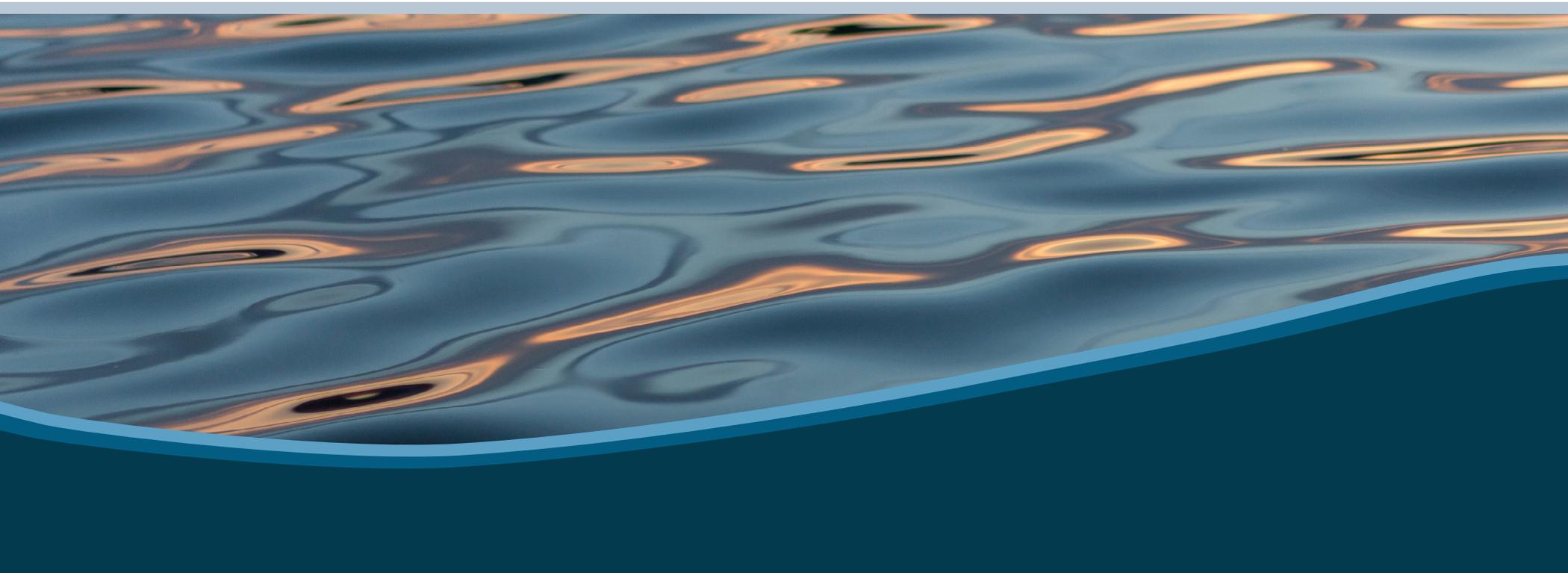


# Quarterly Oil and Gas Water Management Summary

Third Quarter 2018 (July - September)



## PURPOSE

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This *Quarterly Oil and Gas Water Management Summary* presents short-term water use and water licence data from the Q3 July to September 2018 period.

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

# TABLE OF CONTENTS

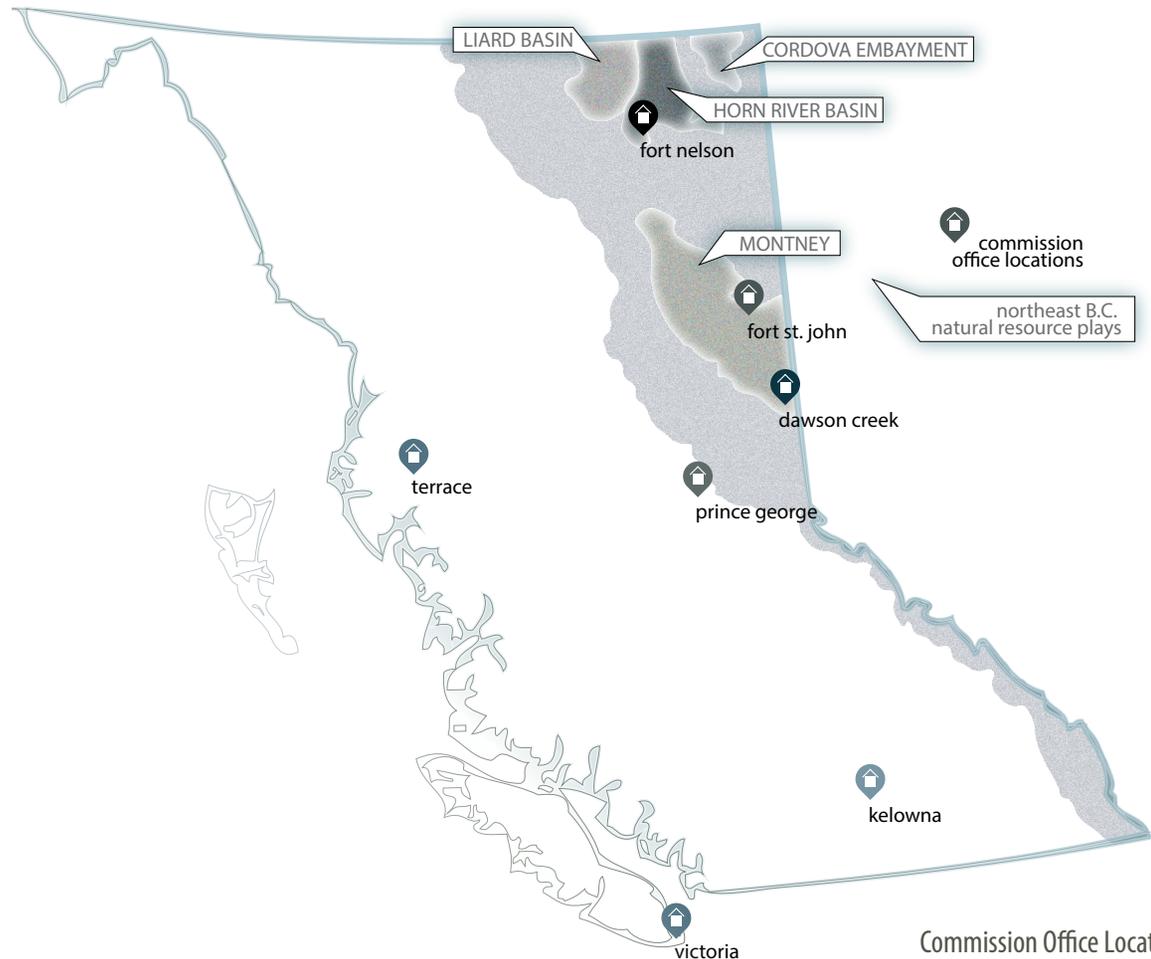
ROLE OF THE BC OIL AND GAS COMMISSION.....	4
HOW WATER IS USED.....	5
HOW WATER IS ACCESSED.....	5
LONG-TERM WATER LICENCES AND USE.....	6
TABLE 1 - SUMMARY OF WATER LICENCES AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO SEPTEMBER 2018 .....	6
TABLE 2 - OIL AND GAS RELATED WATER LICENCES THAT WITHDREW WATER FROM JULY TO SEPTEMBER 2018.....	6
SHORT-TERM WATER APPROVAL AND USE.....	7
TABLE 3 - SUMMARY OF SHORT-TERM APPROVAL AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO SEPTEMBER 2018 .....	7
TABLE 4: SUMMARY OF WATER ALLOCATION AND USE FOR OIL AND GAS ACTIVITIES IN 2018, ORGANIZED BY OGC WATER MANAGEMENT BASIN.....	8

# BC OIL AND GAS COMMISSION

The [BC Oil and Gas Commission](#) (Commission) is the provincial regulatory agency with responsibilities for regulating oil and gas activities in British Columbia, including exploration, development, pipeline transportation and reclamation.

The Commission's core services include reviewing and assessing applications for industry activity, consulting with First Nations, cooperating with partner agencies, and ensuring industry complies with provincial legislation and all regulatory requirements. The public interest is protected by ensuring public safety, respecting those affected by oil and gas activities, conserving the environment, and ensuring equitable participation in production.

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.



Commission Office Locations Throughout B.C.

## 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 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 landowners 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.

## LONG-TERM WATER LICENCES AND USE

At the end of the third quarter of 2018, there were 51 active oil and gas related water licences, representing 54 withdrawal locations, held by 13 companies (Table 1).

The total annual licenced water volume was 27,709,212 m<sup>3</sup>.

A total of 2,078,644 m<sup>3</sup> of licenced water was reported as withdrawn in the first three quarters of the year (Table 1).

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

\* Q1 and Q2 totals updated in Q3 to reflect delayed reporting under two new licences.

TABLE 1 - SUMMARY OF WATER LICENCE AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO SEPTEMBER 2018

	Q1*	Q2*	Q3
<b>WATER LICENCE</b>			
Companies with Active Water Licences	12	13	13
Active Water Licences	26	35	51
Licensed Withdrawal Locations	29	38	54
Annual Volume Available for Use for Water Licences (m <sup>3</sup> )	19,867,424	24,213,356	27,709,212
Cumulative Volume Reported Used in 2018 (m <sup>3</sup> )	741,188	1,344,423	2,078,644

TABLE 2:  
OIL AND GAS RELATED WATER LICENCES THAT WITHDREW WATER FROM JULY TO SEPTEMBER 2018

LICENCE #	LICENCEE	SOURCE	OGC WATER MANAGEMENT BASIN	ANNUAL APPROVAL (m <sup>3</sup> /YR)	Q3 WATER USE (m <sup>3</sup> /YR)
C112155	Whitecap Resources Inc.	Peace River	Lower Peace River	1,825,000	155,976
C126568	Petronas Energy Canada Ltd.	Williston Lake	Peace Arm	3,650,000	3,675
C132688	Canadian Natural Resources	Charlie Lake	Lower Beatton River	394,000	6,662
C133155	Canbriam Energy Inc.	Williston Lake	Peace Arm	3,650,000	12,081
C133847	Petronas Energy Canada Ltd.	Unnamed Creek	Cameron River	3,687	1,424
C133853	Petronas Energy Canada Ltd.	Barker Ck tributary	Middle Sikanni Chief River	7,264	1,008
C133955	Encana Corporation	Peace River	Lower Peace River	750,000	85,330
C134025	ARC Resources Ltd.	Kiskatinaw River	Lower Kiskatinaw River	550,000	232,667
C134093	Petronas Energy Canada Ltd.	Grewatsch Ck	Upper Beatton River	54,368	3,052
C134111	Petronas Energy Canada Ltd.	Unnamed Stream	Upper Beatton River	49,588	532
C134112	Canadian Natural Resources	Pine River	Lower Pine River	650,000	196,060
C500185	Kelt Exploration (LNG) Ltd.	Aquifer	Cache Creek	20,900	1,925
C500246	Kelt Exploration (LNG) Ltd.	Aquifer	Cache Creek	160,235	9,276
C500324	Petronas Energy Canada Ltd.	Aquifer	Middle Sikanni Chief River	4,578	277
C500355	Encana Corporation	Dugout	Lower Peace River	90,000	24,276

## SHORT-TERM WATER APPROVAL AND USE

At the end of the third quarter of 2018, there were a total of 236 short-term water use approvals in place, representing 631 withdrawal locations, held by 41 companies (Table 3).

The total water volume associated with short-term approvals that were active on the last day of the quarter was 9,709,121 m<sup>3</sup>.

A total of 864,893 m<sup>3</sup> was reported as withdrawn by oil and gas operators during the first three quarters of 2018 (Table 3).

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

TABLE 3 - SUMMARY OF SHORT-TERM APPROVAL AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO SEPTEMBER 2018

	Q1	Q2*	Q3	
SHORT-TERM	Companies with Active Approvals	41	39	41
	Active Approvals	185	209	236
	Approved Withdrawal locations	643	608	631
	Volume Available for Use (m <sup>3</sup> )	10,605,996	10,790,642	9,709,121
	Cumulative Volume Reported Withdrawn (m <sup>3</sup> )	99,270	815,498	864,893

\* Q2 withdrawal total updated in Q3 to incorporate delayed reporting.

TABLE 4 - SUMMARY OF WATER ALLOCATION AND USE FOR OIL AND GAS ACTIVITIES IN 2018, ORGANIZED BY OGC WATER MANAGEMENT BASIN (Page 1 of 4)

MAJOR and Sub-Basin Name	SHORT-TERM WATER USE APPROVALS - BC OIL AND GAS COMMISSION					OIL AND GAS RELATED WATER LICENCES					
	NUMBER OF APPROVED WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m <sup>3</sup> ) FOR LOCATIONS ACTIVE ON 9/30/2018	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m <sup>3</sup> )	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m <sup>3</sup> )
<b>BEATTON RIVER</b> (sub-basin of Peace River)											
Upper Beatton River	4	550,800	0.110%	23,716	0.005%	10	1,137,337	0.228%	114,341	0.023%	499,408,440
Middle Beatton River	24	305,650	0.123%	0	0.000%						249,152,995
<b>Middle Beatton Total (incl. Upper Beatton)</b>	<b>28</b>	<b>856,450</b>	<b>0.114%</b>	<b>23,716</b>	<b>0.003%</b>	<b>10</b>	<b>1,137,337</b>	<b>0.152%</b>	<b>114,341</b>	<b>0.015%</b>	<b>748,561,435</b>
Milligan Creek	19	230,085	0.120%	0	0.000%						191,536,686
Blueberry River	49	1,046,936	0.357%	0	0.000%						293,278,540
Doig River	2	7,200	0.002%	0	0.000%						323,069,523
Lower Beatton River	25	285,187	0.205%	13,505	0.010%	1	394,000	0.285%	22,996	0.017%	138,262,629
<b>BEATTON TOTAL</b>	<b>123</b>	<b>2,423,858</b>	<b>0.143%</b>	<b>37,221</b>	<b>0.002%</b>	<b>11</b>	<b>1,531,337</b>	<b>0.090%</b>	<b>137,337</b>	<b>0.008%</b>	<b>1,694,708,813</b>
<b>HALFWAY RIVER</b> (sub-basin of Peace River)											
Chowade River											327,027,527
Upper Halfway River											795,962,409
<b>Upper Halfway Total (includes Chowade)</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>1,122,989,936</b>
Graham River	2	3,450	0.000%	1,170	0.000%						860,627,172
Cameron River	17	257,352	0.115%	30,284	0.014%	7	246,323	0.110%	1,424	0.001%	223,679,567
Lower Halfway River	5	120,581	0.080%	457	0.000%	7	3,838,688	2.533%			151,526,991
<b>HALFWAY TOTAL</b>	<b>24</b>	<b>381,383</b>	<b>0.016%</b>	<b>31,911</b>	<b>0.001%</b>	<b>14</b>	<b>4,085,011</b>	<b>0.173%</b>	<b>1,424</b>	<b>0.000%</b>	<b>2,358,823,666</b>
<b>MOBERLY RIVER</b> (sub-basin of Peace River)											
Moberly River	5	30,388	0.008%	25,743	0.007%						391,714,995
<b>MOBERLY TOTAL</b>	<b>5</b>	<b>30,388</b>	<b>0.008%</b>	<b>25,743</b>	<b>0.007%</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											737,930,022
Sukunka River	3	20,000	0.002%	940	0.000%						1,047,282,572
<b>Sukunka River Total (includes Burnt)</b>	<b>3</b>	<b>20,000</b>	<b>0.001%</b>	<b>940</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	3	53,300	0.004%	23,063	0.002%						1,466,884,035
Murray River	3	20,850	0.001%	0	0.000%						2,698,285,017
Lower Pine River	30	627,732	0.456%	101,555	0.074%	2	1,300,000	0.945%	196,060	0.142%	137,619,889
<b>PINE TOTAL</b>	<b>39</b>	<b>721,882</b>	<b>0.012%</b>	<b>125,558</b>	<b>0.002%</b>	<b>2</b>	<b>1,300,000</b>	<b>0.021%</b>	<b>196,060</b>	<b>0.003%</b>	<b>6,088,001,535</b>

**SHORT-TERM WATER USE APPROVALS - BC OIL AND GAS COMMISSION**

**OIL AND GAS RELATED WATER LICENCES**

MAJOR and Sub-Basin Name	NUMBER OF APPROVED WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m <sup>3</sup> ) FOR LOCATIONS ACTIVE ON 9/30/2018	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m <sup>3</sup> )	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m <sup>3</sup> )
<b>KISKATINAW RIVER</b> (sub-basin of Peace River)											
West Kiskatinaw River											117,515,115
East Kiskatinaw River	1	5,000	0.005%	0	0.000%						105,452,962
Middle Kiskatinaw River	5	1,224,996	2.174%	247,581	0.439%						56,347,972
<b>Middle Kiskatinaw Total (incl. West &amp; East)</b>	<b>6</b>	<b>1,229,996</b>	<b>0.440%</b>	<b>247,581</b>	<b>0.089%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>279,316,049</b>
Lower Kiskatinaw River	11	357,233	0.398%	39,201	0.044%	5	2,223,069	2.479%	453,670	0.506%	89,659,847
<b>KISKATINAW TOTAL</b>	<b>17</b>	<b>1,587,229</b>	<b>0.430%</b>	<b>286,782</b>	<b>0.078%</b>	<b>5</b>	<b>2,223,069</b>	<b>0.602%</b>	<b>453,670</b>	<b>0.123%</b>	<b>368,975,896</b>
<b>PEACE RIVER</b>											
Peace Arm						3	9,125,000	0.000%	53,405	0.000%	N/A
Upper Peace River	1	780,000	0.002%	0	0.000%						36,423,413,429
Lynx Creek											30,436,635
Farrell Creek	4	22,300	0.025%	0	0.000%						91,018,843
Cache Creek	3	28,500	0.038%	0	0.000%	3	366,157	0.491%	59,039	0.079%	74,603,546
Pouce Coupe River	32	1,337,720	0.523%	189,901	0.074%	3	582,754	0.228%	31,956	0.012%	255,686,202
Lower Peace River	13	104,662	0.091%	131,100	0.115%	5	2,388,348	2.086%	1,143,864	0.999%	114,470,012
<b>PEACE TOTAL (incl. Kisk/Pine/Moberly/Half/Beaton)</b>	<b>261</b>	<b>7,417,922</b>	<b>0.015%</b>	<b>828,216</b>	<b>0.002%</b>	<b>46</b>	<b>21,601,676</b>	<b>0.045%</b>	<b>2,076,755</b>	<b>0.004%</b>	<b>47,891,853,572</b>
<b>SMOKY RIVER</b>											
Smoky River	3	9,000	0.000%	0	0.000%	1	2,500	0.000%	0	0.000%	2,669,506,123
<b>SMOKY TOTAL</b>	<b>3</b>	<b>9,000</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>1</b>	<b>2,500</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>2,669,506,123</b>
<b>MUSKWA RIVER</b> (sub-basin of Fort Nelson River)											
Upper Muskwa River											1,725,201,511
Middle Muskwa River											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											646,841,560
<b>MUSKWA 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>4,345,754,887</b>
<b>PROPHET RIVER</b> (sub-basin of Fort Nelson River)											
Upper Prophet River	1	1,500	0.000%	0	0.000%	1	36,593	0.002%	0	0.000%	1,470,271,289
Middle Prophet River	5	30,700	0.005%	0	0.000%						621,428,680
<b>Middle Prophet Total (incl. Upper Prophet)</b>	<b>6</b>	<b>32,200</b>	<b>0.002%</b>	<b>0</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	6	411,510	0.151%	0	0.000%						272,262,427
<b>PROPHET TOTAL</b>	<b>12</b>	<b>443,710</b>	<b>0.019%</b>	<b>0</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>

**SHORT-TERM WATER USE APPROVALS - BC OIL AND GAS COMMISSION**

**OIL AND GAS RELATED WATER LICENCES**

MAJOR and Sub-Basin Name	NUMBER OF APPROVED WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m <sup>3</sup> ) FOR LOCATIONS ACTIVE ON 9/30/2018	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m <sup>3</sup> )	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m <sup>3</sup> )
<b>SIKANNI CHIEF RIVER</b> (sub-basin of Fort Nelson River)											
Upper Sikanni Chief River						2	6,039,241	0.748%	0	0.000%	807,771,692
Middle Sikanni Chief River	28	500,658	0.053%	2,722	0.000%	4	29,202	0.003%	1,889		949,755,794
<b>Middle Sikanni Chief Total (incl. Upper Sikanni)</b>	<b>28</b>	<b>500,658</b>	<b>0.028%</b>	<b>2,722</b>	<b>0.000%</b>	<b>6</b>	<b>6,068,443</b>	<b>0.345%</b>	<b>1,889</b>	<b>0.000%</b>	<b>1,757,527,486</b>
Lower Sikanni Chief	3	7,000	0.001%	1,371							875,678,142
<b>SIKANNI CHIEF TOTAL</b>	<b>31</b>	<b>507,658</b>	<b>0.019%</b>	<b>4,093</b>	<b>0.000%</b>	<b>6</b>	<b>6,068,443</b>	<b>0.230%</b>	<b>1,889</b>	<b>0.000%</b>	<b>2,633,205,628</b>
<b>FORT NELSON RIVER</b>											
Kahntah River	14	87,400	0.022%	0	0.000%						400,582,903
Fontas River	2	24,500	0.004%	5,579	0.001%						591,531,903
<b>Fontas Total (includes Kahntah)</b>	<b>16</b>	<b>111,900</b>	<b>0.011%</b>	<b>5,579</b>	<b>0.001%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>992,114,806</b>
Klua Creek											402,135,448
Upper Fort Nelson River				301	0.000%						276,181,026
<b>Upper Fort Nelson Total (incl. Sikanni Chief Total, Kahntah, Fontas, Klua)</b>	<b>47</b>	<b>619,558</b>	<b>0.014%</b>	<b>9,973</b>	<b>0.000%</b>	<b>6</b>	<b>6,068,443</b>	<b>0.141%</b>	<b>1,889</b>	<b>0.000%</b>	<b>4,303,636,908</b>
Snake River				853							310,763,522
Sahtaneh River	3	22,500	0.005%	2,201	0.000%						474,904,729
Middle Fort Nelson River	1	10,000	0.002%	0	0.000%						515,348,901
<b>Middle Ft Nelson Total (incl. Upper Ft. Nelson total, Muskwa Total, Prophet Total, Snake, Sahtaneh)</b>	<b>63</b>	<b>1,095,768</b>	<b>0.009%</b>	<b>13,027</b>	<b>0.000%</b>	<b>7</b>	<b>6,105,036</b>	<b>0.050%</b>	<b>1,889</b>	<b>0.000%</b>	<b>12,314,371,343</b>
Kiwigana River	10	39,200	0.009%	1,276	0.000%						441,657,543
Lower Fort Nelson River											312,768,938
<b>FORT NELSON TOTAL</b>	<b>73</b>	<b>1,134,968</b>	<b>0.009%</b>	<b>14,303</b>	<b>0.000%</b>	<b>7</b>	<b>6,105,036</b>	<b>0.047%</b>	<b>1,889</b>	<b>0.000%</b>	<b>13,068,797,824</b>
<b>LIARD RIVER</b>											
Muncho River											551,551,360
Upper Liard River											33,125,817,465
<b>Upper Liard Total (incl. Muncho)</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>33,677,368,825</b>
Grayling River											630,833,914
Upper Toad River											1,521,055,576
Racing River											1,488,336,681
Lower Toad River											419,472,722
Beaver River											10,862,659,426
Middle Liard River											463,652,312

**SHORT-TERM WATER USE APPROVALS - BC OIL AND GAS COMMISSION**

**OIL AND GAS RELATED WATER LICENCES**

MAJOR and Sub-Basin Name	NUMBER OF APPROVED WITHDRAWAL LOCATIONS	TOTAL VOLUME APPROVED (m <sup>3</sup> ) FOR LOCATIONS ACTIVE ON 9/30/2018	TOTAL VOLUME APPROVED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF	NUMBER OF LICENCED WITHDRAWAL LOCATIONS	TOTAL VOLUME LICENCED (m <sup>3</sup> )	TOTAL VOLUME LICENCED as % of MEAN ANNUAL RUNOFF	TOTAL VOLUME WITHDRAWN IN 2018 (m <sup>3</sup> )	TOTAL VOLUME WITHDRAWN as % of MEAN ANNUAL RUNOFF	MEAN ANNUAL RUNOFF (m <sup>3</sup> )
<b>LIARD RIVER</b> con't											
<b>Middle Liard Total (incl. Upper Liard Total, Grayling, Upper Toad, Racing, Lower Toad, Beaver)</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>49,063,379,456</b>
Capot-Blanc Creek											183,879,851
Dunedin River											820,464,167
Lower Liard River											1,236,634,664
<b>LIARD TOTAL (incl. Fort Nelson)</b>	<b>73</b>	<b>1,134,968</b>	<b>0.002%</b>	<b>14,303</b>	<b>0.000%</b>	<b>7</b>	<b>6,105,036</b>	<b>0.009%</b>	<b>1,889</b>	<b>0.000%</b>	<b>64,373,155,962</b>
<b>PETITOT RIVER</b>											
Sahdoanah River	36	47,680	0.019%	3,081	0.001%						252,625,362
Upper Petitot River	54	116,085	0.008%	1,400	0.000%						1,476,579,488
Tsea River	62	214,439	0.049%	3,022	0.001%						434,062,484
Middle Petitot River	30	162,925	0.023%	530	0.000%						698,562,753
<b>Middle Petitot Total (incl. Sahdoanah, Upper Petitot, Tsea)</b>	<b>182</b>	<b>541,129</b>	<b>0.019%</b>	<b>8,033</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>2,861,830,087</b>
Lower Petitot River	14	26,600	0.003%	0	0.000%						904,314,069
<b>PETITOT TOTAL</b>	<b>196</b>	<b>567,729</b>	<b>0.015%</b>	<b>8,033</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>3,766,144,156</b>
<b>HAY RIVER</b>											
Upper Kotcho River	1	20,000	0.006%	165	0.000%						311,519,217
Kyklo River	1	8,000	0.005%	2,639	0.002%						145,897,691
Shekilie River	27	175,600	0.039%	0	0.000%						450,747,494
Lower Kotcho River	1	3,000	0.001%	1,023	0.000%						311,519,217
<b>Lower Kotcho Total (includes Upper Kotcho, Kyklo, Shekilie)</b>	<b>30</b>	<b>206,600</b>	<b>0.017%</b>	<b>3,827</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>1,219,683,619</b>
Hay River	25	175,000	0.032%	5,684	0.001%						538,672,352
<b>HAY TOTAL</b>	<b>55</b>	<b>381,600</b>	<b>0.022%</b>	<b>9,511</b>	<b>0.001%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>1,758,355,971</b>
<b>CHINCHAGA RIVER</b>											
Chinchaga River	31	95,097	0.087%	3,489	0.003%						109,492,680
<b>CHINCHAGA TOTAL</b>	<b>31</b>	<b>95,097</b>	<b>0.087%</b>	<b>3,489</b>	<b>0.003%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	<b>109,492,680</b>
<b>OTHER (outside Northeast B.C.)</b>	<b>12</b>	<b>102,805</b>	<b>0.000%</b>	<b>1,341</b>	<b>0.000%</b>	<b>0</b>	<b>0</b>	<b>0.000%</b>	<b>0</b>	<b>0.000%</b>	N/A
<b>GRAND TOTAL</b>	<b>631</b>	<b>9,709,121</b>	<b>0.008%</b>	<b>864,893</b>	<b>0.001%</b>	<b>54</b>	<b>27,709,212</b>	<b>0.023%</b>	<b>2,078,644</b>	<b>0.002%</b>	<b>120,568,508,464</b>



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

For specific questions or enquiries  
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