



Quarterly Oil and Gas Water Management Summary

Jan-Mar (Q1) 2023

BCER
BRITISH COLUMBIA ENERGY REGULATOR



This Quarterly Water Management Summary presents short-term water use and water licence data from the January to March 2023 period.

Previous annual water use reports and quarterly water management summaries are available at bc-er.ca.

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Vision, Mission and Values

Vision

A resilient energy future where B.C.'s energy resource activities are safe, environmentally leading and socially responsible.

Mission

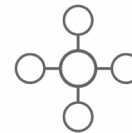
We regulate the life cycle of energy resource activities in B.C., from site planning to restoration, ensuring activities are undertaken in a manner that:



Protects public safety and the environment



Supports reconciliation with Indigenous peoples and the transition to low-carbon energy



Conserves energy resources



Fosters a sound economy and social well-being

Values

Respect is our commitment to listen, accept and value diverse perspectives.

Integrity is our commitment to the principles of fairness, trust and accountability.

Transparency is our commitment to be open and provide clear information on decisions, operations and actions.

Innovation is our commitment to learn, adapt, act and grow.

Responsiveness is our commitment to listening and timely and meaningful action.

Role of the BC Energy Regulator (BCER)

As a provincial Crown agency, we protect public safety and safeguard the environment through the sound regulation of oil, gas and aspects of geothermal activities in B.C. while balancing a broad range of environmental, economic and social considerations.

We regulate resource activities through the [Oil and Gas Activities Act \(OGAA\)](#), the [Petroleum and Natural Gas \(PNG\) Act](#), and other associated laws related to heritage conservation, roads, land and water use, forestry, and other natural resources.

Through combined authority and working with partner agencies, we regulate activities on Crown land, private land, and the Agricultural Land Reserve. When oil, gas, or geothermal permits are granted, we are responsible for ensuring industry compliance with provincial legislation from initial exploration to final reclamation.

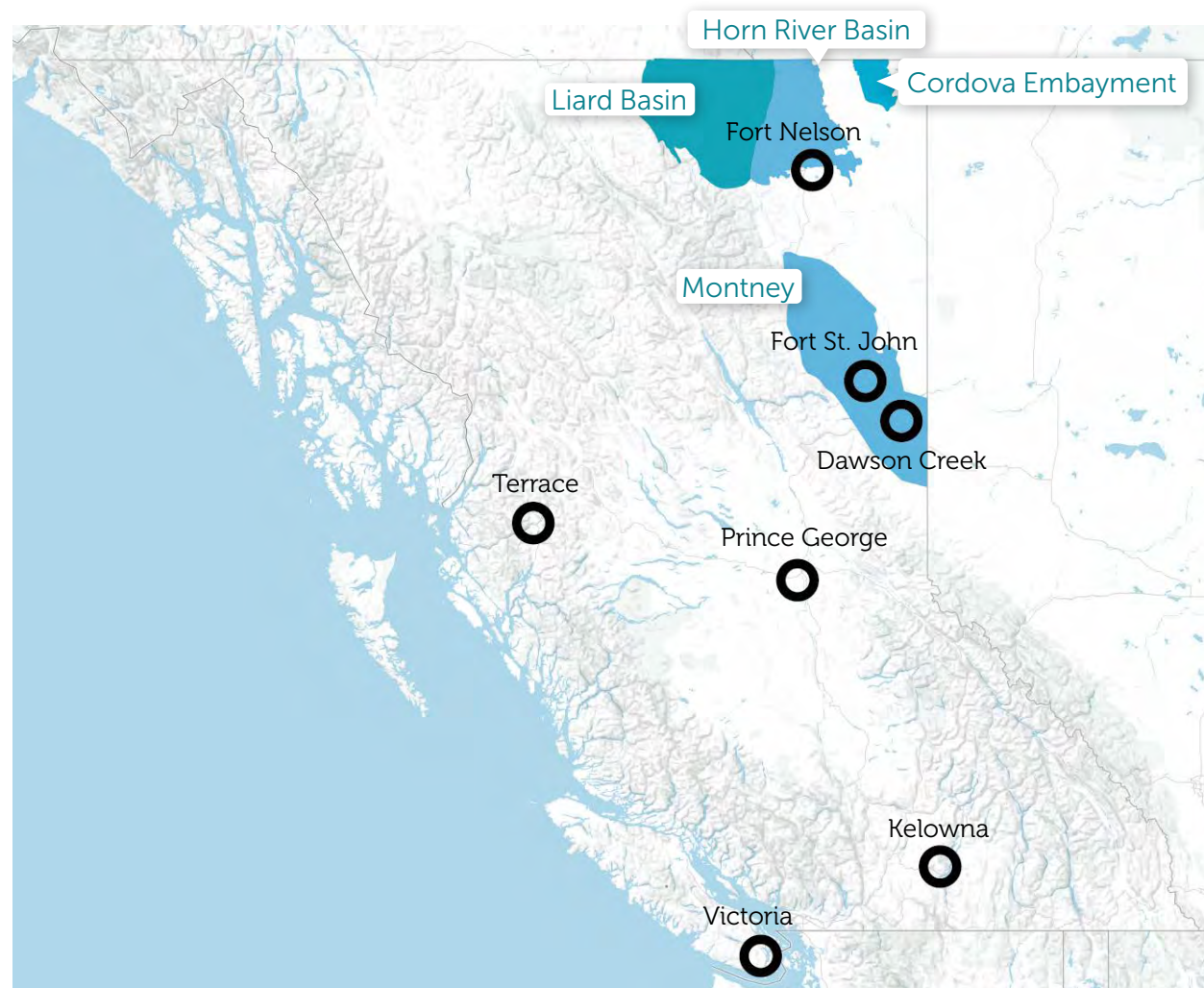
As more resources have been discovered, techniques for accessing them have advanced, environmental awareness has increased, and stakeholders have let us know they are interested in providing more input.

During our review and decision-making processes, we work closely with [land owners](#), [rights holders](#), and [Indigenous communities](#).

The BCER currently has over 280 employees operating out of seven locations: Fort Nelson, Fort St. John, Dawson Creek, Terrace, Prince George, Kelowna and Victoria. The largest number of employees are in the Fort St. John office.



BCER Office Locations Throughout B.C.



Territorial Acknowledgement

We acknowledge and respect the many Indigenous Territories and Treaty areas, each with unique cultures, languages, legal traditions and relationships to the land and water, which the BCER's work spans. We also respectfully acknowledge the Métis and Inuit people living across B.C.

How Water is Used and Accessed

Water Use

Water is used for various purposes in the oil and gas industry. The largest use of water is for hydraulic fracturing, however, water is used for other purposes, such as:



Seismic or geophysical exploration



Drilling



Machine washing



Dust control



Water floods (enhances oil recovery)



Ice road freezing



Hydrostatic testing of pipelines

Water Access

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. BCER staff designated as Regional Water Managers have the authority to issue and administer 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 BCER.
- **Water source wells** authorized by the BCER under OGAA are wells where water is withdrawn for injection into underground formations 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.

Industry may also access water by other means:

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

Oil and Gas Activity Water Use: Short-term Approvals & Long-Term Licences

Short-Term Water Use

During January to March there were 197 water use approvals in place, representing 533 withdrawal locations, held by 32 companies (Table 1).

The total water volume available for use by short-term approvals active on the last day of March was 14,590,176 m³.

A total of 224,843 m³ was reported as withdrawn in 2023.

**TABLE 1 - SHORT-TERM APPROVALS
AND USE IN 2023**

| | End of Q1 |
|---|----------------|
| Companies with Active Approvals | 32 |
| Active Approvals | 197 |
| Approved Withdrawal Locations | 533 |
| Volume Available for Use (m ³) | 14,590,176 |
| Cumulative Volume Reported Withdrawn (m³) | 224,843 |

Long-Term Water Use

During January to March there were 111 active oil and gas related water licences, representing 116 withdrawal locations, held by 33 companies (Table 2).

The total annual volume available for use for water licences was 79,016,405 m³.

A total of 716,604 m³ was reported as withdrawn in 2023.

**TABLE 2 - LONG-TERM WATER LICENCES
AND USE IN 2023**

| | End of Q1 |
|---|----------------|
| Companies with Active Water Licences | 33 |
| Active Water Licences | 111 |
| Licensed Withdrawal Locations | 116 |
| Annual Volume Available for Use (m ³) | 79,016,405 |
| Cumulative Volume Reported Withdrawn (m³) | 716,604 |

A break down of short-term approvals and water licence use by BCER Water Management Basin is listed in Table 4 on page 10.

Oil and Gas Related Water Licences

Table 3: Licences that Withdrew Water from January to March 2023

| LICENCE # | LICENCEE | SOURCE | BCER WATER MGMT BASIN | ANNUAL APPROVAL (m ³ /YR) | WATER USE (m ³) |
|-----------|------------------------------|----------------------|----------------------------|---|--------------------------------|
| C133853 | Petronas Energy Canada | Barker Creek | Middle Sikanni Chief River | 7,264 | 1,320 |
| C134049 | Petronas Energy Canada | Unnamed Spring | Upper Beatton River | 83,402 | 260 |
| C134092 | Petronas Energy Canada | Unnamed Spring | Lower Halfway River | 65,971 | 940 |
| C134111 | Petronas Energy Canada | Unnamed Stream | Upper Beatton River | 49,588 | 3,446 |
| C134443 | Canadian Natural Resources | Williston Lake | Peace Arm | 3,650,000 | 2,080 |
| C134469 | ConocoPhillips Canada | Halfway River | Lower Halfway River | 3,650,000 | 267,572 |
| C134471 | Petronas Energy Canada | Sikanni Chief River | Upper Sikanni Chief | 2,993,000 | 145,967 |
| C500172 | Secure Energy Services | Aquifer 634 | Lower Peace River | 36,500 | 3,996 |
| C500335 | Petronas Energy Canada | FSJ Aquifer | Upper Beatton River | 13,670 | 4,403 |
| C500344 | Petronas Energy Canada | FSJ Aquifer | Lower Halfway River | 16,165 | 900 |
| C500345 | Ovintiv Canada ULC | Unnamed Stream | Lower Kiskatinaw River | 102,100 | 74,989 |
| C500794 | Petronas Energy Canada | FSJ Aquifer | Upper Beatton River | 6,924 | 780 |
| C501120 | Canlin Energy Corp. | FSJ Aquifer | Upper Beatton River | 1,825 | 49 |
| C501477 | TAQA North Ltd. | FSJ Aquifer | Middle Beatton River | 1,095 | 45 |
| C501672 | ConocoPhillips Canada | Aquifer 451 | Cache Creek | 49,750 | 922 |
| C501685 | ConocoPhillips Canada | Aquifer 451 | Cache Creek | 160,235 | 9,326 |
| C501766 | T. Hartnell Enterprises Ltd. | Aquifer 633 | Lower Kiskatinaw River | 100,000 | 85,741 |
| C501773 | Tourmaline Oil Corp. | FSJ Aquifer | Upper Beatton River | 19,710 | 135 |
| C501797 | Canadian Natural Resources | Aquifer 931 | Milligan Creek | 23,725 | 5,527 |
| C501865 | Boundry Lake Sand & Gravel | FSJ Aquifer | Lower Peace River | 10,950 | 272 |
| C502249 | Canadian Natural Resources | FSJ Aquifer | Cameron River | 170,000 | 58,380 |
| C502277 | Peaceland Farm Ltd. | Aquifer 908 | Lower Halfway River | 360,000 | 984 |
| C502295 | Todd Energy Canada | FSJ Aquifer | Blueberry River | 146,000 | 2,190 |
| C502448 | Canadian Natural Resources | Dawson Creek Bedrock | Murray River | 5,475 | 125 |
| C502452 | Canadian Natural Resources | FSJ Aquifer | Kahntah River | 3,650 | 56 |

Continued on next page.

At the end of March, water used by industry by way of licence was a fraction of a per cent (0.001) of the average runoff replenished annually in northeast B.C.

| LICENCE # | LICENCEE | SOURCE | BCER WATER MGMT BASIN | ANNUAL APPROVAL (m ³ /YR) | WATER USE (m ³) |
|-----------|--|----------------------------|--------------------------|---|--------------------------------|
| C502455 | Canadian Natural Resources | Dawson Creek Aquifer | Smoky River | 1,095 | 192 |
| C502462 | Canadian Natural Resources | FSJ Aquifer | Kahntah River | 7,300 | 612 |
| C502467 | Canadian Natural Resources | FSJ Aquifer | Upper Beatton River | 3,650 | 49 |
| C502795 | Canadian Natural Resources | Aquifer 451 | Blueberry River | 3,650 | 293 |
| C502900 | Pineview Trucking & Excavating Ltd. | Unconsolidated Aquifer | Outside of NEBC | 98,550 | 16,320 |
| C502957 | Time Travel Services Ltd. | Aquifer 928 | Upper Peace River | 10,000 | 4,245 |
| C503048 | Albright Flush Systems | Aquifer 451 | Cache Creek | 2,920 | 709 |
| C503155 | Inga Water Source Ltd. | Aquifer 451 | Cache Creek | 76,285 | 3,023 |
| C504748 | Todd Energy Canada | Dunvegan Formation | Blueberry River | 628,165 | 14,888 |
| C500346 | Petronas Energy Canada | FSJ Aquifer | Upper Prophet River | 35,593 | 2,894 |
| C500355 | Ovintiv Canada | Dugout nr Eight Mile Creek | Lower Peace River | 90,000 | 2,974 |

Jan-Mar (Q1) TOTAL: 716,604

TABLE 4 - SUMMARY OF WATER ALLOCATION AND USE FOR OIL AND GAS ACTIVITIES IN 2023, ORGANIZED BY BCER 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 2023 (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 2023 (m³) | TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF | MEAN ANNUAL RUNOFF (m³) |
| BEATTON RIVER (sub-basin of Peace River) | | | | | | | | | | | |
| Upper Beatton River | 8 | 698,620 | 0.140% | 0 | 0.000% | 19 | 2,355,519 | 0.472% | 9,120 | 0.002% | 499,408,440 |
| Middle Beatton River | 8 | 61,516 | 0.025% | 120 | 0.000% | 1 | 1,095 | 0.000% | 45 | 0.000% | 249,152,995 |
| Middle Beatton Total (incl. Upper Beatton) | 16 | 760,136 | 0.102% | 120 | 0.000% | 20 | 2,356,614 | 0.315% | 9,165 | 0.001% | 748,561,435 |
| Milligan Creek | 8 | 13,100 | 0.007% | 0 | 0.000% | 6 | 235,425 | 0.123% | 5,527 | 0.003% | 191,536,686 |
| Blueberry River | 12 | 268,801 | 0.092% | 0 | 0.000% | 5 | 827,090 | 0.282% | 17,371 | 0.006% | 293,278,540 |
| Doig River | 3 | 24,000 | 0.007% | 5,112 | 0.002% | 1 | 51,100 | 0.016% | 0 | 0.000% | 323,069,523 |
| Lower Beatton River | 2 | 519,600 | 0.376% | 0 | 0.000% | 2 | 414,730 | 0.370% | 0 | 0.000% | 138,262,629 |
| BEATTON TOTAL | 41 | 1,585,637 | 0.094% | 5,232 | 0.000% | 34 | 3,884,959 | 0.229% | 32,063 | 0.002% | 1,694,708,813 |
| HALFWAY RIVER (sub-basin of Peace River) | | | | | | | | | | | |
| Chowade River | 0 | | | | | 0 | | | | | 327,027,527 |
| Upper Halfway River | 1 | 500,000 | 0.063% | 0 | 0.000% | 1 | 72,000 | 0.009% | 0 | 0.000% | 795,962,409 |
| Upper Halfway Total (includes Chowade) | 1 | 500,000 | 0.045% | 0 | 0.000% | 1 | 72,000 | 0.006% | 0 | 0.000% | 1,122,989,936 |
| Graham River | 0 | | | | | 0 | | | | | 860,627,172 |
| Cameron River | 11 | 460,618 | 0.206% | 3,113 | 0.001% | 19 | 1,111,919 | 0.497% | 58,380 | 0.026% | 223,679,567 |
| Lower Halfway River | 2 | 3,000 | 0.002% | 0 | 0.000% | 9 | 5,448,688 | 3.596% | 270,396 | 0.178% | 151,526,991 |
| HALFWAY TOTAL | 14 | 963,618 | 0.041% | 3,113 | 0.000% | 29 | 6,632,607 | 0.281% | 328,776 | 0.014% | 2,358,823,666 |
| MOBERLY RIVER (sub-basin of Peace River) | | | | | | | | | | | |
| Moberly River | 0 | | | | | 0 | | | | | 391,714,995 |
| MOBERLY TOTAL | 0 | 0 | 0.000% | 0 | 0.000% | 0 | 0 | 0.000% | 0 | 0.000% | 391,714,995 |
| PINE RIVER (sub-basin of Peace River) | | | | | | | | | | | |
| Burnt River | 3 | 94,002 | 0.013% | 0 | 0.000% | 0 | | | | | 737,930,022 |
| Sukunka River | 5 | 160,000 | 0.015% | 0 | 0.000% | 0 | | | | | 1,047,282,572 |
| Sukunka River Total (includes Burnt) | 8 | 254,002 | 0.014% | 0 | 0.000% | 0 | | | | | 1,785,212,594 |
| Upper Pine River | 0 | | | | | 0 | | | | | 1,466,884,035 |
| Murray River | 6 | 176,352 | 0.007% | 0 | 0.000% | 1 | 5,475 | 0.000% | 125 | 0.000% | 2,698,285,017 |
| Lower Pine River | 12 | 2,225,800 | 1.617% | 0 | 0.000% | 1 | 650,000 | 0.472% | 0 | 0.000% | 137,619,889 |
| PINE TOTAL | 26 | 2,656,154 | 0.044% | 0 | 0.000% | 2 | 655,475 | 0.011% | 125 | 0.000% | 6,088,001,535 |

| 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 2023 (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 2023 (m³) | TOTAL VOLUME WITHDRAWN AS % OF MEAN ANNUAL RUNOFF | MEAN ANNUAL RUNOFF (m³) |
| KISKATINAW RIVER (sub-basin of Peace River) | | | | | | | | | | | |
| West Kiskatinaw River | 0 | | | | | 0 | | | | | 117,515,115 |
| East Kiskatinaw River | 0 | | | | | 0 | | | | | 105,452,962 |
| Middle Kiskatinaw River | 1 | 17,400 | 0.031% | 0 | 0.000% | 1 | 600,000 | 1.065% | 0 | 0.000% | 56,347,972 |
| Middle Kiskatinaw Total (incl. West & East) | 1 | 17,400 | 0.006% | 0 | 0.000% | 1 | 600,000 | 0.215% | 0 | 0.000% | 279,316,049 |
| Lower Kiskatinaw River | 17 | 589,686 | 0.658% | 6,571 | 0.007% | 10 | 3,198,317 | 3.567% | 160,730 | 0.179% | 89,659,847 |
| KISKATINAW TOTAL | 18 | 607,086 | 0.165% | 6,571 | 0.002% | 11 | 3,798,317 | 1.029% | 160,730 | 0.044% | 368,975,896 |
| PEACE RIVER | | | | | | | | | | | |
| Peace Arm | 0 | | | | | 3 | 9,125,000 | N/A | 2,080 | N/A | N/A |
| Upper Peace River | 0 | | | | | 1 | 10,000 | | 4,245 | | 36,423,413,429 |
| Lynx Creek | 0 | | | | | 0 | | | | | 30,436,635 |
| Farrell Creek | 0 | | | | | 0 | | | | | 91,018,843 |
| Cache Creek | 0 | | | | | 8 | 677,605 | 0.908% | 13,980 | 0.019% | 74,603,546 |
| Pouce Coupe River | 9 | 354,016 | 0.138% | 25,046 | 0.010% | 4 | 1,650,200 | 0.645% | 0 | 0.000% | 255,686,202 |
| Lower Peace River | 5 | 381,200 | 0.333% | 0 | 0.000% | 8 | 4,204,919 | 3.673% | 7,242 | 0.006% | 114,470,012 |
| PEACE TOTAL (incl. Kisk/Pine/Moberly/Half/Beatton) | 113 | 6,547,711 | 0.014% | 39,962 | 0.000% | 100 | 30,639,082 | 0.064% | 549,241 | 0.001% | 47,891,853,572 |
| SMOKY RIVER | | | | | | | | | | | |
| Smoky River | 0 | | | | | 2 | 6,595 | 0.000% | 192 | 0.000% | 2,669,506,123 |
| SMOKY TOTAL | 0 | | | | | 2 | 6,595 | 0.000% | 192 | 0.000% | 2,669,506,123 |
| MUSKWA RIVER (sub-basin of Fort Nelson River) | | | | | | | | | | | |
| Upper Muskwa River | 0 | | | | | 0 | | | | | 1,725,201,511 |
| Middle Muskwa River | 0 | | | | | 0 | | | | | 1,973,711,816 |
| Middle Muskwa Total (incl. Upper Muskwa) | 0 | | | | | 0 | | | | | 3,698,913,327 |
| Lower Muskwa River | 1 | 22,000 | 0.003% | 0 | 0.000% | 0 | | | | | 646,841,560 |
| MUSKWA TOTAL | 1 | 22,000 | 0.001% | 0 | 0.000% | 0 | 0 | 0.000% | 0 | 0.000% | 4,345,754,887 |
| PROPHET RIVER (sub-basin of Fort Nelson River) | | | | | | | | | | | |
| Upper Prophet River | 0 | | | | | 1 | 36,593 | 0.002% | 2,894 | 0.000% | 1,470,271,289 |
| Middle Prophet River | 2 | 1,600 | 0.000% | 0 | 0.000% | 0 | | | | | 621,428,680 |
| Middle Prophet Total (incl. Upper Prophet) | 2 | 1,600 | 0.000% | 0 | 0.000% | 1 | 36,593 | 0.002% | 2,894 | 0.000% | 2,091,699,969 |
| Lower Prophet River | 2 | 10,400 | 0.004% | 357 | 0.000% | 0 | | | | | 272,262,427 |
| PROPHET TOTAL | 4 | 12,000 | 0.001% | 357 | 0.000% | 1 | 36,593 | 0.002% | 2,894 | 0.000% | 2,363,962,396 |

| 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 2023 (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 2023 (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 | 0 | | | | | 3 | 3,117,689 | 0.386% | 145,967 | 0.018% | 807,771,692 |
| Middle Sikanni Chief River | 21 | 258,087 | 0.027% | 13,858 | 0.001% | 4 | 29,203 | 0.003% | 1,320 | 0.000% | 949,755,794 |
| Middle Sikanni Chief Total (incl. Upper Sikanni) | 21 | 258,057 | 0.015% | 13,858 | 0.001% | 7 | 3,146,892 | 0.179% | 147,287 | 0.008% | 1,757,527,486 |
| Lower Sikanni Chief | 12 | 86,724 | 0.010% | 0 | 0.000% | 0 | | | | | 875,678,142 |
| SIKANNI CHIEF TOTAL | 33 | 344,811 | 0.013% | 13,858 | 0.001% | 7 | 3,146,892 | 0.120% | 147,287 | 0.006% | 2,633,205,628 |
| FORT NELSON RIVER | | | | | | | | | | | |
| Kahntah River | 6 | 9,000 | 0.002% | 0 | 0.000% | 2 | 10,950 | 0.003% | 668 | 0.000% | 400,582,903 |
| Fontas River | 2 | 11,000 | 0.002% | 0 | 0.000% | 0 | | | | | 591,531,903 |
| Fontas Total (includes Kahntah) | 8 | 20,000 | 0.002% | 0 | 0.000% | 2 | 10,950 | 0.001% | 668 | 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) | 41 | 364,811 | 0.008% | 13,858 | 0.000% | 10 | 3,157,842 | 0.073% | 147,955 | 0.003% | 4,303,636,908 |
| Snake River | 0 | | | | | 0 | | | | | 310,763,522 |
| Sahtaneh River | 12 | 40,438 | 0.009% | 1,075 | 0.000% | 0 | | | | | 474,904,729 |
| Middle Fort Nelson River | 5 | 74,000 | 0.014% | 0 | 0.000% | 0 | | | | | 515,348,901 |
| Middle Ft Nelson Total (incl. Upper Ft. Nelson total, Muskwa Total, Prophet Total, Snake, Sahtaneh) | 63 | 513,249 | 0.004% | 15,290 | 0.000% | 11 | 3,194,435 | 0.026% | 150,849 | 0.001% | 12,314,371,343 |
| Kiwigana River | 14 | 774,100 | 0.175% | 1,946 | 0.000% | 0 | | | | | 441,657,543 |
| Lower Fort Nelson River | 2 | 40,000 | 0.013% | 350 | 0.000% | 0 | | | | | 312,768,938 |
| FORT NELSON TOTAL | 79 | 1,327,349 | 0.010% | 17,586 | 0.000% | 10 | 3,194,435 | 0.024% | 150,849 | 0.001% | 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 APPROVED WITHDRAWAL LOCATIONS | TOTAL VOLUME APPROVED (m³) | TOTAL VOLUME APPROVED AS % OF MEAN ANNUAL RUNOFF | TOTAL VOLUME WITHDRAWN IN 2023 (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 2023 (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 | 1 | 15,544 | 0.008% | 0 | 0.000% | 0 | | | | | 183,879,851 |
| Dunedin River | 0 | | | | | 0 | | | | | 820,464,167 |
| Lower Liard River | 4 | 44,220 | 0.004% | 3,886 | 0.000% | 0 | | | | | 1,236,634,664 |
| LIARD TOTAL (incl. Fort Nelson) | 84 | 1,387,113 | 0.002% | 21,472 | 0.000% | 10 | 3,194,435 | 0.005% | 150,849 | 0.000% | 64,373,155,962 |
| PETITOT RIVER | | | | | | | | | | | |
| Sahdoanah River | 3 | 28,000 | 0.011% | 3,595 | 0.001% | 0 | | | | | 252,625,362 |
| Upper Petitot River | 11 | 83,000 | 0.006% | 0 | 0.000% | 0 | | | | | 1,476,579,488 |
| Tsea River | 6 | 84,310 | 0.019% | 72 | 0.000% | 0 | | | | | 434,062,484 |
| Middle Petitot River | 13 | 73,700 | 0.011% | 570 | 0.000% | 0 | | | | | 698,562,753 |
| Middle Petitot Total (incl. Sahdoanah, Upper Petitot, Tsea) | 33 | 269,010 | 0.009% | 4,237 | 0.000% | 0 | 0 | 0.000% | 0 | 0.000% | 2,861,830,087 |
| Lower Petitot River | 10 | 62,400 | 0.007% | 380 | 0.000% | 0 | | | | | 904,314,069 |
| PETITOT TOTAL | 43 | 331,410 | 0.009% | 4,617 | 0.000% | 0 | 0 | 0.000% | 0 | 0.000% | 3,766,144,156 |
| HAY RIVER | | | | | | | | | | | |
| Upper Kotcho River | 2 | 8,171 | 0.003% | 2,037 | 0.001% | 0 | | | | | 311,519,217 |
| Kyklo River | 8 | 32,720 | 0.022% | 836 | 0.001% | 0 | | | | | 145,897,691 |
| Shekilie River | 22 | 292,400 | 0.065% | 0 | 0.000% | 0 | | | | | 450,747,494 |
| Lower Kotcho River | 1 | 6,000 | 0.002% | 0 | 0.001% | 0 | | | | | 311,519,217 |
| Lower Kotcho Total (includes Upper Kotcho, Kyklo, Shekilie) | 33 | 339,291 | 0.028% | 2,873 | 0.000% | 0 | 0 | 0.000% | 0 | 0.000% | 1,219,683,619 |
| Hay River | 24 | 174,000 | 0.032% | 10,994 | 0.002% | 0 | | | | | 538,672,352 |
| HAY TOTAL | 57 | 513,291 | 0.029% | 13,867 | 0.001% | 0 | 0 | 0.000% | 0 | 0.000% | 1,758,355,971 |
| CHINCHAGA RIVER | | | | | | | | | | | |
| Chinchaga River | 0 | | | | | 0 | | | | | 109,492,680 |
| CHINCHAGA TOTAL | 0 | | | | | 0 | 0 | 0.000% | 0 | 0.000% | 109,492,680 |
| OTHER (outside Northeast B.C.) | 236 | 5,810,651 | N/A | 144,925 | N/A | 4 | 45,176,293 | N/A | 16,320 | N/A | N/A |
| GRAND TOTAL | 533 | 14,590,176 | 0.012% | 244,843 | 0.000% | 116 | 79,016,405 | 0.066% | 716,604 | 0.001% | 120,568,508,464 |

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Annual water reports and quarterly updates are available on the BCER website at <https://www.bc-er.ca/data-reports>.

For questions regarding this report or for digital data files, please contact Communications@bc-er.ca.



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