NAME OF GUIDANCE:	Water Authorization Application Assessment and Processing Guide for Applicants
APPLICATION:	This guidance applies to all new water licence and use approval applications, whether diverting from stream water or groundwater sources.
ISSUANCE:	Director, Water Management Branch, FLNRORD, and Executive Director, Water Protection and Sustainability Branch, ENV
IMPLEMENTATION:	FLNR, OGC, FCBC
REFERENCES:	*Water Sustainability Act* (Ch.15, S.B.C 2014) Water Sustainability Regulation (B.C. Reg 36/2016)
RELATED POLICIES:	This is an overarching guidance and has a relationship to all other water allocation policies.
RELATIONSHIP TO PREVIOUS POLICIES:	This guidance replaces two previous policies: Water Licence Application, Assessment for Decision and Water Licence Application, Processing a Decision.
POLICY AMENDMENT:	To amend this guidance a request must be made in writing to the Executive Director, Water Protection and Sustainability Branch, ENV

Ted White Director and Comptroller of Water Rights Water Management Branch Ministry of Forest, Lands and Natural Resource Operations and Rural Development	Lynn Kriwoken Executive Director Water Protection and Sustainability Branch Ministry of Environment and Climate Change Strategy
May 14, 2019 Date	May 17, 2019 Date

APPROVED AMENDMENTS:		
Effective date	Briefing Note /Approval	Summary of Changes:
June 30, 2019	May 14, 2019	This guidance updates and replaces two previous policies: Water Licence Application, Assessment for Decision and Water Licence Application, Processing a Decision.

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1. POLICY STATEMENT

This guidance provides an overview of how to approach the water authorization (licences and use approvals) application assessment and decision process. It outlines the three stages of considering an application for a water authorization, from Application Receipt and Review (Stage 1), Application Assessment (Stage 2), and Application Decision by Decision Maker (Stage 3), outlining all of the steps and processes and procedures along the way.

Notes throughout the text indicate where the process may differ for use approvals.

2. DEFINITIONS

Terms defined in s. 1 of the *Water Sustainability Act* (WSA): **aquifer, authorization, comptroller**, **date of first use**, **environmental flow needs, groundwater, improvement district, licence**, **mine**, **owner**, **recorded water**, **stream**, **sensitive stream**, **unrecorded water**, **undertaking**, **use approval**, **water manager**, **well**, and **works**.

Appurtenancy means the land, mine or undertaking to which water rights are assigned or made appurtenant to with the issue of a water licence.

eLicensing is the electronic application and licensing system for processing applications and authorizations (licences and use approvals). For the purpose of this document, eLicensing is specific to water authorizations.

Date of Precedence means the date identified in a water authorization (water licences and use approvals) that specifies the priority of the right under the authorization, which is typically used to determine and to enforce precedence among authorization holders, including when taking action during times of shortage under s. 22 of the WSA. Under s. 20 of WSA, an authorization must specify its date of precedence, which is often (but not exclusively) the date that the completed application for it was received by government. The date of precedence differs from the date of issuance, which is also included on the final authorization document.

Duty is the depth of water which is typically applied to irrigate a crop over the growing season expressed in a unit of water over a prescribed area of land. It is dependent upon a number of factors, including the local weather patterns and climate, topography, soil type, and crop type. For example, in the dry south Okanagan the duty may be 3 feet, or to irrigate 1 acre over a growing season 3 acre-feet of water would be needed (see link to Agriculture Water Calculator). Units for calculating duty tend to be in imperial units, however, the authorized volume would be specified in metric units.

Point of Diversion (POD), defined in the Water Sustainability Regulation (WSR), is the location on the stream channel **(SW)** or location of the well from which water is diverted. Note that in eLicensing there are five types of PODs: **Point of Diversion (PD), Point of Well Diversion (PW), Point of Groundwater Diversion (PG), Point of Groundwater Reference (RG)** and **Point of Well Reference (RW)**. Resources for eLicensing are available on the Water Information Hub.

Water Officer means the person who completes the technical assessment of an application and makes recommendations on its adjudication to the decision maker. The person is often designated as an officer under the WSA.

3. REASON FOR GUIDANCE

When reviewing, making recommendations and making decisions on a water authorization application, consistency of approach across regions is encouraged, to the extent reasonably possible, so that applications are assessed fairly. To this end, this document guides: 1) the assessment process for adjudication of water authorization applications; 2) the processing of a water authorization decision; and 3) the making of a decision on a new water authorization.

4. WHO REQUIRES AN AUTHORIZATION

The ownership of both groundwater and stream water has been vested in the Province. The current vesting provisions are found in s. 5 of the WSA. If water for use is not diverted from a stream or from an aquifer, then an authorization or other authority to do so may not be required under s.6 of WSA, such as water that is diverted off a roof or is "overland flow", as described in the Water Authorization Requirements for Dugout Structures policy.

Under s.6 of the WSA, a person must not divert or use water from a stream or aquifer unless that person holds an authorization, or the use or diversion is authorized in the regulations (Part 4 and Part 5 of the Water Sustainability Regulation). Also, some diversion of water is exempted under the regulations (e.g., S. 31-35 WSR). Section 6 describes exemptions to the requirement for an authorization, including, to the extent permitted, diverting unrecorded water from a stream for domestic purpose or from a stream or aquifer for "prospecting for a mineral" (as defined).

Section 7 of the WSA establishes that an authorization can entitle the holder to divert, use or store the quantity of water specified, to construct works as authorized, or to make a change in and about a stream in a manner provided in the authorization.

The decision maker (water manager or the comptroller) may only issue a water licence to a person or entity that is eligible to acquire an authorization under s. 9 of the WSA. Under s. 10 of the WSA (temporary use approvals), those restrictions do not apply.

The definition of 'owner' is found in s. 1 of the WSA and includes a person who is entitled to possession or has a substantial interest in the appurtenant land, mine or undertaking (often the place of intended water use). If an application has been submitted on behalf of a person who would qualify as an "owner", such as by that person's agent, a letter of agency should be requested. If an applicant will not be able to qualify as an "owner" under s. 9(a) of WSA, a licence can only be issued to them if they qualify under one of the other categories listed in s. 9(b) to (g) of WSA. Note that this limitation on who can acquire a licence does not apply to a temporary use approval.

5. THE WATER AUTHORIZATION REVIEW BUSINESS PROCESS

Receipt, assessment and decision on a water authorization application involves a number of steps and the involvement of various people. While the process to review an application may not always be linear, there are generally three key stages in assessing and processing a water authorization application.

- **Stage 1** (Application Receipt and Review) includes pre-application work, electronic submission of the application by the applicant via FrontCounter BC's online application system, an automated system check by the system, an application review to determine if the application meets the prescribed criteria to allow forwarding of data to the eLicensing system for the next stage of processing.
- **Stage 2** (Application Technical Assessment) includes the preliminary review and technical assessment to assess and document the merits of the application, and to identify and consider issues, such as notice, referrals and First Nations consultation, and objections. At the end of this stage, reviewers will suggest appropriate terms and conditions if the issuance of an authorization is recommended. There is no preliminary review for use approvals, only a technical assessment, which is completed by a water officer.
- **Stage 3** (Application Decision) includes a review by a decision maker of the findings of the technical assessment and a decision to issue or refuse a water authorization.

If, at any stage of the review, it becomes apparent that a required step has not been completed or additional information is required, this should be addressed prior to making a decision.

6. STAGE 1 – APPLICATION RECEIPT AND REVIEW

Once the licence, use or change approval application has been submitted to FrontCounter BC (FCBC) and is checked for completeness, the application undergoes a preliminary review followed by a technical assessment.

6.1 A completed application

A completed application for a water licence or use approval is one that meets the requirements outlined in the WSA and the Water Sustainability Regulation. Upon submission, FCBC staff conduct an initial review for completeness of the application to ensure the application is valid, including:

- Check the application for completeness against s. 3 of the WSR;
- Confirm the applicant can qualify to acquire a licence (s. 9 of the WSA);
- Verify that appropriate consents required by s. 13(2) of the WSR are provided.

Checklists are available within eLicensing and virtual FrontCounter BC (vFCBC) to help staff determine if the application is complete. All applications must be accompanied by an application fee, if required. See s.11 of the Water Sustainability Fees, Rentals and Charges Tariff Regulation for a listing of fee exemptions. Rentals are paid up front with applications for use approvals.

6.1.1 Applications received outside of Virtual FrontCounterBC

The submission of applications through vFCBC should be actively encouraged as the online system guides applicants through the requirements of an application and ensures the necessary materials are submitted. Clients who struggle with computers may make an appointment to visit a FCBC office where staff can assist them with submitting an online application. However, if a client chooses to compile and deliver an application manually, and fulfills the requirements of a complete application as described in s. 3 to 9 WSR, the application must be accepted. In such circumstances the application would then be transferred to vFCBC or uploaded to eLicensing by staff along with any supporting documents for further assessment.

7. STAGE 2– APPLICATION ASSESSMENT

Stage 2 involves the assessment of the application, described below, including an assessment of application complexity, supply and demand, need for notice, referrals, First Nations consultations, etc. The outcomes of stage 2 are a technical report and decision documents with recommendations to be reviewed by the decision maker in stage 3.

7.1 Assessing application complexity

Understanding the factors that contribute to the potential complexity of a water authorization application will be helpful in determining:

- What resources may be required to complete a review,
- The staff that need to be involved in review of the application,
- The referrals and notices required and the level and extent of consultation needed with First Nations and other subject matter experts, and
- Which policies, procedures and guidelines to consider during the review process.

7.2 Water Use Purposes

Water use purposes are defined in s. 2 of the WSA. Further categories of water use are described in the WSR and Water Sustainability Fees, Rentals and Charges Tariff Regulation. It is important to verify that the water use purpose(s) is (are) appropriate for the proposed activity; e.g., an application may list domestic purpose but the actual water use is supplying a multi-family development, in which case the purpose may actually be waterworks.

The public document "Definitions for Water Use Purposes and Categories of Water Use Purposes" provides a description, with some examples, of the different water use purposes.

For some undertakings, there could be multiple purposes in an authorization.

Additionally, stream water and groundwater sources can now be combined in the same authorization in vFCBC and eLicensing jobs, if the date of precedence is the same and they are hydraulically connected.

7.3 Referrals, First Nations consultation and notice

When a water authorization application is received, there is often a need for referrals, First Nations consultation and notice of an application, such as to persons with standing to object.

Referrals – The referral process provides an opportunity for other local, provincial and federal government agencies, and other persons to whom a water authorization application is referred, to review and comment on an application so that due consideration is given to any relevant concerns they may have in relation to an application. This may be completed in Stage 1 or Stage 2.

First Nations Consultation – The province's duty to consult First Nations is triggered where it contemplates an action or decision that may have adverse impacts on Aboriginal Interests (claimed or proven Aboriginal or treaty rights). The following document provides information on provincial policy for consulting with First Nations and related procedures.

Any required consultation should follow the provincial policy when making any water-related authorization decisions, unless there is an agreement with the First Nation that governs consultation on the type of decision at issue. Visit the "Consulting with First Nations" webpage for updated information and links.

Notice to legal objectors – The WSA recognizes classes of persons as potential objectors if the decision maker considers that their rights are likely to be detrimentally affected should the application be granted and, in that case, notice of an application should be provided to them. The decision maker is charged with the responsibility to determine who receives notice pursuant to the WSA and in accordance with the WSR. These requirements apply to applications for authorizations (e.g. water licences or use approvals).

Sections 13 and 14 of the WSA requires that the decision maker direct an applicant to provide notice to persons whose rights the decision maker considers are likely to be detrimentally affected, or alternatively, the decision maker may provide the notice.

A legal objector is a person identified in s. 13 (1)(a) and (b) of the WSA whose rights the decision maker considers are likely to be detrimentally affected, which could include, if legal criteria are met, private citizens, First Nations, governments, government agencies, Crown corporations or private corporate entities. Separate from the duty to consult, First Nations also have the right to notice and to object to an application if they are also one of the persons described under s. 13(1)(a) and (b) of the WSA (e.g. an authorization holder or riparian landowner).

The decision maker has the discretion to consider all the information that is relevant to the application, which may include concerns raised by other parties, provided these are within the scope of the WSA.

7.4 Water supply and demand

The technical assessment is a process of examining specific application details, evidence, data and management tools to determine if issuing a water authorization can be recommended and, if so, the terms and conditions that may be required. Whether the source in question is a stream water source or a groundwater source, a primary part of the technical assessment is examining supply and demand – including environmental flow needs. The factors considered I a supply and demand analysis, and the

appropriate depth of analysis, can vary depending on circumstances.

7.4.1 Assessing Supply

Water supply is the quantity of water that can be expected on an annual, seasonal, or monthly time period. When available, obtain information on water supply at the watershed scale from both stream water sources and hydraulically connected aquifers. Assessing supply may include consideration of information, where available, regarding:

- Watershed characteristics,
- Hydrometric or meteorological data,
- Groundwater supply, and
- Hydraulic connectivity.

Each of these considerations is discussed further below.

7.4.1.1 Assessing Supply: Watershed characteristics

Determining the characteristics of the watershed – including both streams and aquifers – may be necessary for the application review. Watershed characterization generally focuses on developing a picture of water source(s) and stressors that may affect the source(s) at the point of diversion (POD). One source for guidance on desktop watershed characterization methods can be found in the document "Desktop Watershed Characterization Methods for British Columbia". This document identifies free and publicly available sources of information that can be used to develop a watershed characterization, such as: information resources, maps, air photos and remotely sensed images, watershed climate, general hydrology and drainage characteristics, sediment, stream channels and sediment yield potential, land uses and natural disturbances checklist.

For larger, more significant applications, more comprehensive supply and demand analysis may call for characterization of a larger area that includes upstream and downstream components of the watershed. Where warranted, characterizations may be performed for multiple time periods (e.g., annual, seasonal, monthly). Further investigation in the field and/or review by a hydrologist or hydrogeologist (water source depending) may also be necessary for such applications.

In such cases, important watershed characteristics for stream water and groundwater may include:

- defining the drainage area above the proposed POD (stream water only);
- the total watershed area of the source;
- determining the annual, seasonal and monthly water source(s) and location of water in any streams, including any springs, lakes, etc.;
- modifications or controls on the watershed such as canals, reservoirs or dams;
- land uses such as dugouts, mining operations, agriculture, etc.;
- geological or geomorphological features such as glaciers, landslides, mass wasting, fires, etc.;
- any intermittent or ephemeral steam channels;
- aquifer classification data, where available; and
- aquifer composition (e.g., confined/bedrock; unconfined/surficial, in assessing hydraulic connectivity).

7.4.1.2 Assessing Supply: Hydrometric and meteorological data

Where warranted, reviewing any available hydrometric and meteorological data for the POD catchment, or sometimes adjacent watersheds with comparable characteristics, can aid the technical assessment process. If the latter, it is important that characteristics between the watersheds are similar, otherwise correlations, which are not representative, may result (for example, creating a relationship between a small rain dominated watershed vs. larger snow dominated watershed). However, if comparable, such data can be used to develop appropriate relationships (correlations) to estimate stream flow at the proposed POD and other significant Points of Interest (POIs) (e.g., critical fisheries reach).

Annual and seasonal water supplies often vary due to the presence of differing contributing water sources (i.e., multiple sources at certain times of year vs. single sources during other times). For example, a stream may be composed of snow melt, rain and groundwater flow in the freshet season, while it may only comprise groundwater base flow in the summer/winter time periods. Total annual water supply and seasonal water supply will also vary from year to year, primarily in response to variability in year to year temperature, precipitation, and other weather parameters. As such, in addition to the mean annual water supply, it is important to consider the water source's variability over the time period of interest as well as stresses on that source.

The identification of appropriate 'periods of scarcity' to consider in water supply analysis is at the discretion of the decision maker. For example, some regions have considered the one-in-five year seven-day (7Q5) low flow event in allocation decisions.

Allocation decisions recognize that water supply is variable and while that supply might be available in most years, it may not always meet authorized demand during times of water scarcity. Licensees have the right to divert and use a maximum authorized annual quantity of water from a source as long as that water is available. Otherwise, action may be taken under the WSA to enforce priority amongst them based on their respective dates of precedence on the same or connected source. The WSA provides decision makers with tools to address water scarcity events, including the ability to: include terms and conditions in authorizations; regulate water users during times of scarcity through temporary protection orders to protect aquatic ecosystems, fish, and senior water rights; and enforce beneficial use.

7.4.1.3 Assessing Supply: Groundwater

In many parts of the Province, groundwater discharges may contribute much of the base flow to streams. Groundwater extractions from aquifers that are hydraulically connected to a stream may therefore diminish stream flow, particularly in small streams during critical low flow periods. Assessing whether streams (proposed sources) are susceptible to reduced base flows as a result of increasing or heavy groundwater use from aquifers that are hydraulically connected to a stream, may be an important consideration in those cases. Analysis of well interference from known wells may be one method to check susceptibility to reduced base flow in a stream from increasing diversion and use from a connected aquifer.

Assessing groundwater quantity typically involves different measurement methodologies, data assessment and interpretation, than assessing stream water quantity, because sources are underground.

The document Guidance for Technical Assessment Requirements in Support of an Application for Groundwater Use in British Columbia (Water Science Series WSS 2016-08) provides guidance to the applicant (or consultant representing the applicant) on a self-assessment that identifies when a technical assessment (desk-top or field-based) may be required.

7.4.1.4 Assessing Supply: Hydraulic connection

The likelihood of hydraulic connection between streams and aquifers is a consideration in applications for a groundwater authorization, and when considering the contribution to supply in a stream water application. The level of assessment of hydraulic connection may vary depending on the nature of the application.

Where hydraulic connection is determined to exist or is suspected to exist in reviewing an application for groundwater use, depending on the circumstances, the decision maker may wish to consider whether to conduct, or to require, additional assessments or other information requirements as part of the application review process.

Technical Guidance is available through the Water Science Series, including:

- Determining the Likelihood of Hydraulic Connectivity for practitioners on current methods for determining the likelihood of hydraulic connection; and
- Guidance for Technical Assessment Requirements in Support of an Application for Groundwater Use in British Columbia for the applicant wanting to establish a new non-domestic water supply that requires a technical assessment by a qualified professional.

7.4.2 Assessing Demand

Water demand is the quantity of water required over a corresponding period of time for particular water uses, which includes water licensed and under application. Assessing demand may include consideration of:

- Existing peak daily, instantaneous, or typical usage;
- Future peak daily use (if the new authorization is granted);
- Purpose and timing of demand;
- Annual or seasonal usage;
- Whether the use is non-consumptive (e.g., used for power production) or consumptive;
- Environmental flow needs;
- Water reservations or water allocation notations (the latter provide administrative guidance for decision makers); and
- Minimum flows required for instream or other uses, i.e., dilution of waste discharge, navigation or to meet interjurisdictional agreements.

7.4.2.1 Assessing Demand: Environmental Flow Needs

Section 15 of the WSA states that, except where exempted under the regulations, "the decision maker must consider the environmental flow needs of a stream in deciding an application in relation to the stream or an aquifer that the decision makers considers is reasonably likely to be hydraulically connected to that stream." The provincial Environmental Flow Needs Policy includes a framework to

help decision makers and resource staff assess whether it is reasonably likely that a specific application, if granted, would interfere with environmental flow needs of a connected stream.

7.4.2.2 Assessing Demand: Diversion and use of water

With respect to the diversion and use of water a distinction is made between: (1) authorized demand; and (2) actual demand. *Authorized demand* is the total quantity of water committed through the authorization process. It includes groundwater use for a domestic use purpose, which does not require an authorization, but is limited to particular quantities for household use. *Actual demand* is the total quantity of water actually diverted from a water source by the various water users.

When evaluating an application to divert and use water, authorized demand combined with the environmental flow need (EFN) is typically compared against supply to determine if the *residual flow* – the water that remains available in the stream after water has been diverted and after taking into account the EFN – is adequate to provide the quantity of water requested by the applicant.

There are a number of reasons why authorized demand and actual demand may differ (see Figure 1 below). At times, licensees may not use their full allocation, for example, due to greater rainfall than usual, or an early harvest. Similarly, other users may have exceeded their allocation without proper authorization.

Differences are also expected in watersheds where users rely partially or fully on groundwater, particularly if demand sometimes shifts between sources. As existing, non-domestic groundwater users apply for and are issued water licences, information about these differences should increase.

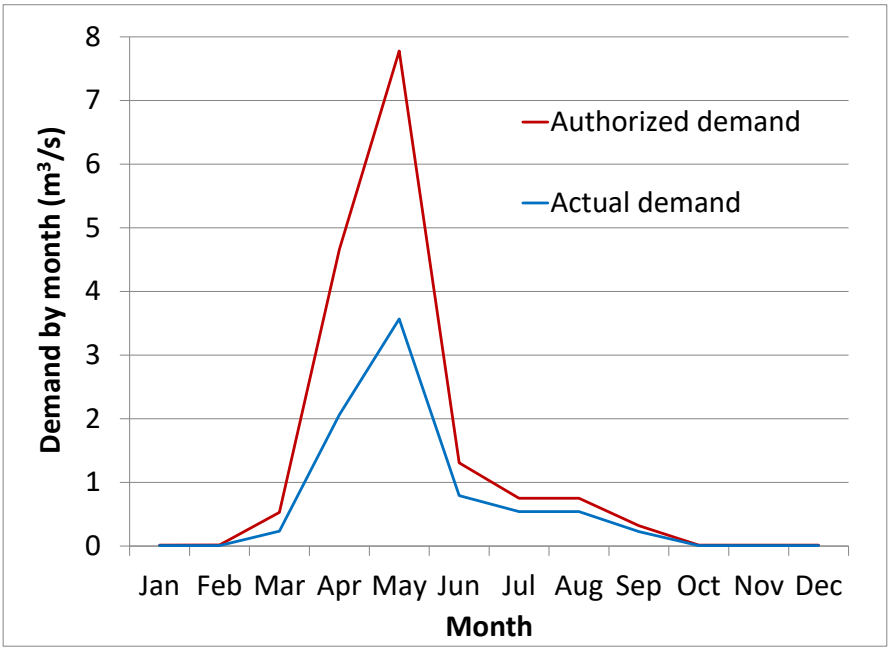

Figure 1. Hydrograph with estimates of authorized demand and actual demand from Bessette Creek watershed. Discrepancies result from a number of factors including the authorized practice of carrying stored water over from one year to the next to avoid a shortage during periods of water scarcity.

If actual demand is much lower than authorized demand, and there are indications that a licensee is not making beneficial use of that water, the decision maker may wish to consider whether to request a beneficial use declaration (s. 30 of the WSA) and to conduct a beneficial use review to determine the nature and extent of water use by existing authorization holders. In such cases, working towards reconciling the two measures of demand, depending on the circumstances, may help over the long-term to improve the sustainable management of water resources.

7.4.2.3 Assessing Demand: Methods for determining authorized demand

The primary tool for reporting purpose, volume and timing of authorized water demand is the licence (and use approval) demand report generated by eLicensing. Instructions for generating a demand report in eLicensing can be found at in the eLicensing Manual on the Intranet. The report can be limited to one stream reach or expanded up or downstream. The report shows both authorized stream water and, where known, authorized groundwater use on a hydraulically connected aquifer. The report may need to be run multiple times in order to cover water use for specific periods of the year. The summer low flow season is an important period to include because in many areas of the province, it corresponds to the time of greatest demand. Winter low flows may also be important to consider, if peak demand (e.g., for a fish hatchery) extends through this season. However, in other cases the winter low flow season may not need to be considered if diversion and use of water, as proposed by the application, does not extend through that part of the year.

The demand report generated by eLicensing pulls information from all of the current water licences issued on the stream, or stream reach, of interest, including, if connectivity is established, hydraulically connected groundwater diversions and tributary streams if desired. This information includes the total quantity of water allocated for each licence, as well as the average demand for each licence in cubic metres per second. In eLicensing the average demand for each licence is calculated by averaging the total annual diversion quantity over the entire term of the licence; for a domestic purpose licence from a stream water source, the term would generally be the entire year (365 days), while for an irrigation purpose licence the term is usually from April 1st to September 30th (183 days). However, the water officer may also wish to consider other information to better understand the timing and weighting of demand. Other potentially relevant factors may include, for example, if there is more than one authorized POD under a licence or whether the licensee holds more than one licence or the role of releases from storage, etc.

For larger, more significant applications involving more complex watersheds, the use of the BC Water Tool or iMapBC may be useful for assessing licensed demand within a watershed or specific area, especially where intermittent streams, springs, or groundwater diversions create conditions where the demand report in eLicensing may not reflect the total licensed demand within the area of interest.

7.4.2.4 Assessing Demand: Methods for estimating actual demand

Various methods and data may be used and considered to estimate actual demand, depending on the circumstances. As described in section 7.4.2 above, in circumstances requiring more detailed estimates of actual demand, estimations by water officers can be made through analysis of hydrometric data, review of existing water budgets, estimation based on flow rates and/or approximations derived from known pipe size, pump capacity, etc.

7.4.2.5 Assessing Demand: Methods for estimating demand related to irrigation

There are a number of sources of land-use information that can be used to derive an office-based estimate of existing demand for irrigated lands in British Columbia. Because these sources may change over time and may vary according to the methods used, it may be useful to consider, where appropriate, more than one source of information on the extent of the irrigated land-base and to compare results. Potential sources include:

(1) **aerial photography** available in a variety of platforms including:
   a. Google Earth;
   b. iMap; or
   c. ARCGIS search for most recent Provincial imagery (e.g., consult GIS support staff for instructions on the Ortho Index Tool).

(2) Agricultural Land Use Inventory (ALUI). Checking the website available through the link can provide information for the area of interest. If an inventory is available, consider whether to consult FLNRORD GIS support staff to arrange FLNRORD access through the Ministry of Agriculture to the target ALUI dataset. The ALUI dataset may provide some information on whether, for a polygon of irrigated land, the source is likely to be from stream water or groundwater.

(3) the "**Land Parcels with Water Licences**" data layer available in iMap and ARCGIS. This layer does not show the exact boundaries of the appurtenant lands for water licences, but does provide an indication of which land parcels are linked with diversion points (PODs) through individual water licences.

(4) the **survey maps** for individual water licences show the boundaries of the land to which each licence is appurtenant. These maps are filed in two places as scanned image files in .TIF format. Internally, they can be found on eLicensing under the Documents tab for an individual licence of interest. Externally, they can be searched through the Water Licence Query website and downloaded through the "Scanned Water Licences" webpage.

(5) After determining the extent of irrigated lands, estimate the total annual duty (e.g. total annual demand for water) for those lands. Either use the BC Agriculture Water Calculator or the duty for that area, if known. Next, it would be possible to convert the total annual demand into monthly use or maximum instantaneous demand (i.e., peak flow rate) as indicated with the BC Agriculture Water Calculator. Alternatively, consider apportioning the total annual demand across the period of use based on patterns of use, if documented.

7.4.3 Assessing Water Availability

Availability of water for allocation may be assessed by considering, after existing rights, actual diversion and use, EFNs, and other considerations are accounted for, whether there is a water surplus or deficit in order to determine if there is residual flow that is adequate to provide the quantity of water requested by the applicant.

7.4.3.1 Assessing Water Availability: Additional considerations

The following considerations may need to be factored into determining water availability.

Sensitive streams

There are a number of streams designated as 'sensitive streams' in Schedule B of the WSR and shown as "SS" in the source hierarchy of eLicensing. Section 17 of the WSA and Division 2 of the WSR provide further requirements and guidance on issuing an authorization on a sensitive stream.

Water allocation notations (restrictions)

Water allocation notations are a water management tool, through which water allocation staff place a notation on a stream or aquifer to alert other staff of current or potential water allocation concerns. There are a number of water allocation notations that may be established in order to guide water resource decisions. These notations range from a potential water shortage to further water allocation is limited. Current notations are in eLicensing in the source hierarchy as "RS", and for the public can be found on iMapBC.

Guidance on water allocation notations can be found in the policy "Application of Water Allocation Notations to Water Authorizations." More information is also available about water allocation restrictions and associated notations.

Water allocation plans

Water allocation plans include information collected in their preparation on estimates of water availability within a watershed, including review of supply and demand, together with environmental flow needs ("instream requirements"). Water allocation plans provide recommendations for the future allocation of water from sources within the watershed. If a water allocation plan has been developed for a watershed, it should be reviewed for any relevant information.

Water reservations

Water reservations are enabled under s. 39 of *Water Sustainability Act* (WSA) whereby the Lieutenant Governor in Council can reserve from being diverted or used, all or part of the unrecorded water that is in the stream or aquifer, and that is unreserved and that is not dedicated agricultural water.

The proposed water source should be reviewed for existing water reservations. Often the water reservation is placed on the main stem of the stream in eLicensing so a full stream hierarchy report should be run to determine if there is a water reservation. Also the water reservation should be reviewed to check if it is in perpetuity or if there is an expiry clause.

A reservation under s.39 of the WSA does not prevent the granting of a licence for domestic or land improvement purpose, or a use approval for any purpose. Depending on the wording of the water reservation, a new water authorization on the same source may be allowed by the reservation, or may be allowed by a subsequent order. It's important to review the details of the reservation - for the most up to date list of water reservations, consult the Water Resource Management – Water Reserves layer in iMapBC and in eLicensing in the Source Hierarchy listed as "RV". Information about water reservations is also available.

Treaty First Nation water reservations

Treaty First Nation water reservations are enabled under s. 40 of the *Water Sustainability Act* and Nisga'a water reservations are enabled under s. 41. These reservations can include any water use purposes other than for a power purpose. A treaty water reservation reserves a specific quantity of water from specific streams or aquifers. The issuance of an authorization from a treaty water reservation is restricted by the provisions of the treaty.

7.4.4 Assessing a Reasonable Authorization Quantity

The volume of water requested in the application should be reviewed for reasonableness. It may be necessary for the decision maker to request additional information to determine if the volume of water requested is consistent with the proposed use. For example:

- Use for domestic purpose is typically 2 m^3/day for a private dwelling (see also s. 22 (8) of the WSA).
- The decision maker can use the BC agriculture water calculator to assess the reasonableness of the potential beneficial use of the volume proposed in the application for an irrigation purpose, having regard to the range of crops that might be grown on the land.
- The Guide to Rural Subdivision Approvals provides a general guideline of water requirements for a proposed subdivision development.
- The Design Guidelines for Rural Residential Community Water Systems (2012) cover the design of new waterworks systems or extensions and replacement works to existing systems providing water service generally for housing in rural areas.

There may be instances when the licensee is not the end user of the water, e.g., water being diverted and stored is authorized under a licence for "water sales" or "waterworks" purpose. Additional information may be necessary to determine the appropriate licence quantity, e.g., waterworks may have a set or predictable number of users, potentially involving information from the applicant about area and users served, and may also have an associated Certificate of Public Convenience and Necessity (CPCN), while water sales is a bit more unpredictable so a business case might be sought from the applicant as a rationale for why the volume requested is required.

7.4.4.1 Assessing a Reasonable Authorization Quantity: Future Use of Water

All applicants for a water authorization (except for transitioning groundwater users) apply for an authorization based on their proposed future use of water. The terms and conditions of an authorization, when granted, typically establish the future dates by which works must be completed and by which the authorization holder must establish beneficial use. Establishment of these dates – and their extension (by an amendment), if needed to accommodate unanticipated setbacks – is within the discretionary authority of the decision maker. The timeline established by the decision maker would typically be based on what is appropriate to the scale of the proposed development.

Pursuit of a WSA s. 39 Water Reservation for a Waterworks Purpose

Municipalities, regional districts, and improvement districts seeking to have water set aside for future supply for a waterworks purpose potentially have several options.

Under WSA s. 39 (1) (b) the Lieutenant Governor in Council (LGIC) may reserve all or part of the unrecorded water in a stream or aquifer 'to make provision for a water supply from a stream or an

aquifer for a proposed waterworks, irrigation or power system or project of a specified person.' A water reservation under s.39 can only be applied to water that is unrecorded, is not otherwise reserved, and is not dedicated agricultural water. A s. 39 water reservation is established, amended, or cancelled by an Order in Council (OIC). The date the OIC is signed becomes the priority date of any licence issued for the reason of the water reservation.

7.5 Description of the works

As required in s. 3 of the WSR, in addition to the location of the proposed works, the applicant is required to provide a detailed description of the proposed works. In some cases, the proposal is simple and straightforward, in other cases the project and associated works are complex.

It is important to list works in eLicensing so that they are accurately described in the authorization documents. In cases where a project is complex, a site visit with the proponent might be considered to gain a better understanding of the project.

Section 3 (2) of the WSR requires that a decision maker must not authorize in a use approval water storage by a dam to which Part 2 of the Dam Safety Regulation (DSR) applies unless the dam is authorized by a licence.

Section 7 (1) of the WSA entitles licence holders to undertake several activities in and about a stream in a manner provided in their licence, as well as diverting and using the quantity specified, including the construction, maintenance and operation of works (s. 7 (1) (b) and (c)). The decision maker has authority to specify terms and conditions when deciding to issue an authorization. These may specify how works are to be carried out, including but not limited to conditions designed to avoid or mitigate environmental impacts, taking into account local conditions and considerations, and including those that might be described in a qualified professional's report, submitted by the holder.

7.6 Applications that are pending

An application may be shown as "pending" (on hold), if the decision maker is awaiting submission of additional information or confirmation of particular information. If not submitted by the applicant in a timely manner or within a specified timeframe or if weather conditions prevent more timely site inspection (e.g. winter conditions), adjudication of the application may be somewhat delayed. In certain cases, an applicant may request more time to provide information, such as to enable collection of data in support of the application. In other cases, decision making may not be able to proceed pending issuance of an environmental assessment certificate.

7.7 Site inspections

A site inspection may be one method for obtaining essential technical information. Establishing good communication with the applicant or a qualified professional (acting for the applicant), which in some cases may include a field visit, or meeting in the office, can facilitate a more efficient review. The following is general guidance on when a site inspection might be considered.

7.7.1 When a site inspection might be considered

There should be a clear purpose for conducting a site inspection, such as to obtain technical information that is essential to deciding the application. While the following list is not exhaustive, a site inspection may be warranted when the inspection:

- Can reasonably be expected to validate or refute the basis for an objection;
- Will facilitate and improve the quality of assessment and processing of the application;
- Provides an opportunity to consider and understand issues raised by local, federal and provincial agencies, major clients and First Nations;
- Provides an opportunity for joint inspections with other agencies; and
- Is reasonably expected to assist with the assessment of the impacts to the environment (e.g. water quality, water quantity, aquatic ecosystem of stream or aquifer), First Nations, other authorized users, riparian owners, affected landowners.

Site inspections may be conducted by the water officer or habitat officer and, more rarely, by the decision maker, preferably at the right time in the application process e.g., after the pre-assessment phase and most typically during the Technical Assessment process, and, if practicable, at the right time in the season that reflects the period of use e.g., application submitted in the winter for a summer water use.

Note that the site inspection may establish that additional authorization holders or other potential objectors may need to be notified of the proposed application.

7.7.2 Documentation

Once the site inspection has been completed, documenting and filing of the inspection results should be undertaken to ensure the file is up-to-date and the information is available to everyone working on or using the file.

7.8 Permit over Crown land

A permit over Crown land (PCL) under s. 24(1) of the WSA may be issued to allow the holder of an authorization, change approval or drilling authorization to construct or maintain works or for flooding on Crown land.

If a PCL is required, the PCL document should:

- Describe the area of Crown land to be occupied;
- Specify the actual dimensions, i.e., hectares to determine the application fee as per Section 9 of the Water Sustainability Fees, Rentals and Charges Tariff Regulation; and,
- Indicate the water authorization to which it is attached.

If a single person has multiple licences for the same appurtenancy, they may only need one PCL, depending on whether works are the same under the licences. For individuals to qualify for sharing one PCL, other considerations come into play. At a practical level, sharing a PCL is not to be considered unless key aspects are the same, including a shared POD, joint works and for water use on the same appurtenant land. In that very unlikely event, one shared PCL might be considered and only one licence would be billed. More typically, each licensee would require their own PCL.

For more on PCLs, see the policy Authorization Requirements for Locating Licensed Works or Flooding on Crown Land, which includes specifics on when a PCL is required for approvals (Section 5.3).

7.9 Requesting additional information

A decision maker is able to request or to order submission of additional information that is relevant to the application. This might be for the purpose of confirming details or to solicit the applicant's response to an objection. The decision maker may also set a date for receipt of the information requested.

7.10 Receipt of objections and concerns

S. 13 of WSA describes categories of persons with standing who are able to object when notice of an application is provided to them because the decision maker considers that their rights are likely to be detrimentally affected or their land is likely to be physically affected if the application is granted. In that case, if an objection is received within the required time period, the decision maker must decide whether or not the objection warrants a hearing. S. 13(5) to (7) of WSA describe the hearing process. While the decision maker is also able to seek input from other persons not having objector standing, if considered advisable, that person is not entitled to participate in any hearing of the application (s. 13(12) of WSA).

7.11 Final document review

Once the technical review and assessment is considered to be complete, the technical report and recommendations will be for the decision maker to review and, if satisfied with the content, the decision maker will proceed with making a decision on the application (see Stage 3 below).

7.12 Metric units and significant figures

Note that under the WSA, all documents are issued in metric units. The number of digits to the right of the decimal may be specified in a regulation (e.g., Schedule 1 of the Groundwater Protection Regulation) but should otherwise reflect the precision of the data.

8. STAGE 3 – APPLICATION DECISION BY DECISION MAKER

8.1 Generating a technical report and decision documents

Generating the Water Authorizations Application Technical Report through eLicensing is the last part of Stage 2. The technical report summarizes the assessment and identifies a recommendation whether to grant the new water authorization or to refuse the application (whether in whole or in part), and may make recommendations for clauses that might be included as possible terms and conditions should the application be granted.

The technical report provides the rationale in support of the recommended clauses selected for inclusion in both the letter of decision and licence or approval if the application is to be granted. The technical report is then used by the decision maker for the final steps in adjudication of the application.

8.2 Review of technical report and decision package

The technical report (developed in stage 2) provides a recommendation on whether to fully or partially grant or refuse a water authorization application, as well as also recommending conditions in the form of suggested clauses. The technical report and recommendations will be reviewed by the decision maker and, if the decision maker is not satisfied with its content, the decision maker may return the report to the water officer for further consideration.

8.3 Decision documentation

Regardless of the decision, a decision letter will be required to document the decision made on a application. If the decision maker decides to issue a water authorization, which includes granting the application in full, or in part, and may be made subject to conditions, a package of the related documents should be prepared.

8.3.1 Decision letter

In a letter to the applicant, the decision maker advises as to the outcome of the application. If the application is granted (whether in whole or in part), the decision maker would attach a copy of the authorization, as well as provide some general information regarding the authorization to the applicant. An objector with standing who has filed an objection will also be given notice of the decision. The applicant and objectors are able to appeal the decision within the required timeframe (30 days after notice of the decision is delivered to that person).

Also, notice of the decision should be given any referral agencies or persons (e.g. listed in the technical report) who may not have legal standing to object or to appeal.

8.3.2 Authorization document

Water authorizations typically contain fairly standard terms and conditions. In addition, the authorization may include additional or special clauses (provisions) as may be considered advisable in the circumstances.

There are two key differences for terms and condition for use approvals. Use approvals always have terms and they can only be for up to 24 months. Also, use approvals do not require but may have an appurtenancy or place of use. For example, a place of use clause may be added for a use approval for placer mining purposes but might only specify a coordinate in the case of a dust control use approval.

8.3.3 Water authorization drawing

The drawing, which forms part of the water authorization documentation and will be signed off by the decision maker (outside of eLicensing and scanned), provides important spatial information on the

point of diversion (PD/PW/PG), the appurtenancy, source of water withdrawal, storage site(s) if applicable, and other authorized works.

8.4 Making water authorization decisions

If the decision maker considers as complete the technical report and recommendations, as well as the application process including any required steps, then following review and consideration of any objections received, the decision maker is in a position to proceed with making a decision on the application.

The decision (whether to grant the application, in whole or in part, including on terms and conditions considered advisable, or to refuse the application) must be signed by the decision maker, including signing any authorization issued, as well as any supporting documents, and, in giving notice of the decision, letters to any legal objectors, referral agencies or other persons (e.g. if their input was sought, as listed in the technical report).