

# Water Used in Natural Gas Activities

## Why is Water Used?

Water is a necessary element in the development of natural gas resources. The largest use of water for oil and gas activities is for hydraulic fracturing. It is also used for drilling, washing machinery, dust control, hydrostatic testing and freezing ice roads. Water use is permitted to operators through water licences and short-term water use approvals of both surface water and groundwater resources. The Commission requires industry to submit quarterly water use.

## How Much Water is Used?

Water use is monitored by Commission experts, who have the tools and expertise to ensure water resources are managed responsibly. Each quarter, the Commission produces a summary of water allocation and use for oil and gas activities organized by water management basins - in 2017, short-term water use approvals and oil and gas related water licences accounted for 0.003 per cent of total volume of mean annual runoff in northeast B.C.

### The NorthEast Water Tool (NEWT)

#### Omineca Water Tool (OWT)

#### NorthWest Water Tool (NWWT)

[bcogc.ca/public-zone/water-information](http://bcogc.ca/public-zone/water-information)

GIS-based hydrology decision-support tools developed in partnership by the Commission and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. They provide guidance on water availability across northern B.C. and support the decision-making process for water use approvals and licences.

### The Water Portal

[bcogc.ca/public-zone/water-information](http://bcogc.ca/public-zone/water-information)

A map-based water information tool designed to provide public access to a wide range of water-related data and information in northeast B.C. The data is displayed with flexible charts and analytical tools to assist users to interpret the data.

### FracFocus.ca

Website provides information on hydraulic fracturing, fracturing fluids, groundwater and surface water protection and related oil and gas activities.



## How is Water Managed?

As of mid-2018, there were 51 active oil and gas related licences, representing 54 withdrawal locations, held by 13 companies.

Regulating water used for oil and gas activities is the Commission's responsibility. In recent years, as water use increased, the Commission has put considerable resources into better understanding water availability and water use in northeast B.C. The overall goal is to ensure the water needs of the environment and other users are addressed before allocating water for industry use.

Companies are continually seeking ways to reduce freshwater use including sources such as recycled hydraulic fracturing flowback water and the use of unpotable water from deep wells.

The Commission can suspend industry water use in times of drought, as took place in northeast B.C. in 2010, 2012, 2014, 2017, 2018 and 2019.



### For Further Information

Email [ogc.communications@bcogc.ca](mailto:ogc.communications@bcogc.ca) or call 250-794-5200

24 Hour Incident Reporting for Industry 1-800-663-3456

This information is published by the BC Oil and Gas Commission and is available online at [www.bcogc.ca](http://www.bcogc.ca)

## What is New at the Commission?

- ✓ Commission staff are designated as Regional Water Managers and Assistant Regional Water Managers, which provides authority to review water licences for oil and gas purposes, and approve, when appropriate.
- ✓ The Commission developed an electronic submission process for all oil and gas activity permit applications. The Application Management System (AMS) transformed paper processing of multiple applications into a streamlined online process.
- ✓ The **Water Sustainability Act** came into effect in 2016 resulting in changes to surface water and groundwater allocation processes resulting in more conservative allocation of surface water and groundwater resources, and increased protection of aquatic ecosystems.
- ✓ In an effort to increase transparency for both statutory decision makers, public and industry and to manage the cumulative effects of water use, the Commission developed map-based tools: NorthEast Water Tool (which led to the), NorthWest Water Tool and the Omineca Water Tool.



### SUMMARY OF SHORT-TERM APPROVAL AND USE FOR OIL AND GAS ACTIVITIES FROM JANUARY TO DECEMBER 2017

	Q1	Q2	Q3	Q4
Companies with Active Approvals	45	42	43	42
Active Approvals	198	238	259	271
Approved Withdrawal Locations	763	720	696	685
Volume Available for Use (m <sup>3</sup> )	13,030,214	16,198,738	15,622,886	11,719,925
Cumulative Volume Reported Withdrawn (m <sup>3</sup> )	271,537	818,700	1,607,674	2,005,057

source: Quarterly Oil and Gas Water Management Summary - Fourth Quarter 2017  
[www.bcogc.ca/public-zone/water-information](http://www.bcogc.ca/public-zone/water-information)

## How Do We Proactively Regulate?

The Commission has the legislative authority to make decisions on proposed oil and gas activities. While the Commission does not set policy, the diverse expertise and experience of Commission staff provides critical insight at every level of oil and gas development. This knowledge base provides perspective through scientific evidence, guidance, best practices, reports, tools and analysis.

Companies looking to explore, develop, produce, and market oil and gas resources in B.C. must apply to the Commission. The Commission reviews, assesses and makes decisions on these applications. This consolidated single-window authority provides not only a one-stop place for all oil and gas and associated activity requirements, but a consistent application, decision, regulatory and compliance authority. Stakeholders work with one agency; therefore, the Commission serves the public interest by having an all-encompassing review process for oil and gas activities.