



Water Licence
Application Manual
VERSION 2.0: October 2023

About the Regulator

The BC Energy Regulator (Regulator) is the single-window regulatory agency with responsibilities for regulating oil and gas activities in British Columbia, including exploration, development, pipeline transportation and reclamation.



The Regulator's core roles include reviewing and assessing applications for industry activity, consulting with First Nations, ensuring industry complies with provincial legislation and cooperating with partner agencies. The public interest is protected by ensuring public safety, protecting the environment, conserving petroleum resources and ensuring equitable participation in production.

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.

Additional Guidance

As with all Regulator documents, this document does not take the place of applicable legislation. Readers are encouraged to become familiar with the acts and regulations and seek direction from Regulator staff for clarification.

The Regulator publishes both application and operations manuals and guides. The application manual provides guidance to applicants in preparing and applying for permits and the regulatory requirements in the planning and application stages. The operation manual details the reporting, compliance and regulatory obligations of the permit holder. Regulator manuals focus on requirements and processes associated with the Regulator's legislative authorities. Some activities may require additional requirements and approvals from other regulators or create obligations under other statutes. It is the applicant and permit holder's responsibility to know and uphold all legal obligations and responsibilities. For example, Federal Fisheries Act, Transportation Act, Highway Act, Workers Compensation Act and Wildlife Act.

Throughout the document there are references to guides, forms, tables and definitions to assist in creating and submitting all required information. Additional resources include:

- [Glossary and acronym listing](#) on the Regulator website.
- [Documentation and guidelines](#) on the Regulator website.
- [Frequently asked questions](#) on the Regulator website.
- [Advisories, bulletins, reports and directives](#) on the Regulator website.
- [Regulations and Acts](#) listed on the Regulator website.

In addition, this document may reference some application types and forms to be submitted outside of the Application Management System but made available on the Regulator's website. Application types and forms include:

- Heritage Conservation Act, Section 12
- Road use permits
- Water licences
- Master licence to cut
- Certificate of restoration
- Waste discharge permit
- Experimental scheme application
- Permit extension application

Table of Revisions

The Regulator is committed to the continuous improvement of its documentation. The table below summarizes revisions to the Water Licence Application Manual. Revisions are posted to the documentation section of the Regulator's website at the beginning of every month and are effective one month after posting, unless otherwise noted. For more information about the Regulator's monthly revisions, and for details of this month's revisions, please visit the [Documentation section](#) of the Regulator's website.

Stakeholders who would like to provide input or feedback on Regulator documentation may send comments to servicedesk@bc-er.ca.

Posted Date	Effective Date	Chapter	Summary of Revision(s)
March 1, 2016	March 1, 2016	All	Updated to reflect the implementation of the Water Sustainability Act . For more information, refer to INDB 2016-05 on the Regulator's website.
June 23, 2016	June 23, 2016	Chapter 1, 2, 3, Appendix B	Updated to reflect the release of the Oil and Gas Activity Application Manual.
January 8, 2018	February 1, 2018	Chapter 3	Removed "The Regulator does not have a Dam Safety Officer designated under the WSA. Water licence applications involving dams will be referred to the Dam Safety Officer with the Ministry of Forests, Lands and Natural Resource Operations" from Section C as the Regulator now has a designated Dam Safety Officer.
May 8, 2019	June 1, 2019	Various	Updated to reflect changes to the Water Management Plan requirements, WSA updates, and Environmental Flow Needs assessment.
November 8, 2019	December 1, 2019	Chapter 7	Updated the Groundwater Licences section.
December 22, 2021	December 22, 2021		Minor edits clarifying authorizations and licensing under WSA
October 25, 2023	October 25, 2023	Various	Replace BCOGC with BCER; OGAA with ERAA; new logos, references and associations logos, references and associations

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Preface

The Water Licence Application Manual is intended to provide oil and gas operators an overview of the requirements and procedures for applying for and obtaining a water licence from the Regulator.

The manual has been prepared to be as comprehensive as possible; however it is not all encompassing and may not cover all situations. Where circumstances or scenarios arise and are not covered by the manual, contact the Regulator's Water Manager or Assistant Water Manager for assistance.

Manual Structure

Beginning with pre-application requirements, this manual guides the user through application preparation; the Regulator's review and determination process; licence terms, transfers, cancellations and abandonment; pre- and post-approval requirements; and compliance. The appendices include documents to reference when compiling information required by the Regulator, as well as the requirements for supporting documentation and assessments and the preparation of a Water Management Plan.

Manual Scope

The manual is limited in scope to the Regulator's application processes and the authorities and requirements established within the [Energy Resource Activities Act](#) (ERAA) or specified enactments established thereunder and the [Water Sustainability Act \(WSA\)](#). Carrying out oil and gas and related activities may require additional approvals from other regulators or create obligations under other statutes. It is the permit holder's responsibility to know and uphold all of their legal obligations.

Additional Guidance

Additional BCER manuals and guidelines are available in the [Documentation section](#) of the Regulator's website. The [glossary](#) page of the Regulator's website provides a comprehensive list of common terms. ERAA and its regulations, the WSA, the [Water Sustainability Regulation \(WSR\)](#), the [Groundwater Protection Regulation \(GPR\)](#), and the [Dam Safety Regulation \(DSR\)](#) provide the primary source for legal definitions.

Compliance and Enforcement

This document does not replace legislation or affect legislative requirements. All licensees are ultimately responsible for ensuring they understand and meet all requirements of ERAA, WSA and their licence conditions. Should a person not comply with legislated requirements or their water licence conditions the Regulator may take compliance and enforcement actions. For more information regarding the Regulator's Compliance and Enforcement processes, please refer to the [Compliance and Enforcement Manual](#).

Chapter 1:

Water Licensing Overview

Water is a Crown resource. The Water Sustainability Act vests “the water at any time in a stream” and the “percolation and flow of groundwater” to the Crown. The use of water from a stream or an aquifer for an oil and gas or related activity requires a water licence under Section 9 or a short-term water use approval under Section 10 issued under the [Water Sustainability Act](#) (WSA) from the BC Energy Regulator (the Regulator or BCER). This manual has been developed to aid applicants through the process of obtaining a water licence under Section 9 of the WSA.

BCER staff are designated as Water Managers and Assistant Water Managers by the Deputy Minister of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), with the authority to administer the Water Sustainability Act for water licensing for the oil and gas sector.

Mandatory licensing, approvals, and reporting requirements enable the Regulator to monitor and track water consumption and withdrawal locations, thereby bettering sustainable water management.

The primary objective for water licensing is that of efficient and equitable access to Crown water resources to support sound development of the oil and gas sector, in a manner ensuring environmental protection and public safety and protection of First Nations and public rights interests, or existing water rights.

Water Licence Applications

This manual is specific to the process and issuance of water licences whereas; information on the Regulator’s processes for short-term water use approvals can be referenced in Section 4.7 of the [Oil and Gas Activity Application Manual](#).

A water licence is commonly used as authority to access water for activities exceeding 24 months. These activities may include activities common to the oil and gas industry such as: industrial purpose, oil and gas purpose, or storage purpose. It is the applicant’s responsibility to be aware of the complete list of purposes and their associated sub-purposes that can be authorized under the WSA and ensure their application reflects the purpose(s) appropriately. When issued, a water licence provides rights to long-term water access through the “first in time, first in right” (FITFIR) principle of the Water Sustainability Act.

Applications and supporting information for a water licence are submitted using the FLNRORD FrontCounterBC system. A link to this system can be found on the Regulator’s online application portal, located [here](#). A summary of the information documentation requirements for online submission of a water licence application is provided in Appendix A.

Details for specific supporting information requirements are provided in:

- Appendix B (Water Management Plan template)
- Appendix C (Hydrogeological Assessment for Water Source Wells)
- Appendix D (Groundwater Assessment for Water Storage Sites)
- Appendix E (Construction Plans), and
- Appendix F (Water Licence Application Fee Table).

Water Licences

Water licences will be issued under Section 9 of the Water Sustainability Act and entitle the holder to the rights granted under Section 7 of the Water Sustainability Act in a manner specified by the licence.

Water licences associated with oil and gas or related activities will generally be issued with terms ranging from 5 to 20 years, reflecting the intended purpose(s) and/or development associated with the application.

Associated Authorizations or Permits

If the proposed activity, as described in the water licence application, will require associated developments (roads, water storage sites, pipelines and / or facilities, for example), is associated with a water source well permitted under ERAA, and/or requires the use of Crown land, the Regulator may also issue concurrent authorizations or approvals related to these requirements.

These activity types require the submission of separate application packages through the Application Management System (AMS) to the Regulator.

Applicants are encouraged to submit applications for all operations associated with a water licence prior to or at the same time as the water licence application.

For an ERAA regulated water source well, defined in the Petroleum and Natural Gas Act as “a hole in the ground drilled to obtain water for the purpose of injecting water into an underground formation in connection with the production of petroleum or natural gas”, an ERAA permit must be obtained, prior to the issuance of a water licence.

For information about applications related to associated permits or authorizations, please refer to the [Oil and Gas Activity Application Manual](#).

Chapter 2: Pre-Application Requirements

Companies applying to engage in oil and gas or related activities in B.C. for the first time must ensure all pre-application requirements have been met. These requirements may include registration of the business.

For information about the registration, please refer to section 2.1 of the Regulator's [Permit Operations and Administration Manual](#).

Chapter 3:

Determination of Water Source Type

The WSA vests “the water at any time in a stream” and the “percolation of flow of groundwater” to the Crown.

The following provides an overview of WSA definitions pertaining to “surface water” and “groundwater” and provides guidance to determine the water source type.

Surface Water

The WSA defines a “stream” as:

(a) a natural watercourse, including a natural glacier course, or a natural body of water, whether or not the stream channel of the stream has been modified, or

(b) a natural source of water supply,

including, without limitation, a lake, pond, river, creek, spring, ravine, gulch, wetland or glacier, whether or not usually containing water, including ice, but does not include an aquifer.”

A wetland is further defined in the WSA as “a swamp, marsh, fen or prescribed feature”.

For water licence applications related to oil and gas activities, and where the water source type is “Surface Water”, the point of diversion is from a (A) lake or pond or (B) a river or stream, as outlined below.

A. Lake/Pond

Lakes and ponds are both “streams” as defined in the Water Sustainability Act. A lake is a body of relatively still fresh water, localized in a basin. Lakes and ponds can be contrasted with rivers or streams, which normally flow. There is no universally accepted criteria to distinguish ponds from lakes, however, as general guidance, ponds can range in size from a few square metres to approximately two hectares, while lakes are generally larger than approximately two hectares. Most lakes are filled and drained by rivers and streams.

B. River/Stream

A river/stream is a natural watercourse of freshwater flowing towards an ocean/sea, lake or other river, sometimes drying up prior to reaching another water body. Small rivers may also be called by several other names, including stream, creek, brook, rivulet, tributary, rill and crick. A stream in this manual specifically refers to a “stream” as defined in the Water Sustainability Act.

Groundwater

The WSA defines “groundwater” as “water naturally occurring below the surface of the ground”.

Under the WSA, all groundwater is considered to be from an “aquifer” and therefore requires an authorization for diversion and use. The WSA defines an aquifer as:

- “(a) a geological formation,
 - (b) a group of geological formations, or
 - (c) a part of one or more geological formations
- that is groundwater bearing and capable of storing, transmitting and yielding groundwater.”

For water licence applications related to oil and gas activities, the water source type is “Groundwater” if the point of diversion is from a (A) water source well or (B) a water supply well as further described below:

A. Water Source Well

Water source wells are defined in the Petroleum and Natural Gas Act (PNG Act) as “a hole in the ground drilled to obtain water for the purpose of injecting water into an underground formation in connection with the production of petroleum or natural gas” (i.e., water floods, hydraulic fracturing, etc.). A water source well requires a well permit from the Regulator.

Water source wells also require a concurrent authorization (licence or use approval) to divert and use groundwater, except if accessing deep groundwater, as defined in Section 51 of the Water Sustainability Regulation (WSR).

B. Water Supply Well

Water supply wells are defined under the Groundwater Protection Regulation (GPR) as “a well used or intended to be used for the purpose of exploring for, diverting or using groundwater and includes a water source well, but does not include a drainage well, dewatering well or remediation well”. The WSA defines a well, as any artificial opening in the ground that receives water via groundwater.

Note:

An authorization is required for water supply wells and ERAA regulated water source wells as per the WSA, for the use of groundwater above the depth threshold defined in Part 5 of the WSR described here as:

- All groundwater < 300 m deep
- All groundwater between 300 m deep and < 600 m deep that lies above the “base of fish scales” geological marker or an older marker as defined in the WSR that distinguishes between sedimentary bedrock of Lower Cretaceous age and Upper Cretaceous age.

Use of deep groundwater as defined in the Water Sustainability Regulation does not require an authorization under the WSA but, will likely require authorization under ERAA if the groundwater is accessed by a water source well (discussed above). See Appendix C for additional information.

Information on permitting procedures for water source wells can be referenced in [Supplementary Information for Water Source Wells](#) and the [Oil and Gas Activity Application Manual](#).

Water source wells and water source well projects or facilities, designed to be operated so that groundwater is extracted at rates greater than or equal to 75 litres per second (L/s) may be reviewable projects under the [BC Reviewable Projects Regulation](#) and thus subject to additional requirements under the [BC Environmental Assessment Act](#). It is the responsibility of the proponent to verify whether their project is a reviewable project. Any questions on application of the Environmental Assessment Act should be directed to the BC Environmental Assessment Office.

Water Storage Sites

Water storage sites are earthen excavations, with a berm or without, used to store or divert water. These can include dugouts and reservoirs. Some water storage sites may have been originally constructed as borrow pits and are now being evaluated for their potential to serve as this succeeding purpose.

Water accumulating in water storage sites can be groundwater via groundwater infiltration, surface water via stream diversions or runoff, or a combination of the above. Water storage sites that accumulate water via surface water or groundwater require an authorization under the WSA. Where groundwater accumulation cannot be prevented or is expected to contribute to the accumulated volumes, an estimate of the percent of groundwater contribution is to be provided. An authorization is not required where it is demonstrated that all water accumulated in the storage site comes from precipitation or surface runoff.

Refer to the [Water Policy Bulletin Authorization Requirements for Storage and Use of Water in Dugouts](#) for additional information.

All primary water storage sites, including dams (reservoirs), must be identified when applying for a water licence. Primary storage sites are the locations of initial water storage following diversion from a stream or aquifer.

Dams and the Dam Safety Regulation

In some cases the characteristics (physical or potential for capacity) of the water storage site may result in it being classified as a dam under the Dam Safety Regulation ([DSR](#)).

A dam is defined as “a barrier constructed for the purpose of enabling the storage or diversion of water diverted from a stream or an aquifer, or both, or through groundwater infiltration”. Dams regulated under the DSR are classified as:

- 1 metre or more in height and capable of impounding a volume greater than 1,000,000 cubic metres (m³);
- 2.5 metres or more in height and capable of impounding a volume greater than 30,000 m³;

- 7.5 metres or more in height;
- having a total storage volume of greater than 10,000 m³; or
- a classification of significant, high, very high or extreme.

To be exempt from the DSR, a water storage site must have both a berm less than 7.5 metres in height and a total storage volume of less than 10,000 m³. A valuable graphic depicting this criteria can be found in [Industry Bulletin 2016-26](#).

Please note that the volume criteria referred to under the DSR refers to the “live storage” of the dam (water within the reservoir that is available for movement under the influence of gravity); refer to the DSR for further details.

Where a water storage site is classified as a dam under the DSR, the licence holder must comply with the regulation. Regulated dams require a water licence issued under the Act and must meet the requirements specified in the DSR. Applicants should refer to FLNRORD’s [Dam Safety website](#) or the [BCOGC – Regulated Dams](#) which outlines the submission requirements for proposed regulated dams.

Questions regarding a potential dam or a Dam Safety Regulation can be directed to a Regulator’s Dam Safety Officer at dams@bc-er.ca.

Chapter 4: Preparing a Water Licence Application

To obtain a water licence related to an oil and gas activity, applicants must submit a completed water licence application package to the Regulator through [FrontCounterBC](#). A water licence application package provides the Regulator with the information necessary to complete a thorough review of the proposed activity and to issue a decision.

This chapter is intended to provide applicants with a comprehensive overview of the regulations and requirements to be considered and/or carried out for the assembly of an application package.

Application Content and Information

As outlined above, water licence applications must be submitted through FrontCounterBC. In those submissions, applicants must ensure that their applications contain the mandatory information requirements specified in [Section 3](#) Water Sustainability Regulation. The [Water Licence Application Guide](#) provides an application overview. Appendix A outlines supplemental information required as part of the application package.

Determination of Water Source Type

A first step in preparing a water licence application package is to determine the water source type as being “surface water” or “groundwater”, as application requirements depend on water source type.

Considerations for Water Licence Planning & Design

Applicable Regulatory Requirements

The water licence application package must be based on planning and design that considers all applicable regulatory requirements under the Water Sustainability Act and associated regulations (Groundwater Protection Regulation and Water Sustainability Regulation, Dam Safety Regulation, as applicable).

Depending on the circumstances, other legislation may also apply to elements of the application. Other legislation that most commonly applies are the Agriculture Land Commission ([ALC](#)) Act (administered by the Regulator through its Delegation Agreement, etc. as applicable and as outlined in the Regulator’s guidance documents) where works under a licence are proposed on the ALR and the [Environmental Assessment Act](#) where proposed dams, groundwater pumping rates or annual diversion volume of surface water exceed the thresholds in the Reviewable Projects Regulation.

Applicable regulatory requirements and application package deliverables will depend on the nature of the water licence being applied for as well as the associated proposed works.

Surface Agreement for Activities on Private Land

The Regulator may issue a water licence for a point of diversion or works on or adjacent to private land, however, the issuance of the licence does not authorize access to private land.

Where activities associated with a water licence are to be carried out on private land – such as pumps or access roads – applicants are encouraged to develop a surface agreement with the land owner. In cases where a surface agreement with the private land owner cannot be developed, contact the [Surface Rights Board](#) for assistance.

Where a dam, to which the Dam Safety Regulation applies, is proposed on private land, the Regulator will require the water licence applicant to demonstrate that they have effective control over the site of the dam either through fee simple ownership or a lease that extends for the expected life of the dam.

Activities on Crown Land

A permit must be held to conduct oil and gas activities on Crown Land. Applications for Crown Land access are submitted to the Regulator through the Application Management System (AMS).

Required Notice of Land Owners and Rights Holders

Section 13(1) of the Water Sustainability Act requires applicants to give notice of the application to any of the groups identified below whose rights the decision-maker considers are likely to be detrimentally affected if the application is granted. Section 13(2) of the Act requires that these notices must include the name of the decision maker and the address to which objections to the application may be delivered. Applicants are therefore encouraged to contact the Regulator early in their application preparation process in order to receive this direction on notice requirements and content. To constitute a notice required under the Water Sustainability Act, delivery of documents and information must be made in accordance with Section 117 of the Act. It is recommended that the rights holder notification be completed 14 days prior to submission of the water licence application.

Water Authorization Holders, Change Approval Holders and Applicants For Authorizations / Change Approvals: Applicants must notify existing holders or applicants of water authorizations (water licence or short term use approval) or change approvals (ie. changes in and about a stream), whose water rights may be detrimentally affected by the licence being applied for.

These rights holders will be downstream of the point-of-diversion being applied for, on the same stream or lake, or utilizing water from the same aquifer. They also could be affected by having their works (or proposed works) adversely affected by works under the new proposed licence. For water source well applications, these rights holders will usually be located in the same major watershed unit as depicted in the Northeast Water Tool (NEWT), Northwest Water Tool (NWWT), or Omineca Water Tool (OWT) map as the point-of-diversion under application. These tools can be found under [Water Information](#).

Existing and active water authorizations can be identified by using the Water Rights Databases or can be queried spatially through NEWT, NWWT, or OWT and [iMapBC](#).

Riparian Owners: The term “riparian owners” refers specifically to owners of land along a stream or lake. Those riparian owners close to the proposed point of diversion, whether upstream or downstream or who may be affected by fluctuations in water levels, erosion, deposition or access to the water body will normally be included in required notifications.

In the situation where the proposed point of diversion is on a lake, all riparian owners along the lake whose rights may be affected may need to be notified and engaged.

Land Owners Whose Land is Likely to be Physically Affected: Land owners include private land owners as well as those with a substantial interest in land such as Land Act tenures that provide for intensive occupation or use. These lands would be physically affected where works are proposed on them or where water diversions proposed under the application are significant enough to have a physical effect (for example where lake draw down will affect shorelines or adjacent riparian areas).

In addition, in a 2012 Environmental Appeal Board (EAB) decision on an appeal of a water licence (Decision No. 2012-WAT-013(c)), the EAB made a determination that treaty First Nations have broad land related rights that qualify them as land owners.

Please Note:

The concept of riparian owners does not exist for groundwater diversions.

Timelines for Rights Holder Engagement

Section 14(3) of the Water Sustainability Regulation specifies a rights holder who has been notified and who wishes to file an objection must deliver the objection within 30 days after the date the notice was given.

To ensure that rights holders have adequate time to review and comment on the application, notice to rights holders is recommended at least 14 days prior to submission of the water licence application. [Decisions on](#)

water licence applications will not be made until rights holder engagement has been completed to the satisfaction of the Water Manager or Assistant Water Manager as the case may be.

Unresolved Concerns

The Regulator encourages companies and the affected rights holder(s) to try to resolve identified concerns before contacting the Regulator.

If there are unresolved concerns, the applicant is required to include details of the concerns and the proposed mitigative actions and/or plan(s) with the application submission. The Regulator uses the Rights Holder Engagement documentation for evaluation, after which the Regulator may:

- Make a decision on the application, based on the engagement documentation;
- Recommend the company continue consultation; and/or
- Assist with dispute resolution through Landowner Liaisons.

Any unresolved concern will be a direct consideration in the decision making process and also opens up the possibility of a formal objection under the Act. If an objection is submitted in accordance with Section 13(3) of the Act, the objection process will normally delay any decision on an application.

Written Submissions From Rights Holders

Parties subject to notice under Section 13(1) of the Act may deliver a written submission to the Regulator about the application. If the submission constitutes an objection to the application and is received within the prescribed period, the objection process under Section 13 applies. If an affected party delivers a submission or an objection, the Regulator will provide a copy of the submission to the applicant.

Written submissions or objections made in conjunction with a water licence application are not to be confused with written submissions made under the Consultation & Notification Regulation as the former are subject to the WSA.

Application Deliverables for Rights Holder Engagement

Companies are required to submit a Rights Holder Engagement package to the Regulator with their water licence application. This package must include:

- The Rights Holder Engagement line list;
- The Rights Holder Engagement map;
- Copies of all notification letters sent;
- Copies of all correspondence received from notified parties; and

- Engagement Log

Engaging First Nations Prior to Application

Applicants are encouraged to work with First Nations to consider any environmental, heritage and/or community concerns impacted by oil and gas activity. The Regulator suggests applicants initiate and build relationships with First Nations communities by discussing the proposed activities with the communities during the project planning phase and to continue the relationship throughout the project lifecycle.

Applicants may contact the Authorization Manager to determine which First Nations the Regulator will engage respecting a specific application, and for advice about engaging First Nations.

Where pre-engagement occurs, an [Engagement Log](#) should be used to record all engagements and related details, and attached as a deliverable within the application package. Engagement logs may be considered in the decision-making process, however these engagements do not replace the First Nations consultations carried out by the Regulator.

Joint Works Agreement

If the proposed works will be connected to another licensee's authorized works a Joint Works Agreement, if concluded, must be submitted with the water licence application.

If joint works are intended but Agreement cannot be reached with the owner of those works, this must be identified in the application. In these situations, the WSA enables a Water Manager to require joint construction or use of works if it is determined that this will conserve water or avoid duplication of works.

Application Fees

All applicants must determine their application fees based on the proposed activity(ies) and its location(s), and submit them with the water licence application, payable to the Minister of Finance. Application fees are listed in Appendix F of this document. Failure to provide the necessary application fees will result in the application not proceeding through FrontCounterBC screening.

Application Submission

All water licence applications must be submitted through [FrontCounterBC](#). After FrontCounterBC has reviewed the application to confirm application completeness the application will be forwarded to the Regulator for review.

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All water licence applications are processed through FLNRORD's eLicensing System.

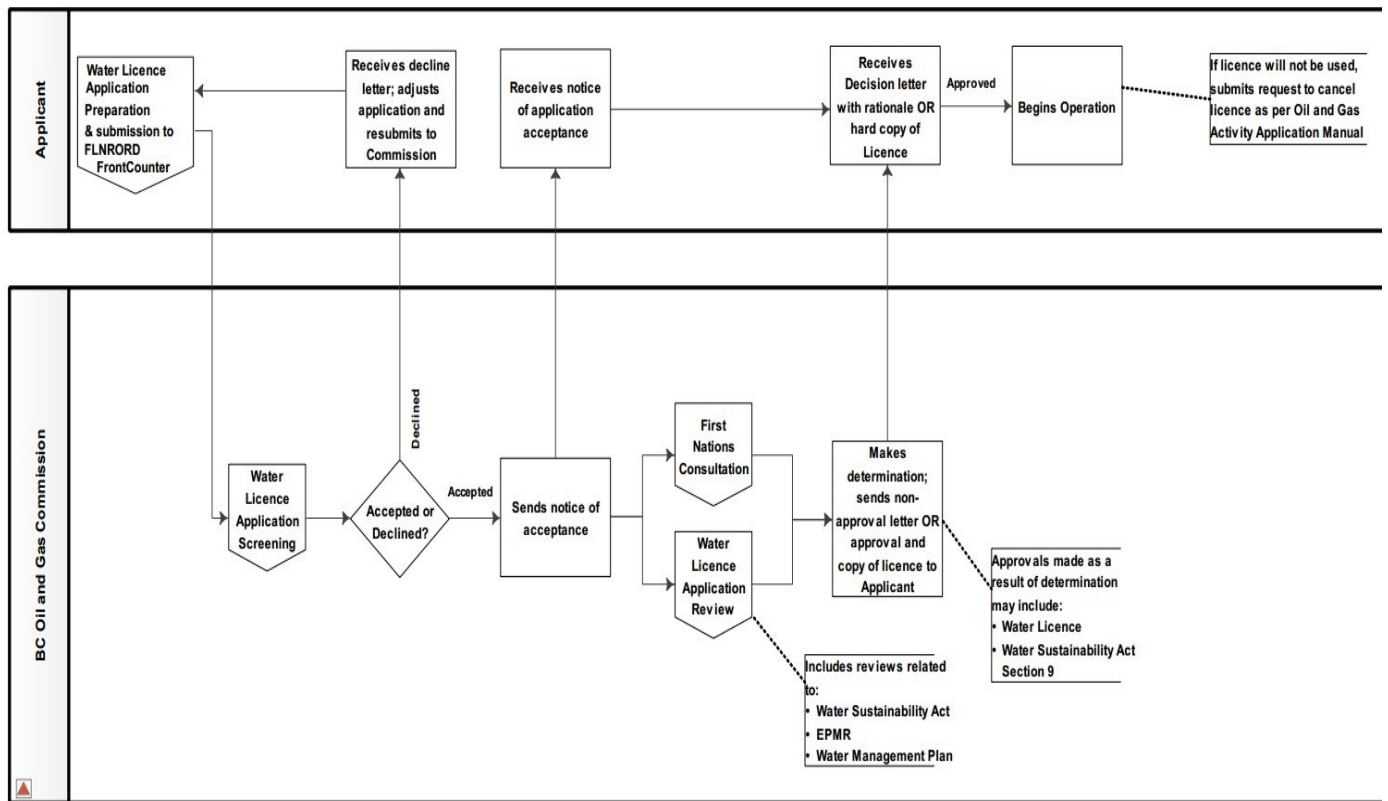
Chapter 5: Application Review & Determination Process

The Regulator completes a review and makes a decision related to all permit applications and amendments submitted for oil and gas and related activities. This chapter provides an overview of the Regulator’s application review and determination processes.

Application Review & Determination

The following process map includes the major steps of the Regulator’s application review and determination processes. The application screening, technical reviews and determination & distribution steps are touched on in more detail below.

Figure 5.1 Water Licence Application Review & Determination Process



Please Note:

After an application is submitted, the company is referred to as the “applicant”. Where an application is approved, the company is referred to as the “licence holder”.

Application Screening Phase

After an application is submitted through FrontCounterBC, it is screened by FrontCounterBC prior to the initiation of the BCER technical reviews.

Applications with missing or incorrect information such as payment of the application fee, First Nations packages or administrative information, will be returned to the applicant prior to the application entering the screening phase.

At the completion of application screening, applications will be either accepted for processing, or declined and returned to the applicant.

Declined Applications

Incomplete applications are declined and returned to the applicant. A rationale of why the application was declined is sent to the applicant by email. After any deficiencies are addressed, the application can be resubmitted. Applications that have been declined are reviewed in order of the resubmission date, not the date of original submission.

Accepted Applications

When all requirements are met, the application is accepted and is forwarded to the Regulator, after which the technical review(s) begin.

Application Technical Reviews

Depending on the application’s characteristics, location and other circumstances, the Regulator will carry out a suite of technical reviews which ensures the application meets all regulatory and guidance requirements. This technical review may include a review of potential land and habitat impacts, a hydrological or

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hydrogeological assessment, dam and reservoir specifics and safety information, and / or rights holder engagement requirements.

Where there are unresolved stakeholder concerns related to the subject application, the Regulator may facilitate dispute resolution activities to seek resolution where possible prior to moving the application forward to a final decision.

As a result of any of the technical reviews and First Nations consultation, staff may follow-up with the applicant to request additional information, mitigation strategies or justification, or to make adjustments to the application.

First Nations Consultation

As an agent of the Crown, the Regulator fulfills any provincial obligation to consult with First Nations prior to the authorization of activities under the WSA, ERAA, and related specified enactments.

Consultation process agreements have been negotiated between the Regulator and several First Nations. Where agreements are in place with a First Nation, the consultation process is guided by the agreement. Where agreements are not in place, the consultation process is guided by the B.C. Interim Consultation Process (ICP). All existing agreements with First Nations and the ICP can be found on the [First Nations page](#) of the Regulator's website. For water licence applications for locations outside of North East BC, and outside of area where Treaty 8 applies, applicants must contact the appropriate Authorizations Manager for direction pertaining to consultation with First Nations.

A detailed description of First Nations consultation requirements can be found in [Chapter 6.3](#) of the [Oil and Gas Activity Application Manual](#).

Application Withdrawal

To withdraw an application, an applicant is required to cancel an application through FrontCounterBC.

Please Note:

Application withdrawals will only be accepted prior to a determination being made on the application.

Determination & Distribution

After all reviews and e-licensing tasks are complete, the Regulator will make a determination to approve or reject the proposed activity. The determination is made based on the combined results from each of the technical reviews.

For approved water licence applications, the Regulator issues the licence under the WSA, which may include conditions of approval.

Distribution

Upon determination, the Regulator will provide notice of decision to the applicant. Where the application is approved, the licence will be distributed to the licensee. In addition, the Regulator distributes the permit to all First Nations communities consulted and any rights holders and / or landowners who have been notified and have objected to the proposed licence.

Chapter 6: Licence Term, Cancellations, Transfers & Replacements

This chapter summarizes the term of a water licence, as well as licence cancellations, abandonments, transfers, amendments and replacements for expiring licences.

Term of Licence

The “term” is the length of time for which the licence is valid and is specified in the licence. Water licences associated with oil and gas or related activities will generally be issued with terms of 5 to 20 years. The expiration date is noted on the licence.

Beneficial Use

The licence holder must make beneficial use of the water under licence for the purposes, terms and conditions specified in the licence. A licence holder may be required to make a declaration of beneficial use covering the preceding 3 year period and containing the information specified in Section 30 of the WSA.

Suspension and Cancellation of Rights

The rights of a licensee under a water licence can be suspended and/or cancelled by the Regional Water Manager for a number of reasons as specified in Section 94 of the Water Sustainability Act, including not making beneficial use of the water held under licence and failure to comply with a term or condition of the licence.

A licence holder may also cancel their licence if the licence will not be used.

Licence Transfers

Water licences are associated with appurtenant land, mine or undertaking(s) such as a petroleum lease(s), and are transferred in whole or part to the new owner should there be a conveyance or other dispensation of the appurtenant land, petroleum lease, mine or undertaking (including the petroleum lease).

Transfer of a water licence is done through FrontCounterBC.

Licence Expiry and Abandonment

A licence automatically terminates upon the date of expiry. When a licence is no longer required or being used, the licence holder can apply to FrontCounterBC to abandon the licence. Abandonment will usually involve the removal of associated works and the restoration of site disturbance.

Amendment of a Water Licence

A Water Manager or Assistant Water Manager may amend a licence to do any of the following:

- Extend the time set for beginning construction of the works;
- Extend the time set for completion of the works;
- Extend the time set for making beneficial use of the water;
- Authorize additional or other works than those previously authorized;
- Correct an error in the licence;
- Remove a provision of the licence inconsistent with the Water Sustainability Act;
- Authorize the use of water for some purpose other than specified in the licence;
- Extend the term of the licence; and
- Increase or reduce the quantity of water authorized to be diverted or stored if it appears to have been erroneously estimated.

Note that a licence cannot be amended to authorize a greater quantity of water diversion or storage except in the case of an erroneous estimate specified above.

Chapter 7:

Post-Approval Requirements

After a water licence is issued, the licensee must meet pre and post-approval requirements, as detailed below.

All operations related to a water licence must be carried out in compliance with the Water Sustainability Act and its regulations, as well as the terms and conditions contained within the licence.

Water Withdrawal Reporting

By housing and monitoring water use statistics, the Regulator is better equipped to manage water authorizations reflecting the best interests of the environment, industry, and the people of British Columbia. Recording accurate information allows the Regulator to better consult with all major stakeholders in addressing potential water and water-related issues and usage.

Surface Water Licences

Companies holding surface water licences issued or administered by the Regulator are required to submit daily water withdrawal data for each approved withdrawal location to the Regulator on a quarterly basis.

This information must be submitted to the Regulator via the relevant process at the time of submission on a quarter-annual basis, on or before January 25, April 25, July 25, and October 25, for the preceding three month period.

This requirement for water use reporting can be amended from time to time as directed by the Regional Water Manager. Data must be reported quarterly, in tabular format, as an Excel (XLS or CSV) file, and emailed to: Water.VolumeData@bc-er.ca

Groundwater Licences

Companies holding a provincial licence under Section 9 of the Water Sustainability Act are required to comply with all conditions of the licence, including those pertaining to water withdrawal reporting.

Additional water withdrawal reporting requirements for "water source wells" permitted under the Energy Resource Activities Act are stipulated in Section 72 of the Drilling and Production Regulation. A monthly water withdrawal statement must be submitted to the Regulator via Petrinex not later than the 20th day of the month following the reported month.

Appendix A: Water Licence Application Instructions

Applications and supporting information for a water licence are submitted through the FLNRORD eLicensing system.

First Nations Consultation Package Requirements

The applicant is required to identify all communities requiring consultation, and to attach complete First Nations/Aboriginal Community packages for each community.

The Authorizations Manager is also available to answer questions and provide guidance on related issues.

Attachments to be submitted in digital form include:

- Cover letter: with the appropriate application categorization and one copy of the application for each First Nation whose administrative consultation area overlaps the proposed project area.
- Completed Application form.
- Mapping requirements: map(s) showing the point(s) of diversion and any associated works.
- Water Management Plan (Appendix B).
- Additional information: any attachments (for example, mitigation plans or justifications) submitted as required by Block G, Additional Information Requirements, of the application.

Application Deliverables

Please Note:

Specific deliverable requirements are dependent on the nature of the application.

The application deliverables block provides a summary of the documents to be included with the application to FrontCounterBC.

Application Fee	Submit as per online application process. Refer to Appendix F: Water Licence Application Fee Table
Drawing and/or Survey Plan	Attach with the application package.
Supporting BaseMaps (topography, geology, aquifer maps)	Attach with the application package, as appropriate

Schedule of appurtenant Petroleum and Natural Gas leases and ERAA permits	Attach with the application package.
Construction Plans	Attach with the application package. Refer to Appendix E: Construction Plans
Water Management Plan	Attach with the application package. Refer to Appendix B: Water Management Plan Template
Storage	Attach where applicable to the application package. If off-stream storage is proposed within an earthen excavation provide signed plans and profiles of each storage location. If storage is required in a dam to which part 2 or part 3 of Dam Safety Regulation applies please contact the Regulator's Dam Safety Officer at dams@bc-er.ca , or the Water Manager or Assistant Water Manager for more information.
Hydrogeological Assessment Report for Water Source or water supply Wells	Attach with the application package, where applicable. Refer to Appendix C: Guidance for Technical Assessment Requirements in Support of an Application for Groundwater Use in British Columbia
Groundwater Assessment for Water Storage Sites	Attach with the application package, where applicable. Refer to Appendix D: Groundwater Assessment for Water Licence Applications for Water Storage Sites
Joint Works Agreement	Attach where applicable to the application package.
First Nations Consultation Package	Attach one copy per community to the application package. Refer to requirements outlined above in this section above, and in previous manual sections.
Rights Holder Engagement package	Attach Rights Holder Engagement Line List package.
Other	List any additional attachments included with the water licence application package.

Appendix B: Water Management Plan Template

A Water Management Plan is required for any water licence application. The specific requirements of the Water Management Plan may vary depending on the water source being surface water or groundwater, and the volume of water requested in relation to the volume of water available in the source, the following provides guidance regarding the expected content of a Water Management Plan (WMP).

Primary Purposes of the Water Management Plan

The purposes of a Water Management Plan are to:

- Provide detailed information on the water supply.
The applicant will detail the hydrology of the surface water body, or water bodies, for which they are applying to withdraw water. In the case of groundwater aquifers, the applicant will reference hydrogeological information or testing conducted for the hydrogeological assessment (Appendix C);
- Provide detailed information and justification on the water demand, including details of the quantities of water required for specified purposes on a per day, per year and per purpose basis;
- Provide detail on construction and operational activities, including water intakes and pumps at each POD, pipelines (above and /or below ground), water source wells, water supply wells, water distribution infrastructure (ditches, trucks, tanks, etc), locations of use, water storage requirements, etc.;
- Provide a status on the works associated with the application;
- Provide information, or reference separately submitted relevant technical information or reports, to ensure that public safety and the environment will not be affected.
- This must include an assessment of the Environmental Flow Needs (EFN) of the stream associated with an application, or a stream that is reasonably likely to be hydraulically connected to the water source well or aquifer for a groundwater application, as specified in s.15 of the Water Sustainability Act;
- Document and address any issues that may exist with respect to First Nations rights that may be affected by the issuance of the water licence, and reference any relevant separately submitted information or reports; and
- Document and address any issues that may exist for individuals or groups that may be directly affected by the issuance of the water licence (e.g., neighbouring land owners, downstream water rights holders, or others), and reference any relevant separately submitted information or reports.

Please Note:

This report is sent out as part of the consultation package and it recommended that an executive summary be included to provide a summary of the technical components.

Introduction

This section contains a description of the basic purpose of the project, normal operational characteristics, and any unique or important design considerations associated with the site or project.

Construction and Operational Activities

A construction schedule and methodology should be proposed in this section, including a description of the water intake, pumping facility, and water conveyance methods:

- For surface water sources, describe how any in-stream works will be constructed and timed within the regional timing window, such that water quality and quantity impacts are minimized. If construction falls outside of the regional timing window a mitigation plan is required;
- For groundwater licence applications, describe the associated subsurface and surface works and include well drilling records;
- If an intake and/or pumping facility is proposed, provide details on design, construction, siting and operation
- Describe storage works such as dugouts or dams, existing or proposed, to be used to provide temporary storage of water acquired from the proposed sources.

Typically, the primary water storage works after pumping from the water source will be defined as “works” in the water licence, and subsequent secondary water storage will not be associated with the licence but will be approved through separate applications.

During application review and determination, the Water Manager will determine what water storage works will be specified as “works” in the water licence;

- Detail the water transportation system, from the water source to the location of use (e.g., permanent pipeline, temporary pipeline, trucks, etc.); and
- If there are land owners proximal to a proposed intake and pumping facility, describe what will be done to minimize or mitigate effects on the proximal land owners from construction and operational activities, including effects such as noise associated with the operation of a water pumping facility.

Hydrology and Water Supply – Surface Water Applications

This section contains a description and assessment of water availability from the proposed surface water source. Hydrogeological and groundwater supply information is submitted separately as part of required assessment reports as outlined in Appendix C and D.

Water Supply

The following information regarding surface water supply is required:

- Basic description of local climate, including detail on any climate or weather monitoring the applicant has undertaken;
- Watershed characteristics (area, relief, general land cover);
- Description of the water source; and
- High resolution site photographs of water source.

Stream/river – width, depth, channel gradient, discharge, description of bed material, based on field surveys using standard professional practice methodology. For large rivers, such as the Liard River or Fort Nelson River, etc., estimates of channel width and depth are acceptable.

Lakes – basic bathymetry, including surface area determined from maps or air photos, and average and maximum depth, based on bathymetry data, if available, or field measurements. To determine average lake depth from field measurements, measurements of depth should be made along two transects encompassing the long and short axes of the lake. Confirm if the lake is hydraulically connected to a stream or has an inlet or outlet along with the associated hydrological data. Provide the current elevation (masl) of the lake and the elevation (masl) of the high water level (HWL) mark.

Water Storage Sites – Site plans and profiles and storage volume(s). Refer to Chapter 3 to confirm if a surface water or groundwater licence application is to be submitted. Refer to Appendix D for additional information.

Detailed Analysis:

- Detailed description of water supply analysis for the water source in question, such as a regional analysis, site specific flow monitoring, hydrology modeling, etc.
- Documentation of the hydrometric data used as the basis to determine water supply. NEWT reports must be included along with additional hydrometric information (e.g., hydrometric data, modelling output, etc.) to support the application. Water licences WILL NOT be issued based on NEWT reports only.

- In some cases, hydrometric monitoring conducted by the applicant will be required to support a water licence application. The requirement will vary in relation to factors such as the volume of water demand in relation to supply, the seasonality of withdrawal, other relevant hydrometric data, etc. Data collected by the applicant must meet the RISC hydrometric standards.
- Quantification and description of baseline hydrology and water supply:
 - Hydrograph and summary table of long-term average monthly discharge;
 - Determination of mean annual discharge (MAD), 20% MAD, and 10% MAD;
 - Quantification and description of low flows (magnitude, frequency, seasonality), including an estimate of a 7-day average 1-in-5 and 1-in-10 year low flows for each week and/or month where water is being proposed for withdrawal; and
 - Discussion of uncertainty in the water supply estimates.

Please Note:

Note for groundwater licence applications, groundwater quality data and EFN considerations are provided separately as part of required assessment reports as outlined in Appendices C and D.

Water Demand

This section provides details of the water demand (i.e., the quantity of water requested for the licence) and should include the information outlined below.

- Document and justify in detail the volume of water requested in the water licence application with specifics of the operational necessity, based on a 3-year projection. Water licences must be tied to “beneficial use” as described in Section 30 of the WSA, and so the projected water demand in the 3-year projection needs to be realistic and defensible;
- For water intended to be used for well completions and hydraulic fracturing, describe the following (the intent is to provide operationally-realistic detail on fresh water demand specific to the applicant's operations):
 - Number of wells to be completed per year for the 3-year projection.
 - Describe the anticipated season of the year of the well completion program.
 - Estimated number of fracture stages per well and the estimated water volume required per fracture stage.
 - Estimated flowback and produced water quantity per well (or well pad), and the intended reuse or disposition of the flowback and produced water.
 - Estimate the total volume of fresh water required per well and well pad on an annual basis, to be acquired from the source or sources proposed in the water licence application.

- Provide a simple water balance, quantifying water required for well completions, the portion that would be sourced from the freshwater source, flowback and produced water reuse, and produced water disposal.
- If the flowback and produced water is not intended to be reused, describe why.
- Provide an estimate of projected water demand on a 10-year horizon, based on the applicant's anticipated or projected development (subject to uncertainty based on a number of external factors);
- Provide a maximum and minimum daily diversion pump rate;
- Document current, existing, cumulative water demand on the proposed water source upstream and downstream of the point of diversion, including both existing and proposed water licences and short term water use approvals. List the major authorization holders both upstream and downstream of the proposed POD;
- Describe the contingency measures to be employed to meet water demand should a significant water short occur or the EFN threshold conditions be exceeded; and
- Document any other petroleum lease holders who access, or will be accessing, water from the same source (e.g., from within the same BCER Water Management Basin or aquifer formation), and any discussions between or among the petroleum lease holders on intent to cooperate or inability to collaborate to share water infrastructure, reuse of flowback or produced water, or other shared water-related topics.

Environmental Flow Needs Assessment

The Regulator evaluates environmental flow needs (EFN) and determination to decisions for water use, consistent with Section 15 of the Water Sustainability Act and [provincial EFN policy](#). Section 15 of the WSA requires that a decision maker must consider the EFN of a stream, or aquifer that is reasonably likely to be hydraulically connected, when making a decision.

The EFN policy describes a “coarse screen for assessing the risk to environmental flow needs (EFN) in the review of application for a water licence or a use approval for short-term water use where the origin of water is a river or creek or an aquifer is reasonably likely to be hydraulically connected to a river or creek”. If a groundwater source is hydraulically connected to a stream, then an EFN assessment is conducted on that stream.

For proposed water withdrawals from water storage sites that are potentially hydraulically connected to any streams, lakes or W2 wetlands (e.g., within 50-100 metres) the applicant must assess the hydraulic connectivity and determine whether a hydraulic connection exists, and the extent of any hydraulic connection, if any (refer to Appendix D for more details). If the water storage site is hydraulically connected, the application must also include an EFN assessment of the proximal stream, lake or W2 wetland completed by a qualified professional to confirm that no material adverse impacts on the subject water feature will result as a consequence of the proposed water withdrawals. Unless the

applicant can demonstrate otherwise, the Regulator will assume hydraulic connection to any surface waterbody within a reasonable (generally 50-100 metres) distance of the source.

If the application relates to water in an aquifer the applicant is required to provide the official names of each stream or other aquifers known to the applicant to be reasonably likely hydraulically connected to the source aquifer, or if there is no official name, a location description of each stream or aquifer.

In situations where hydrometric data is available from the [Northeast Water Tool](#), [the Northwest Water Tool](#), [the Cariboo Water Tool](#), or [the Omineca Water Tool](#), these tools can be utilized to assess the EFN, in addition to other hydrologic available information. If no data is available from these tools, the environmental flow needs must be assessed by a Qualified Professional and a report submitted to the Regulator with the application.

To maintain the EFN for lake sources the Regulator does not permit the volume of water allocated to equal more than a 10 cm drawdown below the high water level (HWL) mark. The HWL mark must be staked and the GPS location recorded and submitted with the water licence application.

Please Note:

Please be aware that the Water Sustainability Act gives the decision maker the discretion to request any additional information he or she may deem necessary for a determination to be made on the application.

Additional Information

- Document information on fish species, distribution, seasonal timing of life-cycle stages, and any other fish-related information available. Requirements for the applicant to undertake fish assessments in relation to the water licence application will be related to the demand vs. supply analysis, and other factors.
- Describe how concerns or impacts identified during the hydrology assessment will be mitigated or addressed.
- Provide recommended weekly or monthly EFN thresholds to be considered as a “zero withdraw thresholds” condition in the water licence based on the period of year during which water is proposed to be diverted, used and stored (if applicable). These “zero withdraw thresholds” must take into account the aquatic needs, the priority (upstream/downstream) licence holders, the low flow conditions, the daily pumping rate (based on minimum and maximum pumping) and be based on the provincial EFN policy.

The Regulator has established “zero withdraw thresholds” on the following rivers:

- Kiskatinaw River:

- Authorizations for the Kiskatinaw River or its tributaries. No withdrawals are allowed when the flow of the river as measured at the Water Survey of Canada gauge 07FD001 (Kiskatinaw River near Farmington, 3,630 km²) is at or below 1.90 m³/s. The Kiskatinaw River is listed as a "[Possible Water Shortage](#)" watershed.
- Pouce Coupe River:
 - Authorizations for the Pouce Coupe River or its tributaries. No withdrawals are allowed when the flow of the river as measured at the Water Survey of Canada gauge 07FD007 (Pouce Coupe River below Henderson Creek, 2,860 km²) is at or below 1.20 m³/s. The Pouce Coupe River is listed as a "[Fully Recorded](#)" watershed.
- Pine River:
 - Authorizations for the Pine River or its tributaries. No withdrawals are allowed when the flow of the river as measured at the Water Survey of Canada gauge 07FB001 (Pine River at East Pine 12, 100 km²) is at or below 40 m³/s.

Mapping

Include in the Water Management Plan a map (or maps) at an appropriate scale showing the following, for the 3-year projection of water use:

- Streams, lakes, major watershed boundaries, including the BCER Water Management Basins, mapped aquifers, water supply wells, etc., as appropriate.
- Direction of stream flow.
- Roads.
- All proposed points of diversion.
- Locations of intakes, water source wells, pumps, pipelines, water loading facilities and other proposed works.
- Location of existing or proposed water storage sites associated with the proposed diversion and licence, including details on the storage volume at each site.
- Locations of monitoring sites relevant to the application (e.g., stream flow, climate, water quality, groundwater monitoring wells, etc.).
- Anticipated locations of water use (e.g., well pads, etc.), showing the purpose (e.g., drilling, hydraulic fracturing, etc.).
- Water conveyance routes and methods (e.g., trucks, temporary surface pipeline, buried permanent pipelined, etc.).
- Other information the applicant considers relevant to the water licence application.

First Nations

- Describe traditional and current use of the proposed water source and proximal land by First Nations, to the extent known by the applicant.
- Summarize engagement with First Nations, and what will be done to address any issues identified.

Affected Water Users and Rights Holders

- Describe any known water users and rights holders proximal to or downstream of the proposed surface water point of diversion, or for groundwater, within the same aquifer as the proposed point of diversion (supported based on separately submitted hydrogeological or groundwater assessment reports, as per Appendices C and D), with consideration to effects on their water usage. This should include water licensees, water licence applicants, domestic water users (which do not require a water licence to use “unrecorded water”), and any riparian land owners proximal to the proposed point of diversion and intake.
- Describe any potential for effects on them related to construction and operational activities, including but not limited to effects on erosion, deposition, access to the water source, water availability and water quality.
- If there are neighbouring land owners or recognized land uses near the proposed water intake or locations of water use, including First Nations traditional use, describes how the construction and operation of the water intake, transportation and use will not impair their rights.
- Summarize your engagement with Water Sustainability Act rights holders, and what you will do to address any issues identified.

Monitoring

- Describe and detail any stream flow, groundwater, water quality or climate monitoring being done to support your water licence application (for groundwater licence applications, reference the separately submitted assessment report described in Appendices C and D). Relevant monitoring data will be required to be submitted to the Regulator for review.
- Describe on-going, or future, monitoring the applicant will undertake, including measuring stream flow, lake level, or groundwater level, associated with the proposed withdrawal, as well as measuring the timing and quantity of water withdrawn (for groundwater licence applications, reference the separately submitted assessment report described in Appendices C and D).
- In some situations, the Regulator may require monitoring data to support an application for a water licence, and may require ongoing water quantity and quality monitoring as a condition of the licence. The requirement for monitoring may include the establishment, or adjustment, of a “zero withdrawal threshold”.

Summary and Conclusions

The project should be summarized in this section.

Appendices

The Water Management Plan should append copies of any documents, maps, plans, analyses, or reports prepared by [Qualified Environmental Professionals](#) (with an area of expertise acceptable to conduct the report) used to develop the Plan and water licence application, that are not otherwise submitted as part of the licence application. All raw data/information collected and analyzed to support this application is to be submitted.

Appendix C: Hydrogeological Assessment Report for Water Source Wells

The primary purpose of the hydrogeological assessment is ensure that the application is consistent with the requirements of the Water Sustainability Act with regard to:

- determine the sustainable water yield of the well, to ensure that the licensed withdrawal does not impair the long-term sustainability of the aquifer;
- determine whether the aquifer is likely to be hydraulically connected to a stream, to determine what licence conditions are necessary to ensure that the environmental flow needs of the stream are not impaired; and
- insure that the water rights are not impaired for individuals who hold rights under the Water Sustainability Act.

The information and analysis provided by the hydrogeological assessment must be sufficient, as determined by the decision maker (DM), to address the above WSA requirements. The DM may, upon the review of the submitted hydrogeological assessment, require the submission of additional data, testing, and/or information to support the application.

The hydrogeological assessment program should be designed for the purpose noted above by a qualified professional and should include the following general components.

1. Background Information Review
2. Field Investigation (i.e., Pumping Test)
3. Data Interpretation
4. Preparation of a Hydrogeological Assessment Report
 - a. A report from the [Groundwater Review Assistant](#) (GWRA)

Guidance regarding requirements for a hydrogeological assessment in support of a groundwater well licence application is found in the FLNRORD document "[Guidance for Technical Assessment Requirements in Support of an Application for Groundwater Use in British Columbia](#)".

Appendix D: Requirements for Water Storage Sites

Water storage sites that accumulate water via surface water or groundwater require an authorization under the WSA.. In situations where a water storage site is physically is connected to a stream, the site may be licensed as a “surface water” source.

The following technical information is required as part of a Water Management Plan for a water licence application; the technical information varies whether the application is for a groundwater or surface water licence:

- Signed plans and profiles of the water storage site. If storage is required in a dam to which part 2 or part 3 of Dam Safety Regulation applies please refer to the Dam Safety Regulation or contact the Regulator’s Dam Safety Officer at dams@bc-er.ca.
- Information on the topography, surficial and shallow bedrock geology, surface water features and hydrology, hydrogeology, mapped aquifers, water supply wells within 200 metres of the site.
- Determine the total, cumulative water supply and demand for the watershed unit containing the water storage site, including all water licences and short term use approvals. The Northeast Water Tool (NEWT), Northwest Water Tool (NWWT), Cariboo Water Tool (CWT), or Omineca Water Tool (OWT) can be used for information.
- Information on any streams that are physically connected to the storage site (i.e., where the dugout has been constructed in a manner to directly capture water from a surface stream). Note: streams are defined in the Water Sustainability Act.
- Information on the groundwater source for the storage site, i.e., regional aquifer, shallow groundwater, water supply well or soil water seepage.
- Information on streams reasonably likely to be hydraulically connected to that storage site. If there are streams reasonably likely to be hydraulically connected to the site, provide as assessment of the environmental flow needs of the stream and the potential for the proposed water withdrawal from the dugout to impair the environmental flow needs of the stream. These will be streams as defined in the Water Sustainability Act that are proximal to any edge of the site
- If the storage site is sourced from a regional aquifer, or is proximal to streams that are reasonably likely to be connected to the site, provide information to ensure the environmental flow needs of the stream or the sustainable yield of the aquifer are not impaired. Refer to Appendix C for assessment information pertaining to determining sustainable yield from an aquifer.

Appendix E: Construction Plans

Construction plans visually and conceptually inform the Regulator about the company's plans for constructing the proposed activity, including details about the activities location and size, associated ancillary sites, and other valuable details of the project's development.

All applicants must prepare a construction plan for the proposed activity to include with the application.

Please Note:

Any planned associated developments which are in the riparian reserve zone (RRZ) must be identified on the construction plan submitted with the water licence application.

If there are differences between activities within the RRZ on submitted applications for associated permits or authorizations and the related water licence application, revisions to the water licence application or amendments to the water licence may be required.

Construction Plan Requirements

Construction plans must include the total area required within a bold outline. Within the plan, and in ePASS, each polygon must be included within a bold outline. Construction plans must meet the requirements detailed in Sections 5.7.2 and 5.7.3 of the [Oil and Gas Activity Manual](#).

Appendix F: Water Licence Application Fee Table

Please Note:

Application fees, water rental fees are defined in the Water Sustainability Fees, Rentals and Charges Tariff Regulation. Please refer to this Regulation for fees associated with water use purposes not listed in this table. The fees can also be found in [Schedule 1 of the Water Sustainability Fees, Rentals and Charges Tariff Regulation](#)

Table 1. Application and use fees associated with water licence applications associated with oil and gas water use purpose.

Purpose	Application Fee	Annual Water Rental Fee (per 1000 m3)
Cooling	\$500	\$1.30
Work Camps (domestic use)	\$500	\$2.25
Fire Protection	\$500	\$200 (flat)
Oil and Gas (including hydraulic fracturing and oilfield injection, but not deep groundwater)		
- Less than 500 m ³ /day	\$1,000	\$2.25
- 500 - <5,000 m ³ /day	\$5,000	\$2.25
- 5,000 m ³ /day or greater	\$10,000	\$2.25
Drilling	\$1,000	\$2.25
Pressure Testing and Flushing	\$1,000	\$2.25
Road Maintenance	\$1,000	\$2.25
Storage		
- Less than 30,000 m ³	\$250	\$0.02
- 30,000 – 1,250,000 m ³	\$500	\$0.02
- 1,250,000+ m ³	\$5,000	\$0.02
Request for amendment to a water licence	\$1,000	

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Transfer of appurtenancy	\$1,000	
Apportionment of water licence	\$1,000	