

# Quarterly Oil and Gas Water Management Summary



Second Quarter 2021 (Apr - Jun)





## PURPOSE

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This *Quarterly Oil and Gas Water Management Summary* presents short-term water use and water licence data from the Q2 April to June 2021 period.

Previous annual water use reports and quarterly water management summaries are available on the BC Oil and Gas Commission website at [www.bcogc.ca](http://www.bcogc.ca).



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# BC OIL AND GAS COMMISSION

The [BC Oil and Gas Commission](#) (Commission) is the provincial regulatory agency with responsibilities for regulating oil, gas and geothermal activities in British Columbia, including exploration, development, pipeline transportation and reclamation. We protect public safety and safeguard the environment while balancing a broad range of environmental, economic, and social considerations.

The Commission is responsible for reviewing, assessing, and making decisions on water authorizations from both surface and subsurface water sources. The Commission has the expertise and tools to make informed water allocation decisions and protecting and maintaining environmental and community water needs are its first priorities.

From exploration through to final reclamation, we respect those affected by oil and gas activities, cooperating with partner agencies while working closely with communities, First Nations, and land owners, and confirming industry compliance with provincial legislation. We are committed to advancing reconciliation and establishing close working relationships with Indigenous peoples throughout the energy life cycle.



## HOW WATER IS USED

Water is used for various purposes in the oil and gas industry.



The largest use of water for oil and gas activities is for hydraulic fracturing.

However, water is used for other purposes, such as:



Seismic or geophysical exploration



Drilling



Machine washing



Dust control



Water floods (to enhance oil recovery)



Ice road freezing



Hydrostatic testing of pipelines

## HOW WATER IS ACCESSED

There are different ways the oil and gas industry may access water in British Columbia. Some methods are managed through provincial legislation, including:

- **Water licences** issued under section 9 of the Water Sustainability Act (WSA) for surface and groundwater. The Commission has staff designated as Regional Water Managers with authority for issuing and administering long-term water licences.
- **Short-term surface water use or diversion approvals** issued under section 10 of the WSA. Short-term water use is administered by the Commission.
- **Water source wells** authorized by the Commission under the Oil and Gas Activities Act (OGAA). Water source wells are a specific type of well where the water withdrawn is intended for injection into an underground formation to enhance oil or natural gas recovery.
- **Flowback water** that returns to the surface after being injected for hydraulic fracturing.
- **Produced water** that flows to the surface as a by-product of oil and gas production.

The oil and gas industry can access water by means outside of regulatory oversight:



- **Private agreements** can be made with land owners or others who have a source of surface water supply such as a dugout or a groundwater well. In some cases, private agreements may require a Waterworks water licence under the WSA.

## SHORT-TERM WATER APPROVAL AND USE

During the second quarter of 2021, there were 341 short-term water use approvals in place, representing 934 withdrawal locations, held by 43 companies (Table 1).

The total water volume associated with short-term approvals active on the last day of the second quarter was 21,625,702 m<sup>3</sup>.

A total of 684,003 m<sup>3</sup> was reported as withdrawn by oil and gas operators in the first half of 2021.

TABLE 1 - SUMMARY OF SHORT-TERM APPROVAL AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO JUNE 2021

OIL AND GAS ACTIVITIES FROM JANUARY TO JUNE 2021		Q1	Q2
SHORT-TERM	Companies with Active Approvals	48	43
	Active Approvals	300	341
	Approved Withdrawal locations	974	934
	Volume Available for Use (m <sup>3</sup> )	20,621,144	21,625,702
	Cumulative Volume Reported Withdrawn (m <sup>3</sup> )	284,797	684,003

A break-down of short-term water approval and use by OGC Water Management Basin is listed in Table 4.

## LONG-TERM WATER LICENCES AND USE

During the second quarter of 2021, there were 108 active oil and gas related water licences, representing 113 withdrawal locations, held by 30 companies (Table 2).

The total annual volume available for use for water licences was 33,310,740 m<sup>3</sup>.

A total of 1,843,310 m<sup>3</sup> of licenced water was reported withdrawn in the first half of 2021. Companies with active withdrawals in Q2 are listed in Table 3.

TABLE 2 - SUMMARY OF WATER LICENCE AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO JUNE 2021

ACTIVITIES FROM JANUARY TO JUNE 2021		Q1	Q2
WATER LICENCE	Companies with Active Water Licences	29	30
	Active Water Licences	103	108
	Licenced Withdrawal Locations	108	113
	Annual Volume Available for Use for Water Licences (m³)	32,932,555	33,310,740
	Cumulative Volume Reported Withdrawn (m³)	462,012	1,843,310

A break-down of water licence allocation and use by OGC Water Management Basin is listed in Table 4.



TABLE 3:  
OIL AND GAS  
RELATED WATER  
LICENCES THAT  
WITHDREW  
WATER FROM  
APRIL TO JUNE  
2021

LICENCE #	LICENCEE	SOURCE	OGC WATER MGMT BASIN	ANNUAL APPROVAL (m <sup>3</sup> /YR)	2021 Q2 WATER USE (m <sup>3</sup> )
C112155	Whitecap Resources Inc.	Peace River	Lower Peace River	1,825,000	161,947
C132688	Canadian Natural Resources Limited (CNRL)	Charlie Lake	Lower Beatton River	394,000	548
C133155	Pacific Canbriam Energy	Williston Lake	Peace Arm	3,650,000	11,599
C133805	Peace View Hutterian Brethren Church	Dawson Creek Aquifer	Lower Peace River	250,000	1,680
C133853	Petronas Energy Canada	Barker Creek Tributary	Middle Sikanni Chief	7,264	1,738
C134054	Tourmaline Oil Corp.	Beatton River Intake B	Upper Beatton River	780,000	45,091
C134110	Petronas Energy Canada	Unnamed Stream	Cameron River	79,045	500
C134112	CNRL	Pine River	Lower Pine River	650,000	112,764
C134283	Ovintiv Canada ULC	Kiskatinaw River	Lower Kiskatinaw River	1,000,000	447,321
C134447	Murphy Oil Company Ltd.	Kiskatinaw River	Middle Kiskatinaw River	600,000	207,302
C500172	Secure Energy Services	Aquifer 634	Lower Peace River	36,500	3,220
C500226	Veresen Energy Pipeline	Aquifer 621	Smoky River	5,500	902
C500662	ARC Resources Ltd.	Kiskatinaw River	Lower Kiskatinaw	1,100,000	285,940
C501076	Ovintiv Canada ULC	Bissette Ck/Dawson Ck	Pouce Coupe River	482,000	14,195
C501120	Canlin Energy Corp.	FSJ Aquifer	Upper Beatton River	1,825	85
C501398	Umbrella Oilfield Ltd.	Chrissy Creek/FSJ Aquifer	Cameron River	150,000	10,303
C501578	Ovintiv Canada ULC	Aquifer 593	Lower Kiskatinaw River	120,000	53,957
C501773	Tourmaline Oil Corp.	FSJ Aquifer	Upper Beatton River	19,710	1,290
C501791	CNRL	Aquifer 931	Milligan Creek	36,500	1,437
C501793	CNRL	Aquifer 931	Milligan Creek	36,500	3,657
C501794	CNRL	Aquifer 931	Milligan Creek	51,100	3,762
C501865	Boundry Lake Sand & Gravel Ltd.	FSJ Aquifer	Lower Peace River	10,950	646
C502134	Petronas Energy Canada	FSJ Aquifer	Cameron River	4,015	533
C502277	Peaceland Farm Ltd.	Aquifer 908	Lower Halfway River	360,000	1,203
C502448	CNRL	Dawson Creek Bedrock	Murray River	5,475	92
C502452	CNRL	FSJ Aquifer	Kahntah River	3,650	97
C502455	CNRL	Dawson Creek Aquifer	Smoky River	1,095	228
C502462	CNRL	FSJ Aquifer	Kahntah River	7,300	789
C502467	CNRL	FSJ Aquifer	Upper Beatton River	3,650	79
C502795	CNRL	Aquifer 451	Blueberry River	3,650	385
C502884	Peaceland Oilfield Services Ltd.	FSJ Aquifer/2 unnamed streams	Cameron River	32,290	4,034
C502900	Pineview Trucking & Excavating Ltd.	Unconsolidated Aquifer	Outside of NEBC	98,550	2,446
C502957	Time Travel Services Ltd.	Aquifer 928	Upper Peace River	10,000	866
C503048	Albright Flush Systems	Aquifer 451	Cache Creek	2,920	657
				<b>Total Q2</b>	<b>1,381,298</b>

TABLE 4 - SUMMARY OF WATER ALLOCATION  
AND USE FOR OIL AND GAS ACTIVITIES IN 2020,  
ORGANIZED BY OGC WATER MANAGEMENT BASIN  
(Page 1 of 4)

MAJOR and Sub-Basin Name	OIL AND GAS RELATED SHORT-TERM WATER USE APPROVALS - SECTION 10					OIL AND GAS RELATED WATER LICENCES - SECTION 9					
	NUMBER OF WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m³)	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m³)	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m³)
<b>BEATTON RIVER</b> (sub-basin of Peace River)											
Upper Beatton River	19	835,410	0.167%	9,745	0.002%	19	2,355,519	0.472%	47,653	0.010%	499,408,440
Middle Beatton River	27	322,896	0.130%	32,171	0.013%	1	1,095	0.000%	0	0.000%	249,152,995
<b>Middle Beatton Total (incl. Upper Beatton)</b>	<b>46</b>	<b>1,158,306</b>	<b>0.155%</b>	<b>41,916</b>	<b>0.006%</b>	<b>20</b>	<b>2,356,614</b>	<b>0.315%</b>	<b>47,653</b>	<b>0.006%</b>	<b>748,561,435</b>
Milligan Creek	19	147,100	0.077%	742	0.000%	6	235,425	0.123%	9,127	0.005%	191,536,686
Blueberry River	41	1,004,506	0.343%	9,369	0.003%	4	198,925	0.068%	695	0.000%	293,278,540
Doig River	6	57,200	0.018%	669	0.000%	1	51,100	0.016%	0	0.000%	323,069,523
Lower Beatton River	20	597,888	0.432%	48,771	0.035%	2	414,730	0.300%	869	0.001%	138,262,629
<b>BEATTON TOTAL</b>	<b>132</b>	<b>2,965,000</b>	<b>0.175%</b>	<b>101,467</b>	<b>0.006%</b>	<b>33</b>	<b>3,256,794</b>	<b>0.192%</b>	<b>58,344</b>	<b>0.003%</b>	<b>1,694,708,813</b>
<b>HALFWAY RIVER</b> (sub-basin of Peace River)											
Chowade River	0					0					327,027,527
Upper Halfway River	1	500,000	0.063%	97,939	0.012%	1	72,000	0.009%	0	0.000%	795,962,409
<b>Upper Halfway Total (includes Chowade)</b>	<b>1</b>	<b>500,000</b>	<b>0.045%</b>	<b>97,939</b>	<b>0.009%</b>	<b>1</b>	<b>72,000</b>	<b>0.006%</b>	<b>0</b>	<b>0.000%</b>	<b>1,122,989,936</b>
Graham River	1	2,400	0.000%	0	0.000%	0					860,627,172
Cameron River	39	1,166,187	0.521%	96,704	0.043%	19	1,111,919	0.497%	138,601	0.062%	223,679,567
Lower Halfway River	5	16,595	0.011%	0	0.000%	9	5,448,688	3.596%	3,639	0.002%	151,526,991
<b>HALFWAY TOTAL</b>	<b>46</b>	<b>1,685,182</b>	<b>0.071%</b>	<b>194,643</b>	<b>0.008%</b>	<b>29</b>	<b>6,632,607</b>	<b>0.281%</b>	<b>142,240</b>	<b>0.006%</b>	<b>2,358,823,666</b>
<b>MOBERLY RIVER</b> (sub-basin of Peace River)											
Moberly River	0					0					391,714,995
<b>MOBERLY TOTAL</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>391,714,995</b>
<b>PINE RIVER</b> (sub-basin of Peace River)											
Burnt River	1	39,000	0.005%	0	0.000%	0					737,930,022
Sukunka River	12	270,000	0.026%	6,753	0.001%	0					1,047,282,572
<b>Sukunka River Total (includes Burnt)</b>	<b>13</b>	<b>309,000</b>	<b>0.017%</b>	<b>6,753</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>1,785,212,594</b>
Upper Pine River	1	18,000	0.001%	0	0.000%	0					1,466,884,035
Murray River	9	223,850	0.008%	12,908	0.000%	1	5,475	0.000%	123	0.000%	2,698,285,017
Lower Pine River	29	2,157,010	1.567%	5,932	0.004%	1	650,000	0.472%	112,765	0.082%	137,619,889
<b>PINE TOTAL</b>	<b>52</b>	<b>2,707,860</b>	<b>0.044%</b>	<b>25,593</b>	<b>0.000%</b>	<b>2</b>	<b>655,475</b>	<b>0.011%</b>	<b>112,888</b>	<b>0.002%</b>	<b>6,088,001,535</b>



OIL AND GAS RELATED SHORT-TERM WATER USE APPROVALS - SECTION 10

OIL AND GAS RELATED WATER LICENCES - SECTION 9

MAJOR and Sub-Basin Name	NUMBER OF APPROVED WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m³)	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m³)	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m³)
<b>KISKATINAW RIVER</b> (sub-basin of Peace River)											
West Kiskatinaw River	0					0					117,515,115
East Kiskatinaw River	0					0					105,452,962
Middle Kiskatinaw River	8	97,946	0.174%	12,745	0.023%	1	600,000	1.065%	207,302	0.368%	56,347,972
<b>Middle Kiskatinaw Total (incl. West &amp; East)</b>	<b>8</b>	<b>97,946</b>	<b>0.035%</b>	<b>12,745</b>	<b>0.005%</b>	<b>1</b>	<b>600,000</b>	<b>0.215%</b>	<b>207,302</b>	<b>0.074%</b>	<b>279,316,049</b>
Lower Kiskatinaw River	38	1,662,936	1.855%	72,445	0.081%	10	3,198,317	3.567%	862,657	0.962%	89,659,847
<b>KISKATINAW TOTAL</b>	<b>46</b>	<b>1,760,882</b>	<b>0.477%</b>	<b>85,190</b>	<b>0.023%</b>	<b>11</b>	<b>3,798,317</b>	<b>1.029%</b>	<b>1,069,959</b>	<b>0.290%</b>	<b>368,975,896</b>
<b>PEACE RIVER</b>											
Peace Arm	0					3	9,125,000	N/A	75,687	N/A	N/A
Upper Peace River	1	510,000	0.001%	77,006	0.000%	1	10,000		886		36,423,413,429
Lynx Creek	0					0					30,436,635
Farrell Creek	5	314,412	0.345%	0	0.000%	0					91,018,843
Cache Creek	3	11,120	0.015%	0	0.000%	8	677,605	0.908%	1,342	0.002%	74,603,546
Pouce Coupe River	16	330,760	0.129%	0	0.000%	4	1,650,200	0.645%	14,195	0.006%	255,686,202
Lower Peace River	17	782,296	0.683%	3,866	0.003%	8	4,204,919	3.673%	328,624	0.287%	114,470,012
<b>PEACE TOTAL</b> (incl. Kisk/Pine/Moberly/Half/Beatton)	<b>318</b>	<b>11,067,512</b>	<b>0.023%</b>	<b>487,765</b>	<b>0.001%</b>	<b>99</b>	<b>30,010,917</b>	<b>0.063%</b>	<b>1,804,145</b>	<b>0.004%</b>	<b>47,891,853,572</b>
<b>SMOKY RIVER</b>											
Smoky River	3	27,000	0.001%	0	0.000%	2	6,595	0.000%	2,388	0.000%	2,669,506,123
<b>SMOKY TOTAL</b>	<b>3</b>	<b>27,000</b>	<b>0.001%</b>	<b>0</b>	<b>0.000%</b>	<b>2</b>	<b>6,595</b>	<b>0.000%</b>	<b>2,388</b>	<b>0.000%</b>	<b>2,669,506,123</b>
<b>MUSKWA RIVER</b> (sub-basin of Fort Nelson River)											
Upper Muskwa River	0					0					1,725,201,511
Middle Muskwa River	0					0					1,973,711,816
<b>Middle Muskwa Total (incl. Upper Muskwa)</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>3,698,913,327</b>
Lower Muskwa River	1	22,000	0.003%	0	0.000%	0					646,841,560
<b>MUSKWA TOTAL</b>	<b>1</b>	<b>22,000</b>	<b>0.001%</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>4,345,754,887</b>
<b>PROPHET RIVER</b> (sub-basin of Fort Nelson River)											
Upper Prophet River	0					1	36,593	0.002%	0	0.000%	1,470,271,289
Middle Prophet River	5	61,400	0.010%	150	0.000%	0					621,428,680
<b>Middle Prophet Total (incl. Upper Prophet)</b>	<b>5</b>	<b>61,400</b>	<b>0.003%</b>	<b>150</b>	<b>0.000%</b>	<b>1</b>	<b>36,593</b>	<b>0.002%</b>	<b>0</b>	<b>0.000%</b>	<b>2,091,699,969</b>
Lower Prophet River	1	7,800	0.003%	0	0.000%	0					272,262,427
<b>PROPHET TOTAL</b>	<b>6</b>	<b>69,200</b>	<b>0.003%</b>	<b>150</b>	<b>0.000%</b>	<b>1</b>	<b>36,593</b>	<b>0.002%</b>	<b>0</b>	<b>0.000%</b>	<b>2,363,962,396</b>

OIL AND GAS RELATED SHORT-TERM WATER USE APPROVALS - SECTION 10						OIL AND GAS RELATED WATER LICENCES - SECTION 9					
MAJOR and Sub-Basin Name	NUMBER OF APPROVED WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m³)	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m³)	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m³)
SIKANNI CHIEF RIVER (sub-basin of Fort Nelson River)											
Upper Sikanni Chief River	4	50,000	0.006%	0	0.000%	3	3,117,689	0.386%	26,173	0.003%	807,771,692
Middle Sikanni Chief River	26	348,488	0.037%	22,284	0.002%	4	29,203	0.003%	1,738	0.000%	949,755,794
Middle Sikanni Chief Total (incl. Upper Sikanni)	30	398,488	0.023%	22,284	0.001%	7	3,146,892	0.179%	27,911	0.002%	1,757,527,486
Lower Sikanni Chief	24	212,544	0.024%	2,216	0.000%	0					875,678,142
SIKANNI CHIEF TOTAL	54	611,032	0.023%	24,500	0.001%	7	3,146,892	0.120%	27,911	0.001%	2,633,205,628
FORT NELSON RIVER											
Kahntah River	31	172,648	0.043%	0	0.000%	2	10,950	0.003%	1,737	0.000%	400,582,903
Fontas River	4	27,200	0.005%	0	0.000%	0					591,531,903
Fontas Total (includes Kahntah)	35	199,848	0.020%	0	0.000%	2	10,950	0.001%	1,737	0.000%	992,114,806
Klua Creek	0					0					402,135,448
Upper Fort Nelson River	0					0					276,181,026
Upper Fort Nelson Total (incl. Sikanni Chief Total, Kahntah, Fontas, Klua)	89	810,880	0.019%	24,500	0.001%	9	3,157,842	0.073%	29,648	0.001%	4,303,636,908
Snake River	0					0					310,763,522
Sahtaneh River	9	30,500	0.006%	552	0.000%	0					474,904,729
Middle Fort Nelson River	11	103,630	0.020%	2,515	0.000%	0					515,348,901
Middle Ft Nelson Total (incl. Upper Ft. Nelson total, Muskwa Total, Prophet Total, Snake, Sahtaneh)	116	1,036,210	0.008%	27,717	0.000%	10	3,194,435	0.026%	29,648	0.000%	12,314,371,343
Kiwigana River	6	60,000	0.014%	0	0.000%	0					441,657,543
Lower Fort Nelson River	0					0					312,768,938
FORT NELSON TOTAL	122	1,096,210	0.008%	27,717	0.000%	10	3,194,435	0.024%	29,648	0.000%	13,068,797,824
LIARD RIVER											
Muncho River	0					0					551,551,360
Upper Liard River	0					0					33,125,817,465
Upper Liard Total (incl. Muncho)	0	0	0.000%	0	0.000%	0	0	0.000%	0	0.000%	33,677,368,825
Grayling River	0					0					630,833,914
Upper Toad River	0					0					1,521,055,576
Racing River	0					0					1,488,336,681
Lower Toad River	0					0					419,472,722
Beaver River	0					0					10,862,659,426
Middle Liard River	0					0					463,652,312

OIL AND GAS RELATED SHORT-TERM WATER USE APPROVALS - SECTION 10

OIL AND GAS RELATED WATER LICENCES - SECTION 9

MAJOR and Sub-Basin Name	NUMBER OF WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m³)	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m³)	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2021 (m³)	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m³)
LIARD RIVER con't											
Middle Liard Total (incl. Upper Liard Total, Grayling, Upper Toad, Racing, Lower Toad, Beaver)	0	0	0.000%	0	0.000%	0	0	0.000%	0	0.000%	49,063,379,456
Capot-Blanc Creek	0					0					183,879,851
Dunedin River	0					0					820,464,167
Lower Liard River	1	20,000	0.002%	21,255	0.002%	0					1,236,634,664
LIARD TOTAL (incl. Fort Nelson)	123	1,116,210	0.002%	48,972	0.000%	10	3,194,435	0.005%	29,648	0.000%	64,373,155,962
PETITOT RIVER											
Sahdoanah River	22	55,000	0.022%	3,949	0.002%	0					252,625,362
Upper Petitot River	47	165,400	0.011%	1,214	0.000%	0					1,476,579,488
Tsea River	33	133,810	0.031%	245	0.000%	0					434,062,484
Middle Petitot River	13	62,600	0.009%	285	0.000%	0					698,562,753
Middle Petitot Total (incl. Sahdoanah, Upper Petitot, Tsea)	115	416,810	0.015%	5,693	0.000%	0	0	0.000%	0	0.000%	2,861,830,087
Lower Petitot River	14	214,000	0.024%	1,430	0.000%	0					904,314,069
PETITOT TOTAL	129	630,810	0.017%	7,123	0.000%	0	0	0.000%	0	0.000%	3,766,144,156
HAY RIVER											
Upper Kotcho River	0					0					311,519,217
Kyklo River	2	26,720	0.018%	0	0.000%	0					145,897,691
Shekilie River	33	342,800	0.076%	112	0.000%	0					450,747,494
Lower Kotcho River	3	14,400	0.005%	0	0.000%	0					311,519,217
Lower Kotcho Total (includes Upper Kotcho, Kyklo, Shekilie)	38	383,920	0.031%	112	0.000%	0	0	0.000%	0	0.000%	1,219,683,619
Hay River	28	212,300	0.039%	2,158	0.000%	0					538,672,352
HAY TOTAL	66	596,220	0.034%	2,270	0.000%	0	0	0.000%	0	0.000%	1,758,355,971
CHINCHAGA RIVER											
Chinchaga River	41	279,100	0.255%	1,104	0.001%	0					109,492,680
CHINCHAGA TOTAL	41	279,100	0.255%	1,104	0.001%	0	0	0.000%	0	0.000%	109,492,680
OTHER (outside Northeast B.C.)	254	7,908,850	N/A	136,769	N/A	2	98,793	N/A	7,129	N/A	N/A
GRAND TOTAL	934	21,625,702	0.018%	684,003	0.001%	113	33,310,740	0.028%	1,843,310	0.002%	120,568,508,464



## PREVIOUS REPORTS

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Previous annual water reports and quarterly updates are available on the Commission's website at: <https://www.bcogc.ca/data-reports>.

For questions regarding this report, please contact: [OGC.Communications@bcogc.ca](mailto:OGC.Communications@bcogc.ca)