intake or diversion works are not required except on Ogden Lake, Ogden Creek, Hadley Lake and Trematon Lake. However, fish and debris screens should be recommended to any applicant as part of good intake design.

7.1 Domestic

A water licence should issue for 500 gpd for each single rural residential water application demand. Water supply should be restricted to uses associated with dwelling(s) located approximately as shown on a plan attached to the water licence. Domestic water licences should not be issued to provide proof of an "adequate potable water supply" for subdivision approval purposes.

To ensure an adequate water supply, applicants should be prepared to develop storage or use lake or swamp storage, for the average daily demand of 250 gpd for a five month period (150 days), say 6,000 ft^3 or .14 acre feet. This requires a reservoir or dugout approximately 20 feet wide by 30 feet long, with an average depth of 11 feet (1 foot for evaporation loss).

7.2 Waterworks

Except for community waterworks purposes, no further water licences should issue within the Hadley Creek watershed. Hadley Lake (called Pete's Lake by residents) and tributary streams should be noted in the stream register as **"Fully Recorded for All Purposes Except Waterworks"**.

If community water supply demand, in excess of the existing licensed demand is required, the applicant will be required to further assess the available water supply in Hadley Lake. The applicant will also be required to meter and treat the water supply. Further storage development may also be indicated.

7.3 Industrial and Commercial

Industrial demands related to commercial and resort development should be handled similar to multiple domestic demands with the same requirements.

7.4 Irrigation

All irrigation water demands must be supported by storage development. There is no soil information readily available for Lasqueti Island. Therefore, the irrigation duty for agriculture on Lasqueti Island will be 1.0 acre feet of water per acre of land to be irrigated. The maximum allowable rate of withdrawal will be 4.2 Igpm per acre of land to be irrigated.

The storage required to support irrigation demands is 1.0 acre feet per acre of irrigation demand, plus an additional allowance for evaporation and other losses from the storage reservoir.

Natural storage in existing lakes, ponds and marshes may be used, except for Hadley Lake, Ogden Lake and Trematon Lake where fisheries must be preserved.

7.5 Power (Residential

Applicants for hydro power purpose are required to adequately complete the "**Information Required in Respect of an Application for Power Purpose" form.**

The water demand will be estimated (in cubic meters per second) from the power requirement **P**(in kw) and head **h** (in metres) as follows (overall efficiency - 30% e=0.3):

$$Q = 0.34 \frac{p}{h}$$

A hydro power supply with a 30.5 metre (100 ft.) head and sufficient storage to store variations between the five month higher winter flows requires approximately:

Hydro Power Requirements With Automatic Load Management
30.5 metre (100 ft) Head

	Power	Flow	Drainage Area	
Description	**Kw**	**cfs**	**Acres**	**Km²**
3-4 Bedroom with elec. Stove	14	5.5	1,300	5.1
2 Bedroom	7	2.7	630	2.5
Cabin	4	1.6	360	1.4
Home Supply with Batteries and Alternative Supply	1	0.34	90	0.4
Few Appliances with Batteries	0.1	0.04	9	0.04

The period of hydro power use will be from November to March unless adequate storage can be developed to extend the period.

Water returned to the stream after generation of hydro power may be licensed for subsequent compatible water demands. Hydro power use that diverts water away from subsequent use should be discouraged.

7.6 Storage

An additional 1.0 foot of depth over the surface area of the storage reservoir or natural water body must be allowed for evaporation and other losses when considering supporting storage for licensed demands. Each acre-foot of water to be stored requires 0.8 acres of drainage area based on 1.3 acre-feet runoff per acre of drainage.

Design plans must be submitted and accepted by written letter before construction commences on any proposed dam over 10 feet in height or on storage of 10 acre-feet or more.

7.7 Allocation Plan Revision

The Lasqueti Island Water Allocation Plan should be reviewed and updated on or before August 1997 (5 years).

APPENDIX A

LASQUETI ISLAND

LICENSED WATER DEMAND by PURPOSE/USE

LICENCE NUMBER	FILE NUMBER	PRIORITY DATE	SOURCE NAME	QUANTITY/UNITS	Equiv. Low Flow l/sec	dam³	% of total
Waterworks Purpose							
C072113	0232181	19600816	Hadley Creek	9,125,000.000 GY	1.315	.0013	
			SUB-TOTAL	9,125,000.000 GY	**1.315**	**.0013**	**3.2**
Domestic Purpose							
C046040	0328240	19750109	Amundsen Spring	500.000 GD	0.026		
C045313	0323737	19740827	Archimedes Spring	500.000 GD	0.026		
C072629	1000751	19870722	Big Snag Pond	500.000 GD	0.026		
C051713	0340463	19761112	Billdown Swamp	1,500.000 GD	0.079		
C061376	0368012	19810303	Blanchette Creek	500.000 GD	0.026		
C058452	0367028	19800731	Constance Swamp	500.000 GD	0.026		
C058450	0367356	19801008	Danmark Creek	500.000 GD	0.026		
C051775	0330696	19760526	Deane Creek	3,000.000 GD	0.158		
C041656	0310592	19720728	Evans Brook	500.000 GD	0.026		
C041657	0310416	19720628	Lambert Lake	1,500.000 GD	0.079		
C062611	0365516	19790504	Lotzer Creek	500.000 GD	0.026		
C061344	1000020	19820528	McRae Swamp	1,000.000 GD	0.053		
C061444	0328914	19750603	Monahan Brook	1,000.000 GD	0.053		
C033727	0277330	19671114	Ogden Lake	1,000.000 GD	0.053		
C041086	0305936	19710825	Ogden Lake	1,000.000 GD	0.053		
C045737	0328879	19750528	Sam Creek	1,000.000 GD	0.053		
C046944	0329605	19750917	Sam Swamp	1,500.000 GD	0.079		
C051842	0330165	19760204	Sam Swamp	1,000.000 GD	0.053		
C058456	0355442	19791002	Stapleton Creek	500.000 GD	0.026		
C046041	0329342	19750814	Stone House Creek	500.000 GD	0.026		
C052307	0340998	19770323	Stone House Creek	500.000 GD	0.026		
C051777	0342744	19780227	Tawny Gold Swamp	2,000.000 GD	0.105		
C052275	0340431	19761102	Trematon Creek	2,100.000 GD	0.110		
C061378	1000187	19830714	Trematon Lake	1,750.000 GD	0.092		
C045315	0328421	19750317	Tucker Brook	100.000 GD	0.005		
C070365	1000761	19870817	Wamer Creek	1,000.000 GD	0.053		
			SUB-TOTAL	**25,950.000 GD**	**1.364**	**10.6**	**3.4**
Power Residential Purpose							
	0340998	19770323	Stone House Creek	0.500 CS	14.158	110.1	
			SUB-TOTAL	**0.500 CS**	**14.158**	**110.1**	**34.8**
Industrial Enterprise Purpose							
C045734	0322356	19740107	Trematon Creek	1,000.000 GD	0.053	0.4	
			SUB-TOTAL	**1,000.000 GD**	**0.053**	**0.4**	**0.1**
Irrigation Purpose							
C072629	1000751	19870722	Big Snag Pond	1.000 AF	0.158		
C061376	0368012	19810303	Blanchette Creek	1.000 AF	0.158		
C058452	0367028	19800731	Constance Swamp	1.000 AF	0.158		
C058450	0367356	19801008	Danmark Creek	1.000 AF	0.158		
C041657	0310416	19720628	Lambert Lake	5.000 AF	0.792		

LICENCE NUMBER	FILE NUMBER	PRIORITY DATE	SOURCE NAME	QUANTITY/UNITS	Equiv. Low Flow l/sec	dam³	% of total
C051846	0330782	19760607	Oben Lake	20.000 AF	3.168		
C033727	0277330	19671114	Ogden Lake	20.000 AF	3.168		
C045737	0328879	19750528	Sam Creek	4.000 AF	0.634		
C051842	0330165	19760204	Sam Swamp	55.000 AF	8.713		
C058456	0355442	19791002	Stapleton Creek	1.500 AF	0.238		
C052307	0340998	19770323	Stone House Creek	3.000 AF	0.475		
C045315	0328421	19750317	Tucker Brook	3.000 AF	0.475		
C070365	1000761	19870817	Wamer Creek	35.000 AF	5.545		
			SUB-TOTAL	**150.500 AF**	**23.843**	**185.4**	**58.5**
			TOTAL LASQUETI ISLAND DEMAND			**316.7**	**100.0**
Storage Purpose							
C072629	1000751	19870722	Big Snag Pond	1.200 AF	-0.190		
C061377	0368012	19810303	Blanchette Creek	1.000 AF	-0.158		
C061377	0368012	19810303	Blanchette Creek	1.000 AF	-0.158		
C058453	0367028	19800731	Constance Swamp	1.500 AF	-0.238		
C058451	0367356	19801008	Danmark Creek	1.500 AF	-0.238		
C051776	0330696	19760526	Deane Creek	1.500 AF	-0.238		
C072113	0232181	19600816	Hadley Creek	36.000 AF	-5.703		
C045738	0328879	19750528	Sam Creek	5.000 AF	-0.792		
C051843	0330165	19760204	Sam Swamp	58.400 AF	-9.252		
C058457	0355442	19791002	Stapleton Creek	2.000 AF	-0.317		
C061352	0355312	19790911	Stone House Creek	27.500 AF	-4.357		
C051778	0342744	19780227	Tawny Gold Swamp	1.000 AF	-0.158		
C052276	0340431	19761102	Trematon Creek	0.460 AF	-0.073		
C052900	0365220	19790226	Trematon Creek	0.230 AF	-0.036		
C045316	0328421	19750317	Tucker Brook	3.000 AF	-0.475		
C070365	1000761	19870817	Wamer Creek	40.000 AF	-6.337		
			SUB-TOTAL	**181.290 AF**	**-28.720**	**-223.3**	

gpd . . . . . gallons per day
gy . . . . . gallons per year
cs . . . . . cubic feet per second
cms . . . . . cubic metres per second
acft . . . . . acre feet
l/sec. . . . . litres per second

Conversion to Equivalent Flows

Domestic	500 gpd	= 0.0009 cfs	= 0.026	l/sec
Irrigation (per 90 days) . . .	1.0 acft	= 0.0056 cfs	= 0.158	l/sec
Storage (per 90 days) . . .	1.0 acft	=-0.0056 cfs	=-0.158	l/sec

APPENDIX B

LASQUETI ISLAND

LICENSED WATER DEMAND by DRAINAGE AREA and PURPOSE/USE

SOURCE NAME	DOM gpd	IRR acft	IND gpd	WWKS MIgpy	POWER cfs	Equivalent Flow l/sec	Volume dam^3	STORAGE acft	Storage Eq.Flow l/sec	TOTAL l/sec	dam^3
Lambert Creek											
Lambert Lake	1500	5				0.871					
Evans Brook	500					0.026					
Ogden Lake	2000	20				3.277					
	4000	**25**				**4.174**	**32.5**			**4.174**	**32.5**
Blanchette Creek											
Blanchette Creek	**500**	**1**				**0.185**	**1.4**	**2**	**-0.317**	**-0.132**	**-1.0**
Trematon Creek											
Trematon Creek	2100		1000			0.163		.69	-0.109		
Trematon Lake	1750					0.092					
	3850		**1000**			**0.255**	**2.0**	**.69**	**-0.109**	**0.146**	**1.1**
Danmark Creek											
Constance Swamp	500	1				0.185		1.5	-0.238		
Danmark Creek	500	1				0.185		1.5	-0.238		
Oben Lake		20				3.173					
	1000	**22**				**3.542**	**27.5**	**3.0**	**-0.476**	**3.066**	**23.8**
Hadley Creek											
Hadley Lake	500			9.125		1.341		36	-5.711		
Stapleton Creek	500	1.5				0.264		2	-0.317		
	1000	**1.5**		**9.125**		**1.605**	**12.5**	**38**	**-6.028**	**-4.423**	**-34.4**
Billdown Swamp											
Billdown Swamp	**1500**					**0.079**	**0.6**			**0.079**	**0.6**
Unnamed (W.Pt.) Creek											
Archimedes Spring	**500**					**0.026**	**0.2**			**0.026**	**0.2**
Deanne Creek											
Deane Creek	**3000**					**0.158**	**1.2**	**1.5**	**-0.238**	**-0.080**	**-0.6**
Tucker Brook											
Tucker Brook	**100**	**3**				**0.481**	**3.7**	**3**	**-0.476**	**0.005**	**0.0**
Stonehouse Creek											

SOURCE NAME	DOM gpd	IRR acft	IND gpd	WWKS MIgpy	POWER cfs	Equivalent Flow l/sec	Volume dam^3	STORAGE acft	Storage Eq.Flow l/sec	TOTAL l/sec	dam^3
Stone House Creek	1000	3			.5	14.687		27.5	-4.362		
Amundsen Spring	500					0.026					
	1500	3			.5	14.713	114.4	27.5	-4.362	10.351	80.5
Unnamed (Monahan) Creek											
Monahan Brook	1000					0.053					
Big Snag Pond	500	1				0.184		1.2	-0.190		
McRae Swamp	1000					0.053					
	2500	**1**				**0.290**	**2.3**	**1.2**	**-0.190**	**0.100**	**0.8**
Wamer Creek											
Wamer Creek	**1000**	**35**				**5.604**	**43.6**	**40**	**-6.345**	**-0.741**	**-5.8**
Sam Creek											
Sam Creek	1000	4				0.687		5	-0.793		
Sam Swamp	2500	55				8.855		58.4	-9.264		
	3500	**59**				**9.542**	**74.2**	**63.4**	**-10.057**	**-0.515**	**-4.0**
Other Sm.Drainages											
Tawny Gold Swamp	**2000**					**0.105**	**0.8**	**1**	**-0.158**	**-0.053**	**-0.4**
					TOTAL	**40.759**	**316.9**	**181.29**	**-28.756**	**12.002**	**93.3**

gpd . . . . . gallons per day
MIgpy . . . . . million imperial gallons per year
cfs . . . . . cubic feet per second
acft . . . . . acre feet
dam^3 . . . . . decametre cubed
l/sec. . . . . litres per second

Conversion to Equivalent Flows

Waterworks	1.000 Mgpd	= 1.8578 cfs	= 0.0526 cms
Domestic	500 gpd	= 0.0009 cfs	= 0.026 l/sec
Irrigation (per 90 days) . . .	1.0 acft	= 0.0056 cfs	= 0.158 l/sec
Storage (per 90 days) . . .	1.0 acft	=-0.0056 cfs	=-0.158 l/sec

APPENDIX C

LASQUETI ISLAND

PENDING (1992) WATER LICENSE APPLICATIONS by PURPOSE/USE

Lasqueti Island

Pending Water Licence Aplications by Purpose/Use

FILE NUMBER	SOURCE NAME	QUANTITY/UNITS	EQUIVALENT l/sec	EQUIVALENT dam³*
Domestic				
1000909	Unnamed Swamp	500 GD	0.026	0.2
1000920	Livingston Creek	500 GD	0.026	0.2
1000985	Unnamed Brook	500 GD	0.026	0.2
1000998	Livingston Creek	500 GD	0.026	0.2
1001019	Lambert Lake	2,000 GD	0.105	0.8
1001085	Unnamed Stream	1,750 GD	0.092	0.7
1001094	Livingston Swamp	1,750 GD	0.092	0.7
1001182	Unnamed Swamp	3,000 GD	0.158	1.2
1001284	Trematon Lake	1,000 GD	0.053	0.4
1001390	Unnamed Spring	1,500 GD	0.079	0.6
1001437	Unnamed Spring	500 GD	0.026	0.2
1001481	Unnamed Pond	1,500 GD	0.079	0.6
1001509	Unnamed Spring	500 GD	0.026	0.2
1001556	Unnamed Swamp	5,000 GD	0.263	2.0
1001565	Unnamed Swamp	500 GD	0.026	0.2
	Domestic Sub-Total	**21,000 GD**	**1.105**	**8.6**
Irrigation				
1000909	Unnamed Swamp	4.0 AF	0.635	4.9
1000920	Livingston Creek	6.0 AF	0.953	7.4
1000985	Unnamed Brook	1.0 AF	0.159	1.2
1000986	Livingston Creek	1.0 AF	0.159	1.2
1001019	Lambert Lake	20.0 AF	3.168	24.7
1001284	Trematon Lake	5.0 AF	0.792	6.2
1001390	Unnamed Spring	5.0 AF	0.792	6.2
1001481	Unnamed Pond	1.0 AF	0.159	1.2
1001556	Unnamed Swamp	25.0 AF	3.971	30.8
1001565	Unnamed Swamp	10.0 AF	1.588	12.3
1001586	Unnamed Pond/Stream	3.5 AF	0.556	4.3
	Irrigation Sub-Total	**81.5 AF**	**12.946**	**100.5**
Power				
1000920	Livingston Creek	0.290 CS	8.212	63.9

			EQUIVALENT	
FILE NUMBER	**SOURCE NAME**	**QUANTITY/UNITS**	**l/sec**	**dam³***
1000985	Unnamed Creek	0.380 CS	10.760	83.7
1000998	Livingston Creek	0.300 CS	8.495	66.1
1001019	Lambert Lake	0.290 CS	8.212	63.9
1001093	Livingston Swamp	0.080 CS	2.265	17.6
1001107	Sam Creek	0.160 CS	4.531	35.2
1001389	McRae Swamp	0.200 CS	5.663	44.0
1001453	Unnamed Creek	1.000 CS	28.317	220.2
1001532	Unnamed Creek	0.040 CS	1.133	8.8
1001130	Sam Creek	0.160 CS	4.531	35.2
	Power Sub-total	**2.900 CS**	**82.119**	**638.6**
Industrial				
1001284	Trematon Lake	50 GD	0.003	0.0
	Industrial Sub-Total	**50 GD**	**0.003**	**0.0**
Storage				
1000998	Livingston Creek	2.0 AF	-0.317	-2.5
1001019	Lambert's Lake	40.0 AF	-6.336	-49.3
1001085	Unnamed Stream	2.3 AF	-0.365	-2.8
1001094	Livingston Swamp	2.3 AF	-0.365	-2.8
1001481	Unnamed Pond	3.1 AF	-0.492	-3.8
1001556	Unnamed Swamp	10.0 AF	-1.588	-12.3
1001565	Unnamed Swamp	10.0 AF	-1.588	-12.3
1001586	Unnamed Pond/Stream	1.0 AF	-0.159	-1.2
	Storage Sub-total	**70.7 AF**	**-11.231**	**-87.2**
	Total Unsupported Demand		**84.942**	**660.5**
	Total 45 Purpose/Uses			

* Based on an estimated 90 day irrigation period demand.

APPENDIX D

LASQUETI ISLAND

HYDROMETRIC RECORDS - OGDEN CREEK FLOW & OGDEN LAKE LEVELS

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN	YEAR
1972	---	---	---	0.024	0.006	0.001	0.001	0	0	---	---	---	---	1972
1973	---	---	---	---	---	---	---	---	---	0	0.087	0.088	---	1973
1974	0.088	0.043	0.088	0.017	0.012	0.003	0	0	0	0	0.088	0.087	0.037	1974
1975	0.088	0.083	0.038	0.006	0.001	0	0	0	0	0.045	0.135	0.082	0.035	1975
1976	0.088	0.033	0.041	0.015	0.005	0.002	0.001	0	0	0.001	0.012	0.038	0.015	1976
1977	0.045	0.032	0.033	0.006	0.002	0	0	0	0	0	0.036	0.093	0.030	1977
1978	0.088	0.083	0.017	0.015	---	---	---	---	---	---	---	---	---	1978
MEAN	0.087	0.041	0.027	0.015	0.005	0.001	0	0	0	0.008	0.081	0.077	0.025	MEAN

LOCATION - LAT 48 28 48 N
LONG 124 16 00 W

DRAINAGE AREA, 1.65 km²
NATURAL FLOW

670

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

YEAR	MAXIMUM INSTANTANEOUS DISCHARGE (m^3/s)	MAXIMUM DAILY DISCHARGE (m^3/s)	MINIMUM DAILY DISCHARGE (m^3/s)	TOTAL DISCHARGE (dam^3)
1972	---	---	0 ON JUL 26 *	---
1973	---	---	---	---
1974	---	0.1678 ON NOV 21	0 ON JUN 24	845
1975	---	0.3468 ON DEC 26 *	0 ON MAY 25	1 110
1976	---	0.1388 ON DEC 27	0 ON JUL 17	578
1977	---	0.224 ON NOV 28	0 ON MAY 31	630
1978	---	0.288 ON JAN 10	---	---
		* - EXTREME RECORDED FOR THE PERIOD OF RECORD		790

E - ESTIMATED

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08NB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	---	---	---	2.1	0.50	0.06	0.07	0	0	---	---	---	1
2	---	---	---	1.7	0.47	0.05	0.07	0	0 E	---	---	---	2
3	---	---	---	1.7	0.47	0.03	0.06	0	0 E	---	---	---	3
4	---	---	---	1.1	0.61	0.02	0.06	0	0 E	---	---	---	4
5	---	---	---	0.50	0.41	0.02	0.05	0	0 E	---	---	---	5
6	---	---	---	0.50	0.81	0.02	0.05	0	0 E	---	---	---	6
7	---	---	---	0.50	0.50	0.02	0.04	0	0 E	---	---	---	7
8	---	---	---	0.50	0.31	0.02	0.06	0	0 E	---	---	---	8
9	---	---	---	0.50	0.29	0.02	0.02	0	0 E	---	---	---	9
10	---	---	2.0	0.50	0.17	0.03	0.03	0	0 E	---	---	---	10
11	---	---	---	0.50	0.16	0.05	0.05	0	0 E	---	---	---	11
12	---	---	---	0.93	0.15	0.07	0.06	0	0 E	---	---	---	12
13	---	---	---	0.87	0.13	0.07	0.06	0	0 E	---	---	---	13
14	---	---	---	1.1	0.12	0.07	0.07	0 E	0 E	---	---	---	14
15	---	---	---	1.1	0.12	0.07	0.07	0 E	0 E	---	---	---	15
16	---	---	---	0.96	0.11	0.07	0.07	0	0 E	---	---	---	16
17	---	---	---	1.0	0.11	0.07	0.06	0	0 E	---	---	---	17
18	---	---	---	1.0	0.10	0.07	0.05	0	0	---	---	---	18
19	---	---	---	1.0	0.10	0.06	0.05	0	0	---	---	---	19
20	---	---	---	0.96	0.09	0.06	0.06	0	0	---	---	---	20
21	---	---	---	0.87	0.09	0.06	0.05	0	0	---	---	---	21
22	---	---	---	0.78	0.07	0.02	0.04	0	0	---	---	---	22
23	---	---	---	0.75	0.07	0.05	0.04	0	0	---	---	---	23
24	---	---	---	0.75	0.07	0.05	0.03	0	0	---	---	---	24
25	---	---	---	0.72	0.07	0.03	0.03	0	0	---	---	---	25
26	---	---	---	0.62	0.07	0.05	0.03	0	0	---	---	---	26
27	---	---	---	0.51	0.07	0.07	0.02	0	0	---	---	---	27
28	---	---	---	0.50	0.07	0.07	0.01	0	0	---	---	---	28
29	---	---	---	0.56	0.07	0.07	0	0	0	---	---	---	29
30	---		---	0.58	0.07	0.07	0	0	0	---	---	---	30
31	---		---		0.06		0	0		---		---	31
TOTAL	---	---	---	25.66	6.31	1.47	1.33	0	0	---	---	---	TOTAL
MEAN	---	---	---	0.86	0.20	0.05	0.04	0	0	---	---	---	MEAN
AC-FT	---	---	---	50.9	12.5	2.9	2.6	0	0	---	---	---	AC-FT
MAX	---	---	---	2.1	0.81	0.07	0.07	0	0	---	---	---	MAX
MIN	---	---	---	0.50	0.06	0.02	0	0	0	---	---	---	MIN

SUMMARY FOR THE YEAR 1972

MAXIMUM DAILY DISCHARGE, 2.1 CFS ON APR 1
MINIMUM DAILY DISCHARGE, 0 CFS ON JUL 29

TYPE OF GAUGE - MANUAL
LOCATION - LAT 49 28 46 N
LONG 124 16 00 W

E-ESTIMATED

NATURAL FLOW

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08NB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	---	---	---	---	---	---	---	---	---	0	0.15	3.0 E	1
2	---	---	---	---	---	---	---	---	---	0	0.17	2.8 E	2
3	---	---	---	---	---	---	---	---	---	0	0.17	2.5 E	3
4	---	---	---	---	---	---	---	---	---	0	0.15	2.5 E	4
5	---	---	---	---	---	---	---	---	---	0	0.15	2.7 E	5
6	---	---	---	---	---	---	---	---	---	0	0.13	2.9 E	6
7	---	---	---	---	---	---	---	---	---	0	0.15	2.7 E	7
8	---	---	---	---	---	---	---	---	---	0	0.15	2.7 E	8
9	---	---	---	---	---	---	---	---	---	0	0.29	2.1 E	9
10	---	---	---	---	---	---	---	---	---	0	0.38	1.9 E	10
11	---	---	---	---	---	---	---	---	---	0	0.1 E	5.0 E	11
12	---	---	---	---	---	---	---	---	---	0	4.5 E	5.0 E	12
13	---	---	---	---	---	---	---	---	---	0	4.8 E	5.2 E	13
14	---	---	---	---	---	---	---	---	---	0	3.4 E	4.2 E	14
15	---	---	---	---	---	---	---	---	---	0	5.9 E	8.1 E	15
16	---	---	---	---	---	---	---	---	---	0	5.5 E	7.7 E	16
17	---	---	---	---	---	---	---	---	0	0	5.0 E	6.1 E	17
18	---	---	---	---	---	---	---	---	0	0	3.2 E	4.2 E	18
19	---	---	---	---	---	---	---	---	0	0	2.9 E	4.0 E	19
20	---	---	---	---	---	---	---	---	0	0	3.1 E	3.4 E	20
21	---	---	---	---	---	---	---	---	0	0	3.6 E	3.8 E	21
22	---	---	---	---	---	---	---	---	0	0	3.5 E	3.5 E	22
23	---	---	---	---	---	---	---	---	0	0	3.5 E	3.4 E	23
24	---	---	---	---	---	---	---	---	0	0.08	3.6 E	3.7 E	24
25	---	---	---	---	---	---	---	---	0	0.02	3.4	3.7 E	25
26	---	---	---	---	---	---	---	---	0	0	3.0	2.5 E	26
27	---	---	---	---	---	---	---	---	0	0	2.9	2.4	27
28	---	---	---	---	---	---	---	---	0	0	2.8 E	2.1	28
29	---		---	---	---	---	---	---	0	0.12	3.4 E	1.5	29
30	---		---	---	---	---	---	---	0	0.10	3.2 E	1.5	30
31	---		---		---		---	---		0.17		1.1	31
TOTAL	---	---	---	---	---	---	---	---	---	0.45	70.79	108.4	TOTAL
MEAN	---	---	---	---	---	---	---	---	---	0.01	2.4	3.5	MEAN
AC-FT	---	---	---	---	---	---	---	---	---	0.89	140	215	AC-FT
MAX	---	---	---	---	---	---	---	---	---	0.17	5.9	8.1	MAX
MIN	---	---	---	---	---	---	---	---	---	0	0.13	1.1	MIN

TYPE OF GAUGE - MANUAL
LOCATION - LAT 49 28 46 N
LONG 124 16 00 W

E-ESTIMATED

NATURAL FLOW

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	1.2	1.8	1.2	0.82	0.66	0.23	0	0	0	0	0	1.7	1
2	0.96	1.8	1.2	0.89	0.59	0.20	0	0	0	0	0	1.3	2
3	0.76	1.9	1.1	0.96	0.56	0.17	0.02	0	0	0	0	1.3	3
4	0.70	2.1	1.0	0.79	0.69	0.17	0.01	0	0	0	0	1.8	4
5	0.64	2.1	0.99	0.85	0.69	0.17	0	0	0	0	0	2.0	5
6	0.59	2.1	0.89	0.82	0.65	0.16	0	0	0	0	0	2.1	6
7	0.56	1.9	0.82	0.76	0.56	0.18	0	0	0	0	0	2.2	7
8	0.69	1.8	0.76	0.73	0.56	0.17	0	0	0	0	0	1.9	8
9	0.65	1.6	1.7	0.70	0.54	0.15	0	0	0	0	0	1.7	9
10	0.60	1.4	3.9 E	0.82	0.69	0.15	0.03	0	0	0	0	1.9	10
11	0.36	1.3	4.5 E	0.73	0.54	0.13	0.03	0	0	0	0.03	2.7 E	11
12	0.38	1.3	4.3 E	0.66	0.54	0.11	0.02	0	0	0	0.07	2.8 E	12
13	0.59	1.2	3.9 E	0.59	0.49	0.09	0.02	0	0	0	0.12	2.7 E	13
14	3.4 E	1.2	3.9 E	0.51	0.49	0.07	0.01	0	0	0	0.18	2.6 E	14
15	4.4 E	1.2	4.4 E	0.47	0.49	0.07	0	0	0	0	0.42	2.0	15
16	5.2 E	1.1	5.0 E	0.45	0.47	0.07	0.02	0	0	0	0.54	2.2	16
17	5.0 E	1.2	4.8 E	0.45	0.42	0.07	0.01	0	0	0	0.54	3.4 E	17
18	5.2 E	1.4	3.6 E	0.36	0.38	0.06	0.02	0	0	0	0.59	3.8 E	18
19	5.1 E	1.5	2.7 E	0.32	0.34	0.06	0.02	0	0	0	0.82	3.6 E	19
20	4.3 E	1.4	2.2	0.32	0.32	0.06	0.02	0	0	0	4.3 E	3.4 E	20
21	3.4 E	1.6	1.7	0.32	0.32	0.02	0.02	0	0	0	6.6 E	3.6 E	21
22	3.7 E	1.6	1.4	0.34	0.32	0.02	0.01	0	0	0	6.1 E	3.6 E	22
23	3.7 E	1.5	1.2	0.32	0.34	0.02	0	0	0	0	6.3 E	3.4 E	23
24	3.8 E	1.3	0.89	0.32	0.34	0.01	0	0	0	0	6.6 E	3.7 E	24
25	4.1 E	1.3	0.96	0.54	0.36	0.01	0	0	0	0	6.3 E	3.7 E	25
26	3.8 E	1.2	1.1	0.64	0.32	0.01	0	0	0	0	5.9 E	3.6 E	26
27	3.4 E	1.1	1.1	0.70	0.31	0.01	0	0	0	0	5.7 E	3.0	27
28	3.7 E	1.2	1.2	0.70	0.31	0.02	0	0	0	0	3.4 E	1.2	28
29	3.1		1.1	0.70	0.29	0.02	0	0	0	0	2.1	1.3	29
30	2.0		0.89	0.67	0.26	0.02	0	0	0	0	1.8	1.3	30
31	1.9		0.82		0.24		0	0		0		1.2	31
TOTAL	72.19	43.3	65.22	18.23	13.20	2.68	0.28	0	0	0	58.41	73.2	TOTAL
MEAN	2.3	1.5	2.1	0.61	0.43	0.09	0.01	0	0	0	1.9	2.4	MEAN
AC-FT	143	83.9	129	36.2	26.2	5.3	0.56	0	0	0	116	145	AC-FT
MAX	5.2	2.1	5.0	0.96	0.64	0.23	0.03	0	0	0	6.6	3.9	MAX
MIN	0.36	1.1	0.76	0.32	0.24	0.01	0	0	0	0	0	1.2	MIN

SUMMARY FOR THE YEAR 1974

MEAN DISCHARGE, 0.95 CFS
TOTAL DISCHARGE, 685 AC-FT
MAXIMUM DAILY DISCHARGE, 6.6 CFS ON NOV 21
MINIMUM DAILY DISCHARGE, 0 CFS ON JUL 1

TYPE OF GAUGE - MANUAL
LOCATION - LAT 45 28 46 N
LONG 124 16 00 W

E-ESTIMATED

NATURAL FLOW

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	1.0	0.97	2.6	0.41	0.06	0.01	0.01	0	0	0	7.8 E	2.1	1
2	1.0	0.86	3.1 E	0.36	0.09	0.01	0.01	0	0	0	6.3 E	2.4	2
3	1.1	0.79	3.1 E	0.41	0.09	0.01	0.01	0	0	0.01	6.8 E	2.6	3
4	1.2	0.76	3.0 E	0.43	0.06	0.01	0.01	0	0	0.01	8.1 E	5.7 E	4
5	1.2	0.71	2.5	0.36	0.05	0.01	0.01	0	0	0	7.0 E	4.9 E	5
6	1.2	0.71	2.3	0.33	0.05	0	0.01	0	0	0	8.6 E	4.3 E	6
7	1.4	0.65	2.0	0.28	0.05	0	0	0	0	0	9.6 E	3.1 E	7
8	2.5	0.71	1.5	0.26	0.05	0	0	0	0	0	7.3 E	3.2 E	8
9	3.1 E	0.71	1.2	0.26	0.05	0	0	0	0	0	5.1 E	3.1 E	9
10	2.5	0.79	1.0	0.26	0.05	0	0	0	0	0.01	3.9 E	2.9 E	10
11	2.6	0.93	1.0	0.25	0.06	0	0	0	0	0.03	2.5	2.6	11
12	2.6	1.1	0.97	0.25	0.06	0	0	0	0	0.06	3.9 E	2.4	12
13	2.8 E	1.4	0.76	0.23	0.06	0	0	0	0	0.08	6.2 E	2.4	13
14	2.7	1.6	0.71	0.20	0.05	0	0	0	0	0.07	8.1 E	2.3	14
15	2.8 E	2.0	0.76	0.15	0.05	0	0	0	0	0.10	8.8 E	2.0	15
16	2.7	2.1	0.65	0.13	0.05	0	0	0	0	0.19	8.3 E	1.7	16
17	2.9 E	2.2	0.76	0.13	0.05	0	0	0	0	2.3	6.2 E	1.5	17
18	3.4 E	2.5	0.79	0.13	0.04	0	0	0	0	3.2 E	4.6 E	1.4	18
19	3.3 E	3.3 E	0.82	0.14	0.03	0	0	0	0	2.9 E	3.1 E	1.2	19
20	3.7	3.6 E	0.82	0.11	0.02	0	0	0	0	2.4	3.1 E	1.1	20
21	3.5	3.8 E	0.86	0.11	0.04	0	0	0	0	2.2	2.4	1.0	21
22	2.4	3.3 E	0.97	0.09	0.05	0	0	0	0	2.0	1.8	1.1	22
23	2.3	3.4 E	1.0	0.08	0.03	0	0	0	0	1.7	2.0	1.2	23
24	2.2	3.1 E	0.82	0.13	0.02	0	0	0	0	1.3	2.2	1.5	24
25	2.0	2.6	0.71	0.13	0.01	0	0	0	0	1.2	2.5	12.2 E	25
26	1.8	2.3	0.65	0.12	0.01	0	0	0.01	0	1.5	2.4	5.5 E	26
27	1.7	2.2	0.65	0.11	0.01	0.01	0	0.01	0	1.7	2.4	3.9 E	27
28	1.5	2.5	0.60	0.09	0.01	0.01	0	0.01	0	1.9	2.1	3.5 E	28
29	1.3		0.54	0.09	0.01	0.01	0	0.01	0	4.5 E	1.9	4.8 E	29
30	1.2		0.45	0.07	0.01	0.01	0	0.01	0	11.3 E	2.0	4.7 E	30
31	1.1		0.45		0.01		0	0		8.7 E		4.2 E	31
TOTAL	64.7	51.59	38.06	6.10	1.28	0.09	0.06	0.05	0	69.36	143.1	100.2	TOTAL
MEAN	2.1	1.8	1.2	0.20	0.04	0	0	0	0	1.6	4.8	3.2	MEAN
AC-FT	128	102	75.5	12.1	2.5	0.18	0.12	0.10	0	97.9	284	199	AC-FT
MAX	3.4	3.8	3.1	0.43	0.09	0.09	0.01	0.01	0	11.3	9.6	12.2	MAX
MIN	1.0	0.65	0.45	0.07	0.01	0	0	0	0	0	1.9	1.0	MIN

SUMMARY FOR THE YEAR 1975

MEAN DISCHARGE, 1.2 CFS
TOTAL DISCHARGE, 901 AC-FT
MAXIMUM DAILY DISCHARGE, 12.2 CFS ON DEC 25
MINIMUM DAILY DISCHARGE, 0 CFS ON JUN 6

TYPE OF GAUGE - MANUAL
LOCATION - LAT 45 28 46 N
LONG 124 16 00 W

E-ESTIMATED

NATURAL FLOW

200

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	3.2 E	3.1 E	2.1	0.74	0.25	0.12	0.04	0	0.01	0.01	0.25	0.43	1
2	3.1 E	2.4	2.3	0.68	0.28	0.11	0.04	0	0.01	0.01	0.25	0.43	2
3	2.6	2.0	1.7	0.68	0.28	0.11	0.05	0	0	0.01	0.25	0.43	3
4	2.4	1.8	1.4	0.62	0.11	0.08	0.05	0	0	0.01	0.25	0.43	4
5	2.1	1.4	1.2	0.57	0.28	0.05	0.05	0	0.01	0.01	0.22	0.43	5
6	2.1	1.2	1.2	0.68	0.25	0.05	0.05	0	0.06	0.02	0.22	0.47	6
7	2.0	1.0	1.1	0.62	0.25	0.05	0.06	0	0.02	0.01	0.22	0.52	7
8	1.9	1.0	1.1	0.74	0.25	0.05	0.06	0	0.01	0.01	0.25	0.68	8
9	1.9	0.86	1.4	0.68	0.22	0.07	0.08	0	0.01	0.02	0.25	0.93	9
10	2.1	0.78	2.4	0.88	0.28	0.07	0.05	0	0.01	0.03	0.25	0.93	10
11	2.4	0.79	2.5	0.79	0.25	0.07	0.05	0	0	0.02	0.25	0.79	11
12	2.4	1.1	2.6 E	0.82	0.25	0.06	0.04	0	0	0.02	0.25	0.74	12
13	2.1	1.2	2.5	0.91	0.19	0.06	0.04	0	0.01	0.02	0.25	0.68	13
14	2.4	1.2	2.4	1.0	0.16	0.06	0.03	0	0.02	0.02	0.26	0.62	14
15	2.5	1.1	1.9	1.0	0.16	0.10	0.02	0	0.01	0.01	0.28	0.79	15
16	2.6	1.0	1.7	0.93	0.12	0.11	0.02	0.01	0.01	0.01	0.32	0.86	16
17	2.4	1.0	1.5	0.79	0.12	0.10	0.01	0	0.01	0.01	0.43	0.79	17
18	2.5	0.93	1.4	0.82	0.12	0.08	0.01	0	0.01	0.01	0.57	0.74	18
19	2.3	0.90	1.2	0.68	0.11	0.07	0.01	0.01	0.01	0.01	0.74	0.74	19
20	2.0	0.78	1.1	0.74	0.10	0.08	0.01	0	0.01	0.01	0.68	0.79	20
21	1.8	0.68	1.0	0.68	0.10	0.05	0.01	0	0.01	0.01	0.66	0.79	21
22	1.8	0.68	0.93	0.65	0.08	0.04	0.01	0	0.01	0.01	0.62	0.74	22
23	1.9	0.65	1.0	0.65	0.08	0.04	0.01	0	0.02	0.02	0.62	0.68	23
24	1.8	0.65	1.1	0.62	0.12	0.04	0	0	0.03	0.05	0.68	0.62	24
25	1.5	0.71	1.1	0.67	0.10	0.04	0	0	0.01	0.05	0.68	0.68	25
26	2.4	0.79	1.0	0.83	0.12	0.04	0	0	0.01	0.06	0.68	3.2 E	26
27	2.5	1.0	1.0	0.91	0.12	0.04	0	0.05	0.01	0.07	0.68	4.9 E	27
28	2.1 E	1.4	0.93	0.91	0.11	0.04	0	0.01	0.01	0.12	0.65	4.9 E	28
29	2.1 E	1.9	0.93	0.36	0.12	0.04	0	0.01	0.01	0.10	0.53	3.9 E	29
30	4.4 E		0.93	0.31	0.14	0.04	0	0.01	0.01	0.10	0.47	3.2 E	30
31	3.9 E		0.79		0.12		0	0.01		0.19		3.1 E	31
TOTAL	74.8	33.92	45.41	20.08	5.99	1.94	0.78	0.11	0.33	1.06	12.72	39.93	TOTAL
MEAN	2.4	1.2	1.5	0.67	0.18	0.06	0.03	0	0.01	0.03	0.42	1.3	MEAN
AC-FT	148	67.3	90.1	39.8	10.8	3.8	1.5	0.22	0.65	2.1	25.2	79.2	AC-FT
MAX	4.4	3.1	2.6	1.0	0.31	0.12	0.06	0.05	0.04	0.19	0.74	4.9	MAX
MIN	1.5	0.65	0.79	0.31	0.08	0.04	0	0	0	0.01	0.22	0.43	MIN

SUMMARY FOR THE YEAR 1976

MEAN DISCHARGE, 0.65 CFS
TOTAL DISCHARGE, 469 AC-FT
MAXIMUM DAILY DISCHARGE, 4.9 CFS ON DEC 27
MINIMUM DAILY DISCHARGE, 0 CFS ON JUL 24

TYPE OF GAUGE - MANUAL
LOCATION - LAT 41 28 46 N
LONG 124 16 00 W
DRAINAGE AREA .72 SQ MILES

E-ESTIMATED

NATURAL FLOW

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1977

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	2.3	0.57	0.71	0.33	0.13	0.01	0	0	0	0	0.85	3.8	1
2	1.5	0.71	0.77	0.30	0.13	0.01	0	0	0	0	0.08	5.5	2
3	1.0	0.65	1.5	0.26	0.13	0.01	0	0	0	0	0.05	4.7	3
4	0.93	0.59	1.5	0.28	0.13	0.01	0	0	0	0	0.07	4.3	4
5	0.80	0.54	1.5	0.26	0.13	0.01	0	0	0	0	0.10	3.7	5
6	0.74	0.50	1.5	0.26	0.11	0.01	0	0	0	0	0.12	2.6	6
7	0.74	0.45	1.9	0.23	0.11	0.01	0	0	0	0	0.12	2.8	7
8	0.68	0.45	2.1	0.26	0.11	0	0	0	0	0	0.12	3.4	8
9	0.59	0.45	3.0	0.26	0.08	0	0	0	0	0	0.15	3.8	9
10	0.52	0.50	2.5	0.30	0.07	0	0	0	0	0	0.22	4.5	10
11	0.68	0.71	3.5	0.30	0.05	0	0	0	0	0	0.25	4.9	11
12	0.74	1.1	2.1	0.26	0.05	0	0	0	0	0	0.31	6.7	12
13	0.74	0.97	1.5	0.25	0.05	0	0	0	0	0	0.38	5.1	13
14	1.4	1.5	1.5	0.23	0.05	0	0	0	0	0	0.57	7.6	14
15	1.8	1.4	1.6	0.26	0.05	0	0	0	0	0	0.93	7.2	15
16	2.0	1.1	1.1	0.26	0.05	0	0	0	0	0	1.0	6.6	16
17	2.6	1.1	0.83	0.26	0.05	0	0	0	0	0	1.0	5.5	17
18	5.4	0.97	0.71	0.26	0.05	0	0	0	0	0	1.0	4.3	18
19	5.1	0.97	0.71	0.23	0.05	0	0	0	0	0	0.86	3.8	19
20	4.3	0.83	0.71	0.20	0.05	0	0	0	0	0	0.74	2.4	20
21	3.3	0.77	0.65	0.20	0.05	0	0	0	0	0	0.68	1.6	21
22	2.6	0.71	0.71	0.20	0.05	0	0	0	0	0	0.68	1.4	22
23	1.8	0.71	0.65	0.18	0.05	0	0	0	0	0.01	0.68	1.2	23
24	1.5	0.71	0.59	0.16	0.03	0	0	0	0	0.02	0.80	1.0	24
25	1.3	0.68	0.59	0.16	0.02	0	0	0	0	0.02	3.3	0.86	25
26	1.2	0.65	0.50	0.13	0.02	0	0	0	0	0.03	7.9	0.74	26
27	0.86	0.65	0.50	0.13	0.02	0	0	0	0	0	6.4	0.68	27
28	0.74	0.71	0.50	0.13	0.02	0	0	0	0	0.01	6.5	0.62	28
29	0.74		0.43	0.13	0.02	0	0	0	0	0.02	6.0	0.74	29
30	0.74		0.43	0.13	0.02	0	0	0	0	0.01	3.4	0.80	30
31	0.62		0.41		0.01		0	0		0		0.68	31
TOTAL	49.76	21.65	35.90	6.78	1.94	0.07	0	0	0	0.11	40.42	101.32	TOTAL
MEAN	1.6	0.77	1.2	0.23	0.06	0	0	0	0	0	1.3	3.3	MEAN
AC-FT	98.7	42.9	71.2	13.4	3.8	0.14	0	0	0	0.22	80.2	201	AC-FT
MAX	5.4	1.5	3.0	0.33	0.13	0.01	0	0	0	0.02	7.9	7.6	MAX
MIN	0.48	0.45	0.41	0.13	0.01	0	0	0	0	0	0.04	0.62	MIN

SUMMARY FOR THE YEAR 1977

MEAN DISCHARGE, 0.71 CFS
TOTAL DISCHARGE, 512 AC-FT
MAXIMUM DAILY DISCHARGE, 7.9 CFS ON NOV 26
MINIMUM DAILY DISCHARGE, 0 CFS ON JUN 8

TYPE OF GAUGE - MANUAL
LOCATION - LAT 41 28 46 N
LONG 124 16 00 W
DRAINAGE AREA .72 SQ MILES

NATURAL FLOW

OGDEN CREEK AT OUTLET OF OGDEN LAKE - STATION NO. 08HB047

DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1978

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	0.68	1.4	0.71	0.65	0.58	---	---	---	---	---	---	---	1
2	0.68	1.5	0.65	0.65	0.50	---	---	---	---	---	---	---	2
3	0.74	1.2	0.65	0.65	0.45	---	---	---	---	---	---	---	3
4	2.4	1.6	0.59	0.65	0.45	---	---	---	---	---	---	---	4
5	3.8	3.9	0.54	0.59	0.41	---	---	---	---	---	---	---	5
6	4.9	3.3	0.65	0.54	0.36	---	---	---	---	---	---	---	6
7	5.7	3.2	0.71	0.54	0.36	---	---	---	---	---	---	---	7
8	6.8	2.8	0.71	0.50	0.30	---	---	---	---	---	---	---	8
9	8.9	2.3	0.65	0.41	0.26	---	---	---	---	---	---	---	9
10	9.5	2.2	0.65	0.41	0.30	---	---	---	---	---	---	---	10
11	8.9	2.0	0.59	0.41	---	---	---	---	---	---	---	---	11
12	8.4	1.6	0.59	0.41	---	---	---	---	---	---	---	---	12
13	5.3	1.5	0.65	0.41	---	---	---	---	---	---	---	---	13
14	4.2	1.4	0.65	0.65	---	---	---	---	---	---	---	---	14
15	4.0	1.4	0.65	0.54	---	---	---	---	---	---	---	---	15
16	4.0	1.4	0.59	0.65	---	---	---	---	---	---	---	---	16
17	3.8	1.3	0.65	0.65	---	---	---	---	---	---	---	---	17
18	2.3	1.4	0.65	0.80	---	---	---	---	---	---	---	---	18
19	2.1	1.5	0.65	0.97	---	---	---	---	---	---	---	---	19
20	1.9	1.5	0.59	1.1	---	---	---	---	---	---	---	---	20
21	1.8	1.6	0.52	0.97	---	---	---	---	---	---	---	---	21
22	1.5	1.6	0.52	1.1	---	---	---	---	---	---	---	---	22
23	1.6	1.5	0.54	1.1	---	---	---	---	---	---	---	---	23
24	1.8	1.4	0.54	0.97	---	---	---	---	---	---	---	---	24
25	1.8	1.3	0.59	0.89	---	---	---	---	---	---	---	---	25
26	1.5	1.1	0.59	0.89	---	---	---	---	---	---	---	---	26
27	1.4	0.97	0.57	0.71	---	---	---	---	---	---	---	---	27
28	1.3	0.89	0.62	0.65	---	---	---	---	---	---	---	---	28
29	1.2		0.62	0.59	---	---	---	---	---	---	---	---	29
30	1.1		0.65	0.59	---	---	---	---	---	---	---	---	30
31	1.3		0.65		---		---	---		---		---	31
TOTAL	105.30	52.76	19.13	20.49	---	---	---	---	---	---	---	---	TOTAL
MEAN	3.4	1.9	0.62	0.68	---	---	---	---	---	---	---	---	MEAN
AC-FT	209	105	37.9	40.5	---	---	---	---	---	---	---	---	AC-FT
MAX	9.5	3.9	0.71	1.1	---	---	---	---	---	---	---	---	MAX
MIN	0.68	0.89	0.52	0.41	---	---	---	---	---	---	---	---	MIN

SUMMARY FOR THE YEAR 1978

MAXIMUM DAILY DISCHARGE, 9.5 CFS ON JAN 10

TYPE OF GAUGE - MANUAL
LOCATION - LAT 49 28 45 N
LONG 124 16 00 W
DRAINAGE AREA .72 SQ MILES

NATURAL FLOW

OGDEN LAKE ON LASQUETI ISLAND - STATION NO. 08HB058

DAILY WATER LEVEL IN FEET FOR 1977

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	---	---	---	3.54	3.29	3.10	2.84	2.70	2.40	2.62	---	---	1
2	---	---	---	3.48	3.29	3.10	2.82	2.68	2.42	2.40	---	---	2
3	---	---	---	3.44	3.26	3.10	2.82	2.68	2.46	2.40	---	---	3
4	---	---	---	3.42	3.29	3.10	2.82	2.66	2.46	2.40	---	---	4
5	---	---	---	3.42	3.29	3.10	2.82	2.64	2.46	2.40	---	---	5
6	---	---	---	3.42	3.26	3.10	2.82	2.64	2.46	2.40	---	---	6
7	---	---	---	3.40	3.24	3.08	2.82	2.62	2.44	2.40	---	---	7
8	---	---	---	3.40	3.22	3.08	2.80	2.62	2.42	2.40	---	---	8
9	---	---	---	3.40	3.20	3.04	2.80	2.60	2.42	2.40	---	---	9
10	---	---	---	3.40	3.20	3.02	2.78	2.56	2.42	2.40	---	---	10
11	---	---	---	3.40	3.20	3.00	2.78	2.54	2.42	2.40	---	---	11
12	---	---	---	3.40	3.20	3.00	2.68	2.52	2.40	2.40	---	---	12
13	---	---	---	3.40	3.19	3.00	2.90	2.52	2.40	2.40	---	---	13
14	---	---	---	3.40	3.18	2.98	2.88	2.50	2.40	2.40	3.57	---	14
15	---	---	---	3.40	3.19	2.98	2.88	2.50	2.40	2.40	---	---	15
16	---	---	---	3.40	3.19	2.98	2.88	2.48	2.38	2.40	---	---	16
17	---	---	---	3.38	3.18	2.96	2.86	2.48	2.38	2.40	---	---	17
18	---	---	---	3.40	3.18	2.96	2.84	2.46	2.38	2.40	---	---	18
19	---	---	---	3.40	3.18	2.94	2.84	2.46	2.40	2.40	---	---	19
20	---	---	---	3.38	3.18	2.92	2.82	2.44	2.40	2.40	---	---	20
21	---	---	---	3.38	3.18	2.92	2.82	2.42	2.42	2.40	---	---	21
22	---	---	---	3.38	3.16	2.90	2.80	2.42	2.42	2.42	---	---	22
23	---	---	---	3.38	3.14	2.90	2.78	2.40	2.44	2.44	---	---	23
24	---	---	---	3.36	3.12	2.90	2.78	2.40	2.44	2.46	---	---	24
25	---	---	---	3.34	3.12	2.90	2.78	2.42	2.44	2.50	---	---	25
26	---	---	---	3.34	3.10	2.88	2.76	2.42	2.44	2.54	---	---	26
27	---	---	---	3.32	3.10	2.88	2.76	2.42	2.46	2.52	---	---	27
28	---	---	3.54	3.30	3.10	2.86	2.76	2.44	2.42	2.58	---	---	28
29	---		---	3.30	3.10	2.86	2.74	2.44	2.42	2.60	---	---	29
30	---		---	3.30	3.10	2.84	2.74	2.42	2.42	2.64		---	30
31	---		---		3.10		2.72	2.40		2.66			31
MEAN	---	---	---	3.38	3.19	2.98	2.81	2.51	2.42	2.46	---		MEAN
MAX	---	---	---	3.54	3.29	3.10	2.90	2.70	2.46	2.66	---		MAX
MIN	---	---	---	3.30	3.10	2.84	2.72	2.40	2.38	2.40	---		MIN

SUMMARY FOR THE YEAR 1977

MINIMUM DAILY WATER LEVEL, 2.38 FT ON SEP 16

TYPE OF GAUGE - MANUAL
LOCATION - LAT 49 28 47 N
LONG 124 16 12 W

MAY

WATER LEVELS ARE REFERRED TO ASSUMED DATUM

OGDEN LAKE ON LASQUETI ISLAND - STATION NO. 08HB058

DAILY WATER LEVEL IN FEET FOR 1978

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	---	---	---	3.62	3.68	3.20	3.08	2.68	2.81	---	---	---	1
2	---	---	---	3.62	3.58	3.28	3.04	2.66	2.86	---	---	---	2
3	---	---	---	3.62	3.56	3.27	3.00	2.64	2.70	---	---	---	3
4	---	---	---	3.62	3.55	3.27	2.97	2.62	2.72	---	---	---	4
5	---	---	---	3.63	3.53	3.26	2.96	2.62	2.72	---	---	---	5
6	---	---	---	3.61	3.52	3.23	2.96	2.62	2.77	---	---	---	6
7	---	---	---	3.60	3.51	3.21	2.95	2.61	2.79	---	---	---	7
8	---	---	---	3.60	3.50	3.20	2.95	2.61	2.80	---	---	---	8
9	---	---	---	3.59	3.48	3.19	2.94	2.62	2.80	---	---	---	9
10	---	---	---	3.59	3.46	3.20	2.95	2.62	2.83	---	---	---	10
11	---	---	---	3.58	3.43	3.20	2.95	2.63	2.85	---	---	---	11
12	---	---	---	3.54	3.43	3.21	2.95	2.62	2.86	---	---	---	12
13	---	---	---	3.50	3.44	3.21	2.95	2.63	2.89	---	---	---	13
14	---	---	---	3.51	3.46	3.22	2.98	2.66	2.90	---	---	---	14
15	---	---	---	3.55	3.46	3.22	2.93	2.64	2.91	---	---	---	15
16	---	---	---	3.60	3.45	3.21	2.92	2.64	2.92	---	---	---	16
17	---	---	---	3.61	3.44	3.21	2.92	2.62	2.93	---	---	---	17
18	---	---	---	3.72	3.43	3.20	2.90	2.63	2.92	---	---	---	18
19	---	---	---	3.75	3.41	3.19	2.89	2.63	2.91	---	---	---	19
20	---	---	---	3.77	3.40	3.18	2.87	2.62	2.92	---	---	---	20
21	---	---	3.57	3.77	3.39	3.16	2.85	2.62	2.93	---	---	---	21
22	---	---	---	3.78	3.37	3.15	2.84	2.60	2.95	---	---	---	22
23	---	---	---	3.78	3.33	3.14	2.82	2.61	2.97	---	---	---	23
24	---	---	---	3.76	3.31	3.12	2.80	2.60	3.00	---	---	---	24
25	---	---	---	3.73	3.29	3.12	2.79	2.60	3.01	---	---	---	25
26	---	---	---	3.72	3.29	3.12	2.77	2.60	3.01	---	---	---	26
27	---	---	---	3.70	3.31	3.09	2.76	2.60	3.02	---	---	---	27
28	---	---	---	3.69	3.33	3.07	2.72	2.60	3.04	---	---	---	28
29	---		---	3.62	3.33	3.06	2.70	2.60	3.05	---	---	---	29
30	---		---	3.61	3.31	3.05	2.70	2.60	3.06	---		---	30
31	---		---		3.29		2.69	2.60		---			31
MEAN	---	---	---	3.65	3.42	3.18	2.88	2.62	2.88	---	---	---	MEAN
MAX	---	---	---	3.78	3.60	3.29	3.04	2.68	3.06	---	---	---	MAX
MIN	---	---	---	3.58	3.29	3.05	2.69	2.60	2.81	---	---	---	MIN

SUMMARY FOR THE YEAR 1978

MINIMUM DAILY WATER LEVEL, 2.60 FT ON AUG 22

TYPE OF GAUGE - MANUAL
LOCATION - LAT 49 28 47 N
LONG 124 16 12 W

NATURAL FLOW

WATER LEVELS ARE REFERRED TO ASSUMED DATUM

APPENDIX E

PRECIPITATION RECORDS

PARKSVILLE
49° 18'N 124° 18'W 82 m

Daily Maximum Temperature	4.7	7.7	9.7	13.2	17.4	20.3	23.5	23.0	19.5	13.6	8.2	5.8	13.9	8	Température Maximale Quotidienne
Daily Minimum Temperature	−1.6	−0.6	−0.1	2.1	5.0	8.1	9.8	9.6	7.4	4.2	1.0	−0.3	3.7	8	Température Minimale Quotidienne
Daily Temperature	**1.6**	**3.6**	**4.8**	**7.7**	**11.2**	**14.3**	**16.7**	**16.4**	**13.5**	**8.9**	**4.6**	**2.8**	**8.8**	**8**	**Température Quotidienne**
Standard Deviation, Daily Temperature	1.9	1.7	1.0	1.1	1.9	2.0	2.1	1.3	0.9	0.8	1.8	1.3	1.0	6	Écart Type de la Température Quotidienne
Extreme Maximum Temperature	12.2	13.9	16.7	25.0	28.9	31.7	33.9	30.6	29.4	23.3	15.0	12.8	33.9		Température Maximale Extrême
Years of Record	6	6	7	7	7	6	6	6	6	6	6	6			Années de Relèves
Extreme Minimum Temperature	−15.0	−12.2	−8.9	−3.9	−2.8	1.1	4.4	3.9	−0.6	−3.3	−13.9	−10.0	−15.0		Température Minimale Extrême
Years of Record	6	6	7	7	7	6	6	6	6	6	6	6			Années de Relèves
Rainfall	119.0	83.9	73.9	51.3	40.2	38.3	23.1	43.6	45.2	97.5	128.1	144.6	888.7	8	Chutes de Pluie
Snowfall	25.4	10.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	18.8	66.1	8	Chutes de Neige
Total Precipitation	**146.8**	**97.0**	**82.8**	**51.3**	**40.2**	**38.3**	**23.1**	**43.6**	**45.2**	**97.5**	**132.2**	**166.8**	**963.9**	**8**	**Précipitations Totales**
Standard Deviation, Total Precipitation	69.4	41.9	27.0	25.3	10.1	20.0	20.6	36.0	21.2	54.4	63.7	46.8	122.1	6	Écart Type des Précipitations Totales
Greatest Rainfall in 24 hours	66.5	54.9	51.6	47.2	46.3	36.1	42.2	37.6	44.2	54.9	69.3	68.6	69.3		Chute de Pluie Record en 24 heures
Years of Record	43	43	41	43	44	43	44	42	42	43	44	45			Années de Relèves
Greatest Snowfall in 24 hours	35.6	61.0	43.2	10.2	0.8	0.0	0.0	0.0	0.0	5.1	22.9	27.9	61.0		Chute de Neige Record en 24 heures
Years of Record	44	45	45	45	45	44	44	44	45	45	45	45			Années de Relèves
Greatest Precipitation in 24 hours	66.5	61.0	51.6	47.2	46.3	36.1	42.2	37.6	44.2	54.9	69.3	68.6	69.3		Précipitation Record en 24 heures
Years of Record	42	43	41	43	44	43	44	42	42	43	44	45			Années de Relèves
Days with Rain	17	16	17	14	15	11	7	10	11	16	19	20	173	8	Jours de Pluie
Days with Snow	4	2	1	0	0	0	0	0	0	0	1	3	11	8	Jours de Neige
Days with Precipitation	20	17	17	14	15	11	7	10	11	16	20	22	180	8	Jours de Précipitation

DENMAN ISLAND
49° 32'N 124° 49'W 35 m

Daily Maximum Temperature	4.4	7.5	9.2	12.9	17.2	20.2	23.4	22.9	19.3	13.7	8.4	6.1	13.8	8	Température Maximale Quotidienne
Daily Minimum Temperature	−0.8	0.1	0.8	2.8	5.6	8.7	11.0	10.7	7.5	4.7	1.8	0.3	4.4	8	Température Minimale Quotidienne
Daily Temperature	**2.1**	**3.8**	**5.0**	**8.0**	**11.8**	**14.8**	**17.3**	**17.1**	**13.7**	**8.2**	**5.1**	**3.3**	**9.3**	**8**	**Température Quotidienne**
Standard Deviation, Daily Temperature	1.1	1.2	0.8	0.5	0.8	0.8	1.3	1.4	1.2	0.7	1.2	1.4	0.4	6	Écart Type de la Température Quotidienne
Extreme Maximum Temperature	12.8	15.6	19.4	20.6	28.3	30.0	35.6	33.3	28.3	20.6	15.6	15.0	35.6		Température Maximale Extrême
Years of Record	5	6	6	6	6	6	6	6	6	6	6	6			Années de Relèves
Extreme Minimum Temperature	−12.2	−7.8	−8.4	−3.3	−2.8	1.7	3.9	3.9	0.0	−2.8	−5.6	−12.8	−12.8		Température Minimale Extrême
Years of Record	5	6	6	6	6	6	6	6	6	6	6	6			Années de Relèves
Rainfall	168.7	141.3	118.0	72.3	36.7	38.8	26.0	39.6	46.8	145.6	205.1	230.3	1269.2	8	Chutes de Pluie
Snowfall	38.8	13.2	10.8	0.4	0.0	0.0	0.0	0.0	0.0	0.1	6.8	22.6	92.7	8	Chutes de Neige
Total Precipitation	**210.3**	**158.7**	**128.1**	**72.5**	**36.8**	**38.8**	**26.0**	**39.6**	**46.8**	**145.9**	**215.1**	**251.9**	**1371.5**	**8**	**Précipitations Totales**
Standard Deviation, Total Precipitation	125.6	91.7	50.6	32.0	15.7	18.4	24.7	34.7	21.7	83.1	61.6	82.0	179.1	5	Écart Type des Précipitations Totales
Greatest Rainfall in 24 hours	99.6	72.9	73.2	66.6	55.9	44.2	44.5	37.3	54.1	74.9	78.7	80.3	99.6		Chute de Pluie Record en 24 heures
Years of Record	50	52	52	52	53	51	51	53	53	52	53	50			Années de Relèves
Greatest Snowfall in 24 hours	78.2	45.7	45.7	7.6	0.0	0.0	0.0	0.0	0.0	5.1	40.6	40.6	78.2		Chute de Neige Record en 24 heures
Years of Record	48	52	52	54	54	52	53	54	54	55	54	52			Années de Relèves
Greatest Precipitation in 24 hours	99.6	72.9	73.2	66.6	55.9	44.2	44.5	37.3	54.1	74.9	78.7	80.3	99.6		Précipitation Record en 24 heures
Years of Record	48	52	52	52	53	51	51	53	53	52	52	49			Années de Relèves
Days with Rain	14	12	11	10	9	9	6	7	7	13	16	14	128	8	Jours de Pluie
Days with Snow	4	1	1	0	0	0	0	0	0	0	1	2	9	8	Jours de Neige
Days with Precipitation	16	13	12	10	9	9	6	7	7	13	16	16	134	8	Jours de Précipitation

BRITISH COLUMBIA/COLOMBIE–BRITANNIQUE

	JAN JAN	FEB FÉV	MAR MAR	APR AVR	MAY MAI	JUN JUIN	JUL JUIL	AUG AOÛT	SEP SEPT	OCT OCT	NOV NOV	DEC DÉC	YEAR ANNÉE	CODE CODE	
QUALICUM R FISH RESEARCH															
49° 24'N 124° 37'W 8 m															
Daily Maximum Temperature	4.9	7.2	8.9	12.5	16.4	19.1	22.0	21.4	18.1	13.0	8.2	6.2	13.2	8	Température Maximale Quotidienne
Daily Minimum Temperature	-0.4	0.9	1.1	3.4	6.8	9.9	11.4	11.3	8.8	5.5	2.6	1.1	5.2	8	Température Minimale Quotidienne
Daily Temperature	**2.3**	**4.1**	**5.0**	**8.0**	**11.8**	**14.5**	**16.7**	**16.4**	**13.4**	**9.3**	**5.4**	**3.7**	**9.2**	**8**	**Température Quotidienne**
Standard Deviation, Daily Temperature	1.6	1.2	0.8	0.8	0.7	1.2	0.9	1.0	1.1	0.7	1.0	1.7	0.4	4	Écart Type de la Température Quotidienne
Extreme Maximum Temperature	14.4	16.1	18.9	23.3	26.1	30.0	31.1	31.1	27.2	22.0	17.8	16.0	31.1		Température Maximale Extrême
Years of Record	18	18	18	17	17	18	18	19	19	19	19	19			Années de Relèves
Extreme Minimum Temperature	-15.5	-7.8	-6.5	-2.8	0.0	2.8	5.0	4.4	0.0	-2.8	-7.0	-14.4	-15.5		Température Minimale Extrême
Years of Record	18	18	18	17	17	18	18	19	19	19	19	19			Années de Relèves
Rainfall	189.4	140.5	113.2	61.4	44.5	39.3	26.3	41.8	58.6	137.9	203.4	219.0	1275.3	8	Chutes de Pluie
Snowfall	24.4	6.3	2.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.0	12.1	47.4	8	Chutes de Neige
Total Precipitation	**204.5**	**151.8**	**116.9**	**61.7**	**44.5**	**39.3**	**26.3**	**41.5**	**58.6**	**137.9**	**204.4**	**229.8**	**1317.2**	**8**	**Précipitations Totales**
Standard Deviation, Total Precipitation	110.2	55.0	49.1	34.8	16.5	18.4	22.9	28.8	40.3	91.3	97.9	76.3	219.9	4	Écart Type des Précipitations Totales
Greatest Rainfall in 24 hours	117.3	61.7	69.1	29.5	27.7	34.2	25.4	38.1	31.8	72.6	85.1	85.4	117.3		Chute de Pluie Record en 24 heures
Years of Record	18	18	18	17	16	18	18	18	19	19	19	19			Années de Relèves
Greatest Snowfall in 24 hours	49.0	45.7	12.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	11.7	45.7	49.0		Chute de Neige Record en 24 heures
Years of Record	18	18	18	17	18	18	18	19	19	19	19	19			Années de Relèves
Greatest Precipitation in 24 hours	117.3	61.7	69.1	29.5	27.7	34.2	25.4	38.1	31.8	72.6	85.1	85.4	117.3		Précipitation Record en 24 heures
Years of Record	18	18	18	17	16	18	18	18	19	19	19	19			Années de Relèves
Days with Rain	16	15	16	12	10	9	6	8	10	15	17	19	153	8	Jours de Pluie
Days with Snow	4	1	1	0	0	0	0	0	0	0	1	2	9	8	Jours de Neige
Days with Precipitation	19	16	16	12	10	9	6	8	10	15	18	20	159	8	Jours de Précipitation

BRITISH COLUMBIA/COLOMBIE–BRITANNIQUE

	JAN JAN	FEB FÉV	MAR MAR	APR AVR	MAY MAI	JUN JUIN	JUL JUIL	AUG AOÛT	SEP SEPT	OCT OCT	NOV NOV	DEC DÉC	YEAR ANNÉE	CODE CODE
TEXADA ISLAND														
49° 41'N 124° 29'W 24 m														
Daily Maximum Temperature														
Daily Minimum Temperature														
Daily Temperature														
Standard Deviation, Daily Temperature														
Extreme Maximum Temperature														
Years of Record														
Extreme Minimum Temperature														
Years of Record														
Rainfall	103.3	86.4	86.5	46.5	39.1	46.3	31.2	45.9	51.2	100.2	137.8	131.7	868.1	8
Snowfall	16.8	5.9	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	10.3	38.7	8
Total Precipitation	**133.2**	**89.1**	**79.7**	**46.5**	**39.1**	**46.3**	**31.2**	**45.9**	**51.2**	**100.2**	**140.0**	**141.8**	**928.0**	**8**
Standard Deviation, Total Precipitation	61.0	37.2	36.6	27.1	19.2	25.7	20.1	40.3	28.0	61.0	63.8	25.2	142.7	4
Greatest Rainfall in 24 hours	60.2	32.5	51.1	28.2	23.9	29.5	34.5	41.7	24.1	41.7	39.9	54.1	60.2	
Years of Record	14	15	16	16	16	17	17	17	17	17	17	17		
Greatest Snowfall in 24 hours	17.8	25.4	9.1	T	0.0	0.0	0.0	0.0	0.0	0.0	12.7	29.2	29.2	
Years of Record	15	15	16	16	16	17	17	17	17	17	17	17		
Greatest Precipitation in 24 hours	61.5	32.5	51.1	28.2	23.9	29.5	34.5	41.7	24.1	41.7	39.9	54.1	61.5	
Years of Record	14	15	16	16	16	17	17	17	17	17	17	17		
Days with Rain	16	15	14	12	9	9	7	8	10	15	17	18	150	8
Days with Snow	2	1	0	0	0	0	0	0	0	0	0	1	4	8
Days with Precipitation	18	15	15	12	9	9	7	8	10	15	17	19	154	8