

A USERS' GUIDE
TO WORKING IN AND AROUND WATER

UNDERSTANDING THE REGULATION UNDER
BRITISH COLUMBIA'S *WATER ACT*

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1 INTRODUCTION

1.1 Purpose and Scope of this Guide

This guide is for anyone proposing to do work or make changes in or near water bodies in British Columbia. Depending on the type and extent of the proposed work activity, you are required to engage one of two appropriate processes prior to commencing. You will need to either:

- (1) Submit a notification of your intended works to the appropriate regional office of the BC Ministry of Water Land and Air Protection (WLAP Thompson Region an exception), or;
- (2) Submit an application to Land and Water BC inc. for an approval or licence under the *Water Act*

Both the notification process and the approval process require you to submit a form with accompanying documents and to incorporate appropriate standards and best practices into your work plan.

This guide has been developed to familiarize you with the notification and approval processes and to assist you in the preparation and submission procedures for your particular application package.

Please be aware that in addition to the information provided in this guide, you will also need to review the relevant sections of the BC Ministry of Water, Land and Air Protection (WLAP) best management practices document: *Standards and Best Practices for Instream Works (SBPISW)* which is available on the Internet at <http://wlapwww.gov.bc.ca/wld/BMP/bmpintro.html>.

If you already have experience working in and around streams and are familiar with the notification and approval processes, you may opt to turn directly to Sections 6 and 7 of *SBPISW* for information about the standards and best practices that apply to the specific type of work you are proposing.

It is important to note also that in certain cases WLAP regional offices may have additional specific notification requirements to those outlined in this Guide. You may determine this by checking the regional web sites at http://wlapwww.gov.bc.ca/esd/esd_reg_ops.htm and following the links to the appropriate regional office (see Regional map p. 22.).

Some of the information provided in this guide is referenced from legislation. If a discrepancy arises between this document and legislation, the legislation takes precedence. The Province of British Columbia does not guarantee the accuracy or completeness of the information referenced here from legislation, and in no event is the Province liable or responsible for damages of any kind arising out of its use.

1.2 British Columbia's *Water Act*: Working In and Around Water

In British Columbia, ownership of water and most streambeds is vested in the Crown and the main provincial statute regulating water resources is the *Water Act*. Section 9 of the *Water Act* regulates “changes in or about a stream.” Part 7 of the *Water Act* regulation—referred to as “the Regulation” – ensures that water quality, fish and wildlife habitat and the rights of licensed water users are not compromised. See Section 7 of this guide for the complete text of the Regulation.

The Regulation allows certain activities to be undertaken when carried out in compliance with the Regulation, rather than under the authority of an approval or licence. Under the Regulation, you may carry out a number of routine works, provided that the general conditions and notification requirements are met. An approval or licence is required in cases involving more complex works and for the short-term use, storage or diversion of water. Some activities, such as the construction of a dam, require a licence. If an activity is not specifically identified in the Regulation it will require an approval or licence.

If the type of works in and about a stream identified in Section 44 (1) (a) through (x) of the Water Regulation are conducted under the authority of the *Forest and Range Practices Act*, *Forest Practices Code of British Columbia Act*, Section 10 of the *Mines Act*, or any regulation made under any of those acts there is no requirement for notification to WLAP. However other types of works in and about a stream will require application for approval under the *Water Act* from Land and Water BC.

Of particular note also are specific cases where maintenance work to existing grandfathered waterline installations (not operating under permit) may be required. In these cases works that may occur in a fish bearing stream must be referred to DFO to ensure compliance with the *Federal Fisheries Act*.

Instream works are also regulated by a number of other federal, provincial and municipal acts and regulations. These are discussed in Section 5.1 of *SBPISW*.

1.3 What is a Stream?

The term “stream” has a much wider meaning under the British Columbia *Water Act* than it does in everyday usage. In the Act a stream is defined as “a natural watercourse or source of water supply, whether usually containing water or not, ground water, and a lake, river, creek, spring, ravine, swamp and gulch.”

Consistent with the definition in the Act and in support of the federal *Fisheries Act*, channelized streams and some constructed ditches (such as those in floodplain areas) that provide fish habitat are also considered streams.

Streams are complex ecosystems supporting a range of aquatic habitats and species. Streams often sustain rare and endangered plants and animals and may or may not provide fish habitat.

1.4 What are Fish and Wildlife Habitats?

The *Water Act* Regulation defines habitat as “the areas in and about a stream, including (a) the quantity and quality of water on which fish or wildlife depend directly or indirectly in order to carry out their life processes, and (b) spawning grounds and the nursery, rearing, food supply and migration areas.”

Under this definition, not only the watercourse itself, but also the vegetated streamside area or riparian area which provide nutrients and shade to the stream, are recognized as fish and wildlife habitat. Watercourses, streams, ditches, ponds and wetlands that provide water, food or nutrients to fish-bearing streams are considered fish habitat, even if they do not contain fish or if they have only temporary or seasonal flows.

The *Water Act* also applies to streams that may have no fish habitat, yet still meet the definition of a stream. These streams may support populations of amphibians or rare and endangered species. They are also important for the complex ecosystem functions they fulfill.

1.5 What are “Changes in and about a Stream”?

Under the *Water Act* the phrase “changes in or about a stream” means “(a) any modification to the nature of a stream, including the land, vegetation, natural environment or flow of water within the stream; or (b) any activity or construction within the stream channel that has or may have an impact on a stream.”

Specific types of instream works are listed in Section 3 of this guide, along with their requirements for either notification or approval.

2 OTHER LEGISLATION

2.1 The *Fisheries Act (Canada)*

Fisheries and Oceans Canada (DFO) has ultimate authority over fish habitat through the *Fisheries Act*, which is the main federal legislation affecting all fish, fish habitat and water quality. Any time your proposed activity has the potential to deposit a deleterious substance or if you are seeking a permit to destroy or alter fish habitat, this act is invoked.

The *Fisheries Act* defines a deleterious substance as “any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.”

Under the Act, the term “fish” refers to “all fish, shellfish, crustaceans and marine animals, and the eggs, spawn, spat and juvenile stages of fish, shellfish, crustaceans, and marine animals.” Fish habitat is defined as “spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes.”

Key sections in the *Fisheries Act* that you should be aware of are:

- Section 35(1) “no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat”; and
- Section 36(3) “... no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish...”.

Section 35 of the Act protects fish habitat. Subsection 35(2) also contains provisions for DFO to authorize works where the harmful alteration, disruption or destruction (HADD) of fish habitat is expected. Proposed works that would result in a HADD may only proceed after an authorization under Subsection 35(2) of the *Fisheries Act* has been issued, in addition to a *Water Act* notification or approval.

If you are required to apply for a Subsection 35(2) *Fisheries Act* authorization you should contact an appropriately qualified professional with adequate training or knowledge of fish habitat, who can help you identify, address and mitigate potential habitat or species concerns related to your proposed works. DFO will be reviewing your works in terms of their preferred management options and will need you to provide a clear rationale for moving from a more preferred to a less preferred option.

For activities that have low risk to fish habitat DFO is initiating a similar review process to that under the Water Act Regulation which allows certain activities when carried out in compliance with the Regulation to be undertaken by notification (rather than under the authority of an approval or licence.) This initiative is part of a new Environmental Process Modernization Plan that is consistent with the Federal Government’s approach to Smart Regulation. As part of this new approach, DFO will provide upfront guidance on mitigation measures required to avoid the harmful alteration, disruption or destruction of fish habitat (HADD) for specified activities. For these activities a DFO review or authorization will not be required provided that the standard mitigation measures are followed. All other works will be reviewed by DFO to determine if a HADD is likely and an authorization required. An authorization will likely be required for all works that require an approval under the Water Act. You will need to check this web site in the near future for further information regarding this DFO review process, or you may wish to contact your local DFO office.

If you have any questions about meeting any federal *Fisheries Act* requirements, contact one of the Fisheries and Oceans Canada offices listed in Section 6.

2.2 The Fish Protection Act and Riparian Area Regulation

The provincial *Fish Protection Act* was enacted in 1997 as a key element of British Columbia’s Fisheries Strategy to protect fish stocks. The Act is based on four objectives:

ensuring sufficient water for fish; protecting and restoring fish habitat; improving riparian protection and enhancement; and supporting local government powers in environmental planning.

When considering works in or around water you should first check to see whether the watercourse has been designated as a “sensitive stream” under the Act. A sensitive stream is a source that warrants particular attention to protect the watershed’s fishery resource. By definition, all of its tributaries are included.

The following 15 candidate streams have been designated as sensitive streams. On Vancouver Island: Black Creek, Goldstream River, Englishman River, Little Qualicum River, French Creek, Little River and Fulford Creek. On the Lower Mainland: Chapman Creek, Silverdale Creek, Kanaka Creek, West Creek, Lang Creek, Whonnock Creek and Nathan Creek. In the Omineca/Peace region: Salmon River.

The *Fish Protection Act* provides legislative authority for water managers to consider impacts on fish and fish habitat before approving new licences or amendments to licences or issuing approvals for work in or near these streams. For more information about sensitive streams and the Act, see WLAP’s *Fish Protection Act* web site (http://wlapwww.gov.bc.ca/habitat/fish_protection_act/).

The Riparian Areas Regulation (RAR) came into effect in 2005 and provides for the protection of the features, functions and conditions that are vital in the natural maintenance of stream health and productivity. The RAR model uses qualified environmental professionals that are hired by land developers to assess habitat and potential impacts, develop mitigation measures and avoid impacts of development to fish and fish habitat, particularly riparian habitat.

The Riparian Areas Regulation applies only to local governments located in Southwestern BC and the Southern Interior as these are the regions that are experiencing the most rapid urban growth. The regulation does not apply to agriculture, mining or forestry related land uses. For more information see the Riparian Areas web site at:

http://wlapwww.gov.bc.ca/habitat/fish_protection_act/riparian/riparian_areas.html

It is important to note that if your development includes changes in and about a stream you must meet both *Fish Protection Act* and *Water Act* requirements.

2.3 Who is an Appropriately Qualified Professional?

An appropriately qualified professional means an applied scientist or technologist specializing in a relevant applied science or technology including, but not necessarily limited to, agronomy, forestry, biology, engineering, geomorphology, geology, hydrology, hydrogeology or landscape architecture. An appropriately qualified professional must be registered in British Columbia with the appropriate professional organization, and acting under that association’s Code of Ethics and subject to disciplinary action by that association. He or she must also be someone who, through demonstrated suitable

education, experience, accreditation and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within his or her area of expertise.

3 UNDERSTANDING NOTIFICATIONS AND APPROVALS

3.1 What are the Differences Between Notifications and Approvals?

Whether you need to either submit a notification (to WLAP) or apply (to LWBC inc.) for an approval under the *Water Act* depends upon the nature of your proposed work. Specific categories of works that dictate the requirement for either a notification or an approval are listed in Sections 3.2 to 3.4 below. Notifications are submitted to WLAP (except in the Thompson Region). Applications for approvals and licenses are submitted to Land and Water BC (LWBC). As well, for works conducted under the notification process, DFO may also have special requirements under Section 35 of the federal *Fisheries Act*, as discussed in Section 2.1 above. Work requiring an approval will likely require the involvement and approval of federal regulatory agencies such as DFO.

The notification process requires you to submit a completed notification form and supporting material (such as location maps and site plans) before starting your planned activities. Prior to submission, you should review *Standards and Best Practices for Instream Works* (see References section) to familiarize yourself with the legal requirements associated with your proposal. *SBPISW* also explains practices you can adopt to reduce or eliminate potential environmental impacts. You only need to review those sections that apply to your activity. Additional terms and conditions for the protection of habitat may be specified by a Habitat Officer. Check the Regional WLAP website for the Region in which your works will be carried out.

The approval process requires you to pay an application fee and provide all habitat assessments, designs and plans for the works needed to determine the effects of the proposal on the legal rights of downstream water licensees, channel stability, flood levels and fish and wildlife resource values. Before you begin your proposed works, you must receive an approval document from LWBC.

The form for submitting notifications and applying for approvals is linked at this web site. To access it, return to the main page and select from the menu.

3.2 What Works Require Notification?

In general, works that do not involve any diversion of water, that may be completed within a short period of time and that have little impact on the environment may be conducted in compliance with the Regulation under the *Water Act* through the notification process. Such works require notification to WLAP (except in the Thompson Region) and fall into the seven categories described below. Additional background information, WLAP objectives, standards and best practices for each category are provided in *SBPISW*.

Stream Crossings

Stream crossings may be private (e.g., a livestock or driveway crossing), public (e.g., a major road crossing) or associated with utilities (e.g., natural gas pipelines). These works are undertaken for a variety of reasons: to construct a crossing where none existed previously; to replace an existing crossing with one of equal size; or to replace an existing crossing with a larger one or a different type of structure. Because of the risks to riparian and aquatic habitat and species, stream crossing works should only be considered when the need for the works can be justified. See Section 7.1 of *SBPISW* for more information.

Stream crossings permitted under the Regulation include:

- installation, maintenance or removal of stream culverts for the purpose of a road, trail or footpath;
- construction, maintenance or removal of clear-span bridges;
- construction or maintenance of pipeline crossings;
- construction, maintenance or removal of ice bridges or winter fords; and
- construction, maintenance or removal of temporary, seasonal fords.

Culvert/streambed profile

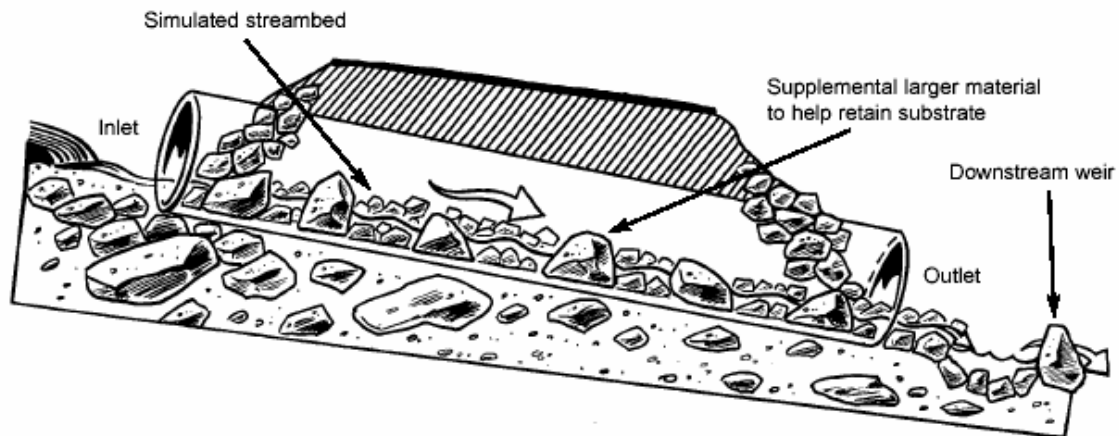


Figure 1b. Example of a closed-bottom culvert.

Concrete slab bridge

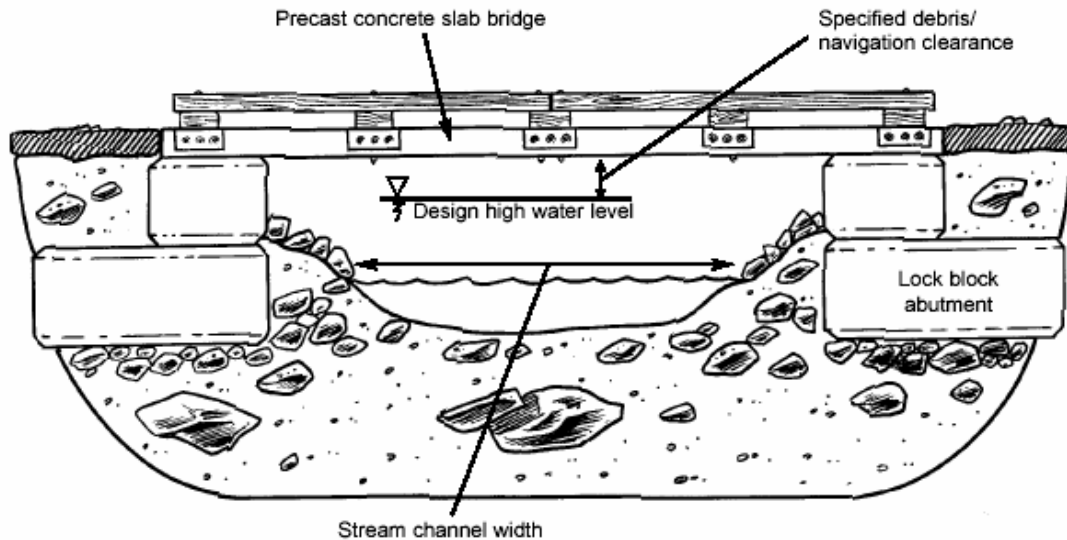


Figure 1b. Example of a clear-span bridge. A clear-span bridge is a structure that spans the stream's open water channel and does not involve the construction or installation of any structure between the stream's banks.

For more information about culverts, bridges and other stream crossings consult the Forest Practices Code *Fish-stream Crossing Guidebook* (listed in the References section).

Stream Channel Maintenance

Streams and channels sustain fish and wildlife values. They are also relied upon as drainage pathways. As such, maintenance activities are periodically required to maintain the ability and capacity of the channel to carry adequate flow. Stream channel maintenance activities can cause temporary or permanent loss or alteration of instream habitats, and can result in both temporary and permanent losses in riparian or streamside vegetation or channel stability. Extreme care must therefore be taken when conducting stream channel maintenance activities. See Section 7.2 of *SBPISW* for more information.

Stream channel maintenance works permitted under the Regulation include:

- restoration or maintenance of stream channels by the provincial government or a municipality;
- cutting of annual vegetation; and
- control of Eurasian water milfoil and other aquatic vegetation.

Stream Bank and Lakeshore Stabilization

Stream bank and lakeshore stabilization refers to works undertaken to protect or armour a bank or shore from erosion. While protecting or armouring a small section of stream bank or lakeshore may prevent erosion at one location and appear to have only minor impacts on the watercourse, the compound effects of all individual works within a drainage or watershed are significant. If not designed and installed correctly, stream bank protection

works can cause erosion on adjacent or downstream sites. See Section 7.3 of *SBPISW* for more information.

Stream bank and lakeshore stabilization works permitted under the Regulations include:

- repair or maintenance of existing dykes or erosion protection works to their original state, provided the dykes or works were functional during the previous year.

Urban Stormwater Management

Urban and rural stormwater management refers to activities involving the connection of urban or rural drainage systems to streams. Streams are critical components of all municipal, urban and rural stormwater systems. As stormwater outfalls are the direct links between upland land use and streams, they can have significant impacts on aquatic species and habitats through the alteration of storm flow volume and timing within watercourses. Pool and riffle habitats may be destroyed, spawning gravels may be scoured out or covered with sediment, and critically low flows or normal flows in streams may be reduced. Stormwater systems also impact a stream's water quality by introducing pollutants through spills and non-point source pollution.

Discharges from new multi-lot residential subdivisions, multi-family residential developments and commercial, institutional or industrial sites are considered stormwater system connections and require notification. Perimeter drain discharges include proposed new discharges from independent single-lot, single-family residential properties only, and do not require notification. See Section 7.4 of *SBPISW* for more information.

Stormwater management works permitted under the Regulations include:

- construction or maintenance of storm sewer outfalls.

Habitat Enhancement and Restoration

Works designed to restore or increase the productive capacity of aquatic or riparian habitat include, but are not limited to: rehabilitating aquatic habitats; restoring fish access; rehabilitating stream banks; rehabilitating off-channel habitat; introducing channel complexity (e.g., placement of large woody debris or boulder clusters); restoring mainstem rearing habitat; introducing pool and riffle sequences; and augmenting minimum stream flows. They do not include works associated with beaver dams. See Section 7.5 of *SBPISW* for more information.

Habitat enhancement and restoration works permitted under the Regulations include:

- restoration or maintenance of fish habitat by the provincial or federal governments.

Beaver and Beaver Dam Management

Beaver impoundments often create flooding and other drainage-related problems on adjacent lands, which can cause concern, particularly at road and rail stream crossings and on agricultural and forest resource lands. Beaver impoundments may also severely restrict fish passage.

To disturb, molest or destroy a beaver house, den or dam is an offence under Section 9 of the *Wildlife Act*, unless you are a licensed trapper. Alteration or removal of a dam is permitted under the *Wildlife Act* “to provide irrigation or drainage under lawful authority for the protection of property” and under the *Water Act* for drainage purposes with specific restrictions. To remove a beaver dam, you must have the permission of the landowner. Be prepared to supply supporting documentation and justification for the works with respect to the size, scale and location of your proposed works and the level of risk to existing buildings, roads or services being threatened with flooding.

WLAP’s objectives for the management of beavers and beaver dams are to encourage human coexistence with beavers, to allow beavers to remain resident where appropriate and to manage beaver populations in areas where beaver presence is not appropriate. For beaver dam removal activities, the Ministry’s objective is to prevent harmful impacts to beaver populations, fish and wildlife species, water quality and quantity and riparian and aquatic habitats. See Section 7.6 of *SBPISW* for more information.

Beaver and beaver dam management works permitted under the Regulations include:

- modification or removal of beaver dams.

Miscellaneous Works

Other works permitted under the Regulation include:

- construction, maintenance or removal of temporary diversions;
- construction, maintenance, or removal of a dock, wharf or pier, provided that the ebb and flow of water and movement of material under the influence of waves or currents is not obstructed;
- maintenance of a routine and minor nature by a public utility of its works;
- construction, maintenance or removal of a flow or water-level measuring device by the provincial or federal governments or their agents;
- construction or removal of a fish fence, screen or fish or game guard across a stream by the provincial or federal governments or their agents, provided that it is designed, constructed, maintained or used so as not to obstruct the flow of water in the stream.

See Section 7.7 of *SBPISW* for more information.

3.3 What Works Require an Approval?

Activities requiring a formal approval under the *Water Act* from Land and Water BC inc. are typically significant works that permanently alter the direction, pattern or flow of a stream’s path. See Section 7.9 of *SBPISW* for more information.

Works that require an approval include, but are not limited to:

- culvert installation for reasons other than those listed under the “Stream Crossings” section above;
- watercourse or channel realignment;
- retaining wall or bank protection installation;
- dam construction;

- dredging;
- weir construction;
- construction of a sediment sump;
- pond or lake creation;
- permanent flow diversions; and
- other significant works.

3.4 What Works Do Not Require Notification or an Approval?

Emergency Works

Emergency instream works are specifically defined in the British Columbia *Water Act* Regulation and do not require notification or an approval, provided they are carried out as specified by Section 40(3) of the Regulation. Emergency works include erosion or flood protection works required during a flood emergency declared under the British Columbia *Emergency Program Act*, and works required to clear an obstruction from a bridge or culvert during a flood event when there exists a potential danger to life or property. The British Columbia government, its agents or a municipality are permitted to undertake both types of work.

Works undertaken by government for flood protection or clearing obstructions during a flood emergency must be reported to a habitat officer within 72 hours of making the change (see Section 40(4) of the Regulation).

Note that the Regulation does not address all high-risk emergency situations or those works that require attention prior to the next flood event to ensure that they do not become high risk. A proposed protocol to manage these other emergency situations can be found in Section 7.8 of *SBPISW*.

Other Works

In addition to emergency works, the following types of work in or about water do not require notification or an approval, providing they are carried out as specified by Section 40(3) of the Regulation:

- installation or cleaning of drain tile outlets;
- repair or maintenance of the superstructure of a bridge (excluding foundations); and
- repair, removal or construction of fences, provided that fencing materials are not in the stream channel, do not block debris and do not interfere with navigation.

Instream Works and Forestry Agreements

If you hold an agreement under the *Forest Act* or the *Range Act*, or are operating under the *Forest Practices Code of British Columbia Act* you must comply with the established standards and guidelines set out under these agreements. In this respect however the type of works identified in Section 44 (1) (a) through (x) of the *Water Regulation* may be carried out without a notification to WLAP while other types of works in and about a stream will still require approval under the *Water Act* from Land and Water BC inc.

Instream Works and Exploration Permits under the Mines Act

If you hold a permit under Section 10 of the *Mines Act* you must be in compliance and meet all permit conditions. In this respect however you may carry out the type of works identified in Section 44 (1) (a) through (x) of the *Water Regulation* without notification to WLAP while other types of works in and about a stream will still require an approval under the *Water Act* from Land and Water BC inc.

3.5 How Do I Submit a Notification or Apply for an Approval?

To submit a notification or apply for an approval, follow the steps outlined below.

Step 1

Review Section 4.2 of *Standards and Best Practices for Instream Works* to familiarize yourself with the potential impacts to stream processes, water quality, riparian vegetation or fish and wildlife populations that may arise from your proposed works.

Step 2

Review your legal obligations in Section 5.1 of *SBPISW*.

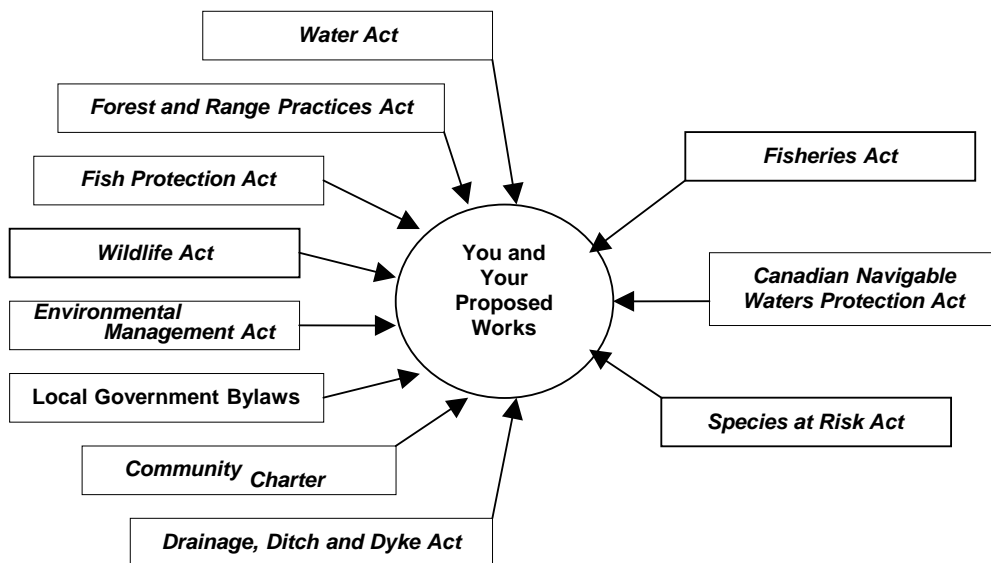


Figure 2. Examples of federal, provincial and municipal legislation that regulate aspects of instream works.

Step 3

Plan your works to comply with the standards and recommended best practices detailed in Section 7 of *SBPISW*. You have the option of following different practices, with or without the advice of an appropriately qualified professional, provided you ensure that your works meet the required standards and achieve the set objectives. If they do not, you must be able to demonstrate that the practices used were an appropriate choice and were applied correctly.

Step 4

Determine whether your works require you to submit a **notification** or apply for an **approval**.

Notifications – Step 5

Submit your notification to your regional WLAP office (NB: Notifications for the Thompson/Okanagan and Kootenay Regions are currently sent to the LWBC Kamloops Service Centre.) using the form linked at this web site.

The notification form, along with the appropriate drawings, maps and site plans, must be submitted to the appropriate office as noted in the application package **prior to** the proposed commencement of the work. Contact information for WLAP regional offices is provided in Section 6.1 of this guide.

If you agree to all the requirements, including the Habitat Officer's terms and conditions, you may proceed with your proposed changes without waiting for a formal response from MWLAP.

Under section 37(3) of the *Water Act* Regulation, if it is determined that your proposal may have a significant detrimental impact on the nature of the stream or stream channel, an application for an approval or licence under the *Water Act* may be required.

Design standards and best practices for your works will vary depending on the type of work you are planning to complete. In most cases, it is recommended that you retain the services of an appropriately qualified professional with adequate training and knowledge of aquatic and riparian habitats to help determine which standards apply and which best practices are appropriate for your proposed works.

Approvals – Step 5

Submit your application for an approval, along with the appropriate drawings, maps and site plans, to your regional LWBC service centre or appropriate Northern Service Centre field office using the form linked at this web site. Contact information for LWBC service centres is provided in Section 6.2 of this guide.

The approval application process requires you to provide all habitat assessments, designs, and plans for the works needed to determine the effects of the proposal on the legal rights of downstream water licensees, channel stability, flood levels and fish and wildlife resource values.

Before you begin your proposed works you must receive an approval document from LWBC.

4 TERMS AND CONDITIONS

4.1 General Conditions

Regardless of the type of work you propose to undertake, all projects conducted under the *Water Act* “Changes in and About a Stream” Regulation must adhere to the following terms and conditions.

Legal requirements of other legislation

You must comply with all applicable federal, provincial or municipal enactments, such as the *Fisheries Act (Canada)*, *Workers Compensation Act* and local zoning and building requirements and you are responsible for obtaining the necessary permits. See **Subsection 37(4) (a)** of the Regulation.

Land ownership

If you do not own the land, you must obtain the approval of the landowner, whether the land is private or Crown land. See **Subsection 37(4) (b)** of the Regulation.

Completion of Work

Once works are started, the changes must be completed without delay, unless necessary to preserve the nature of the stream. See **Subsection 38(1) (b)** of the Regulation.

Public safety

You must design, construct and maintain the works so that life, property and the environment are not endangered. See **Section 38(2)** of the Regulation.

Protection of water quality

You must ensure that no sediment or other compounds enter the stream, that water quality objectives are met, that the stream channel is not destabilized during or after construction and that environmentally sound construction practices are followed. See **Subsection 41 (a) to (g)** of the Regulation. *Stream Stewardship: A Guide for Planners and Developers*

(http://www.stewardshipcentre.bc.ca/sc_bc/stew_series/bc_stewseries.asp#) provides a good overview of water quality protection measures that should be followed.

Protection of other water users

You must ensure that existing water uses under the *Water Act* are protected and that the users are given three days prior notice and provided with an adequate supply of water as required. See **Section 43 (1) and (2)** of the Regulation.

Construction standards

You must comply with the construction standards for the specific activities listed in **Section 44(1) (a) to (x)** of the Regulation.

4.2 Conditions Set by a Habitat Officer for Protection of Species and Habitat

You must also carry out your work in accordance with terms or conditions specified by a habitat officer with respect to any of the following:

Timing of the work

All instream changes are high-risk activities: fish and wildlife populations and their habitats can be significantly impacted at any time. To reduce the risk of such impacts, instream works and vegetation clearing are limited to non-critical periods of the year or periods of least risk. These periods are referred to as reduced risk windows. Due to differences in such factors as species present, geographic location and migration timing, each WLAP Region may have unique reduced risk windows. Therefore, proponents must plan the timing of their work based on the specific reduced risk window for the Region in which the proposed works will occur. Specific reduced risk windows are posted on each Regional WLAP web site.

Timing windows minimize harm to spawning habitat, fish eggs and juvenile fish by instream works, while also preventing impacts to adults and juveniles that may be migrating, over-wintering or rearing. Timing windows for the clearing of vegetation help to reduce the risk of impacting bird eggs, nests and young.

Timing windows vary from site to site, depending on which species may be present and the sensitivity of the habitat. For species at risk (plants or animals designated provincially or federally as vulnerable, threatened or endangered) there is typically no window of least risk, so instream work should be avoided wherever possible when their presence is known or expected. For information about species at risk in BC, see the Endangered Species and Ecosystems web site (<http://srmwww.gov.bc.ca/atrisk/index.html>).

The following recommended timing requirements apply to all types of instream works:

- Only undertake work during favourable weather and low water conditions.
- During periods of heavy and persistent precipitation, stop work if there is a risk of sediment delivery to the watercourse. Ensure sediment control measures are in place.
- Complete the work as quickly as possible once started.

If works are scheduled for fish-bearing streams or if fish presence in the watercourse is not known, you must complete in-channel or bank work during the reduced risk timing window provided for your region. **It is your responsibility to determine the presence or absence of fish.** The FishWizard (<http://pisces.env.gov.bc.ca/>) is a useful tool to help you identify fish-bearing streams. This web site is a cooperative presentation of BC Fisheries and DFO. It generates maps showing the most recent information about British Columbia lakes and streams and the fish inhabiting them.

Works may be completed outside of reduced risk windows only if a technical rationale completed by an appropriately qualified professional is provided. This rationale should demonstrate that there would be no increased risk to fish and wildlife populations and habitats as a result of the proposed works and should include confirmation that the works:

- are in a section of stream with confirmed absence of fish or species at risk;
- are not in a stream or section of a stream immediately upstream of a section or stream with fish or species at risk;
- would not adversely impact any individual, species or population of fish or species at risk;
- do not include the use of concrete pours;
- would not result in the discharge of sediment to downstream sections or streams with fish or species at risk; and
- would not impact benthic macro-invertebrate production.

Instream flow requirements

A habitat officer may specify the minimum flow of water that must remain in the stream channel while the change is being made. This water is required to maintain aquatic ecosystem features and functions, including fish, wildlife and plant species.

Removal of material from the stream or stream channel

Streambed materials provide important habitat for stream invertebrates, juvenile fish and other aquatic life, especially during incubation and periods of low summer or high flood flows. They also have a number of other vital functions. As a result, removal of material from the stream channel or riparian area should be minimized. This can be accomplished through the use of open-bottom structures such as clear-span bridges and arch culverts. Any materials that are removed must be disposed of in such a way that they will not re-enter the stream.

Introduction of any substance, sediment, debris or material to the stream

Works in or around water often result in the release of fine sediments and other deleterious substances. Fish and other aquatic organisms and the food they depend on can be killed, seriously injured or otherwise affected by changes to water chemistry and high suspended sediment levels. For example concrete, cement, mortars, grouts and other construction materials containing Portland cement or lime are basic or alkaline materials. They are highly toxic to fish and must be handled with extreme care when used near water.

Appendices 14.5 to 14.7 of *Standards and Best Practices for Instream Works* outline best management practices to prevent the release of any deleterious substances to watercourses as a result of instream works, to ensure no concrete materials or leachate enters any watercourses and to reduce sedimentation, runoff and erosion associated with construction in and around watercourses.

Protection or salvage of fish and wildlife

One of the primary focuses of all standards and best practices for instream works is the protection of fish and aquatic wildlife species. This may involve ensuring that any fish, amphibians or other aquatic animals found within the project area are transferred to adjacent non-impacted areas. For more information see Appendix 14.3 of *SBPISW*.

Protection of natural materials and vegetation that contribute to habitat or stream channel stability

Natural materials in the stream bank or bed, such as tree roots, woody debris and large boulders contribute to stream bed and streambank stability, thus preventing erosion and impacts on downstream users. They also provide valuable habitat for aquatic species.

Riparian vegetation is important for the same reasons. Vegetation management best practices include replacement criteria for impacted vegetation and guidelines to ensure that activities like hazard tree removal may be completed with minimized impacts to surrounding riparian vegetation. Vegetation best management practices are set out in Appendix 14.8 of *SBPISW*.

Restoration of the site

Site restoration refers to activities used to return the work area to a stable state resembling the site's original instream and riparian habitat characteristics. The site restoration set of best practices (Appendix 14.9 of *SBPISW*) is intended to meet the standards requiring that either no net loss or a gain in habitat is realized as a result of the works. Site restoration activities will also help to minimize the risk of potential post-construction impacts such as slope erosion.

5 ENFORCEMENT OF THE REGULATION

By meeting the requirements outlined in the previous sections you are helping to protect water quality and quantity, aquatic and shoreline habitats, public safety and water and property rights. Failure to meet standards, notification requirements or general conditions could result in penalties under the *Water Act* and other legislation such as the *Fisheries Act (Canada)*.

Keep in mind that Section 39 of the Regulation requires you to report any incidents that result in non-compliance to your nearest Ministry of Water, Land and Air Protection regional office within 72 hours. To remedy the non-compliance, you must take measures specified by the engineer and comply with terms and conditions specified by a habitat officer.

To ensure changes in and about streams occur in a way that protects and conserves water quality and quantity as well as protects the aquatic and riparian environment, spot inspections and ongoing project monitoring will be conducted to ensure compliance with the requirements of the Regulation.

6.0 AGENCY CONTACT INFORMATION

6.1 BC Ministry of Water, Land and Air Protection (WLAP) Regional Offices

The contact information below is only for obtaining general information. Addresses for submitting notifications are listed on the notification form linked at this web site.

Region	Mailing Address	Phone Number
Region 1 Vancouver Island	Ministry of Water, Land and Air Protection 2080A Labieux Road, Nanaimo BC V9T 6J9	(250) 751-3100
Region 2 Lower Mainland	Ministry of Water, Land and Air Protection 2 nd Floor 10470 152 nd St., Surrey, BC V3R 0Y3	(604) 582-5200
Region 3 Thompson	Ministry of Water, Land and Air Protection 1259 Dalhousie Drive, Kamloops, BC V2C 5Z5	(250) 371-6200
Region 4 Kootenay	Ministry of Water, Land and Air Protection #401 - 333 Victoria St., Nelson, BC V1L 4K3	(250) 354-6333
Region 5 Cariboo	Ministry of Water, Land and Air Protection #400 - 640 Borland St., Williams Lake, BC V2G 4T1	(250) 398-4530
Region 6 Skeena	Ministry of Water, Land and Air Protection 3726 Alfred Ave., Smithers, BC V0J 2N0	(250) 847-7260
Region 7 Omineca	Ministry of Water, Land and Air Protection 4051 18 th Ave. Prince George, BC V2N 1B3	(250) 565-6135
Region 8 Okanagan	Ministry of Water Land and Air Protection 102 Industrial Place, Penticton, V2A 7C8	(250) 490-8200
Region 9 Peace	Ministry of Water, Land and Air Protection #400 - 10003 110 th Ave., Fort St. John, BC V1J 6M7	(250) 787-3411



Figure 3. WLAP Regions

6.2 Land and Water British Columbia (LWBC) Regional Service Centres

Service Centre	Mailing Address	Phone/Fax
Lower Mainland Service Region Service Centre - Surrey	Suite 200 - 10428 153rd St. Surrey, BC V3R 1E1	Tel: (604) 586-4400 Fax: (604) 586-4434
Northern Service Region Service Centre - Prince George	Suite 200 - 1488 4th Ave. Prince George, BC V2L 4Y2	Tel: (250) 565-6779 Fax: (250) 565-6941
Northern Service Region Field Office – Fort St. John	Room 370 10003 110 th Ave Fort St. John BC V1J 6M7	Tel: (250) 787-3415 Fax: (250) 787-3219
Northern Service Region Field Office – Smithers	PO Box 5000 3 rd Floor 3726 Alfred Ave Smithers BC V0J 2N0	Tel: (250) 847-7334 Fax: (250) 847-7556
Northern Service Region Field Office – Williams Lake	201–172 North Second Ave Williams Lake, BC V2G 1Z6	Tel: (250) 398-4574 Fax: (250) 398-4836
Southern Service Region Service Centre - Kamloops	3rd Floor 145 3rd Ave. Kamloops, BC V2C 3M1	Tel: (250) 377-7000 Fax: (250) 377-7036
Vancouver Island Service Region Service Centre - Nanaimo	501-345 Wallace St. Nanaimo, BC V9R 5B6	Tel: (250) 741-5650 Fax: (250) 741-5686

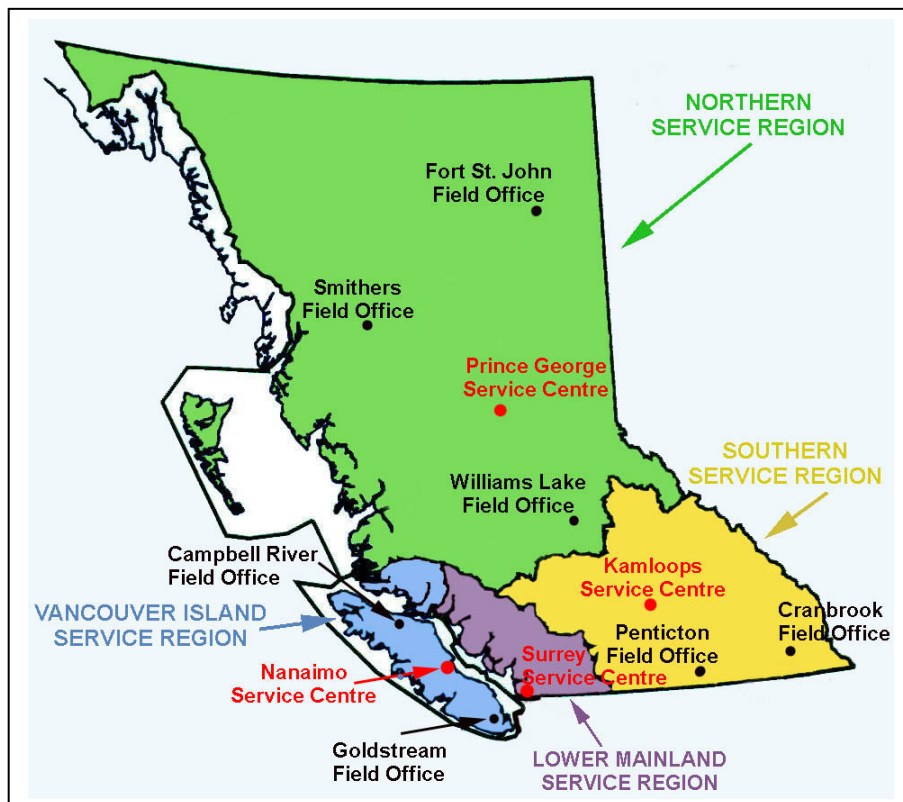


Figure 4. LWBC Service Regions

6.3 Fisheries and Oceans Canada (DFO) Offices in British Columbia

Office	Address	Contact Information	Hours of Operation
Bella Bella	Box 38, Bella Bella, BC V0T 1B0	Tel: (250) 957-1048 Fax: (250) 957-2767	Call Ahead: No Admin. Staff
Bella Coola	Box 130 (Hwy 20) Bella Coola, BC V0T 1C0	Tel: (250) 799-5345 Fax: (250) 799-5540	M to F: 8 AM to 4 PM
Campbell River	315-940 Alder Street, Campbell River, BC V9W 2P8	Tel: (250) 850-5701 Fax: (250) 286-5852	M to F: 8 AM to 4 PM
Chilliwack	45742 A Yale Road West, Chilliwack, BC V2P 2N4	Tel: (604) 702-2278 Fax: (604) 702-2280	M to F: 10AM to 2PM
Clearwater	Box 610-1121 E. Hwy,16 Clearwater, BC V0E 1N0	Tel: (250) 674-2633 Fax: (250) 674-3553	Call Ahead: Open one day a week
Delta	100 Annacis Parkway, Unit 3 Delta, B.C. V3M 6A2	Tel: (604) 666-8266 Fax: (604) 666-7112	M to F: 8 AM to 4 PM
Kamloops	985 McGill Place, Kamloops, BC V2C 6X6	Tel: (250) 851-4950 Fax: (250) 851-4951	M to F: 8 AM to 4 PM
Langley	5550 - 268th Street, Langley, BC V4W 3X4	Tel: (604) 607-4150	M to F: 8 AM to 4 PM
Mission	32873 London Avenue, Mission, BC V2V 6M7	Tel: (604) 814-1055 Fax: (604) 826-1064	M to F: 8 AM to 4 PM
Nanaimo (SCD)	3225 Stephenson Point Road, Nanaimo, BC V9T 1K3	Tel: (250) 756-7270 Fax: (250) 756-7162	M to F: 8 AM to 4 PM
Nelson	112 McDonald Drive, Nelson, BC V1L 6B9	Tel. (250) 352-0891 or (250) 352-0892 Fax. (250) 352- 0916	M to F: 8 AM to 4 PM
Port Hardy	Box 10, 8585 Wolloson Road, Port Hardy, BC V0N 2P0	Tel: (250) 949-6422 Fax: (250) 949-6755	M to F: 8 AM to 4 PM
Prince George	3690 Massey Drive, Prince George, BC V2N 2S8	Tel: (250) 561-5366 Fax:(250) 561-5534	M to F: 8 AM to 4 PM
Prince Rupert	417-2nd Avenue West, Prince Rupert, BC V8J 1G8	Tel: (250) 627-3448 Fax: (250) 627-3480	M to F: 8 AM to 4 PM

DFO offices continued

Office	Address	Contact Information	Hours of Operation
Queen Charlotte City	PO Box 99, 137 Bay Street, QCC, BC V0T 1S0	Tel: (250) 559-4413 Fax: (250) 559-4678	M to F: 8 AM to 4 PM
Quesnel	1205 North Cariboo Hwy, #97, Quesnel, BC V2J 2Y3	Tel: (250) 992-2434 Fax: (250) 992-7232	M to F: 8 AM to 1 PM
Salmon Arm	Box 1160, 1751-10th Ave SW, Salmon Arm, BC V1E 4P3	Tel: (250) 804-7000 Fax: (250) 804-7010	M to F: 8 AM to 4 PM
Smithers	Box 578, 3177 Tatlow Road, Smithers, BC V0J 2N0	Tel: (250) 847-2312 Fax: (250) 847-4723	M to F: 8 AM to 4 PM
Squamish	1120 Hunter Place, Box 2360, Squamish, BC V0N 3G0	Tel: (604) 892-3230 Fax: (604) 892-2378	Call Ahead: No Admin. Staff
Steveston	12551 No. 1 Road, Richmond, BC V7E 1T7	Tel: (604) 664-9250 Fax: (604) 664-9255	M to F: 8 AM to 4 PM
Terrace	5235 A Keith Avenue, Terrace, BC V8G 1L2	Tel: (250) 615-5350 Fax: (250) 615-5364	M to F: 8 AM to 4 PM
Vancouver RHQ	Suite 200 - 401 Burrard Street, Vancouver, BC V6C 3S4	Tel: (604) 666-0384 Fax: (604) 666-1847	M to F: 8 AM to 4 PM
Whitehorse	100 - 419 Range Road, Whitehorse, Yukon Y1A 3V1	Tel: (867) 393-6722 Fax: (867) 393-6737	M to F: 8:00 AM to 4:30 PM
Williams Lake	310A North Broadway, Williams Lake, BC V2G 2Y7	Tel: (250) 305-4002 Fax: (250) 305-3017	M to F: 8 AM to 4 PM: No admin staff after 12.

7 CHANGES IN AND ABOUT A STREAM: THE REGULATION

Note: This is not the official version. The printed version issued by the Queen's Printer remains the official version. Copies may be obtained from Crown Publications Inc., 521 Fort Street, Victoria, BC V8W 1E7 (<http://www.crownpub.bc.ca>).

Part 7 – Changes in and about a Stream

Definitions

36 In this Part:

“**acid generating rock**” means rock that when ground to paste has a paste pH of less than 4.5;

“**changes in and about a stream**” means changes in and about a stream defined in section 1 of the *Water Act*;

“**clear span bridge**” means a single span structure without piers which spans a stream channel from top of bank to top of bank with the bridge abutments outside the stream channel;

“**culvert**” means one or more pipes, pipe arches, or structures covered with soil and lying below the road surface, used to carry water, but does not include log structures;

“**embankment**” means a structure of earth, gravel or similar material raised above the surrounding land surface;

“**engineer**” means an engineer defined in section 1 of the *Water Act*;

“**erosion**” means the wearing away, by water, of the banks or bed of a stream or of the materials used in any works;

“**fish bearing waters**” means a stream having a fish population present at some time during the year;

“**habitat**” means the areas in and about a stream including

(a) the quantity and quality of water on which fish or wildlife depend directly or indirectly in order to carry out their life processes, and

(b) spawning grounds and the nursery, rearing, food supply and migration areas;

“**habitat officer**” means a public service employee designated in writing by the regional director for the regional office of the Ministry of Water, Land and Air Protection where the public service employee is employed;

“**municipality**” means a municipality or regional district incorporated under the *Municipal Act* or the City of Vancouver;

“**natural state**” means as close as possible to the state that existed before the change in and about the stream began;

“**public utility**” means a public utility defined in section 1 of the *Utilities Commission Act* or a federally regulated public utility;

“**professional engineer**” means a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia;

“**scour**” means to scour the stream bed by water action;

“**stream**” means a stream defined in section 1 of the *Water Act*;

“**stream channel**” means a stream channel defined in section 1 of the *Water Act*;

“**works**” means works defined in section 1 of the *Water Act*;

“**worksite**” means the area required for the construction of works in and about a stream.

[en. B.C. Reg. 241/95; am. B.C. Reg. 109/2002, s. 1.]

Authority to make a change in and about a stream

37 (1) A change in and about a stream must not proceed unless it is

- (a) authorized by an approval, licence or order, or
- (b) made in compliance with this regulation.

(2) If a change in and about a stream is authorized by an approval, licence or order, this regulation, except subsection (3), does not apply to the change in and about the stream.

(3) If the engineer is of the opinion that a proposed change in and about a stream may have a significant detrimental impact on the nature of the stream or stream channel, the engineer may require that an application for an approval or a licence be made in connection with the proposed change in and about a stream.

(4) The fact that a change in and about a stream meets the requirements of subsection (1) does not relieve the person carrying out the change in and about the stream from

- (a) the requirement to comply with all applicable federal, provincial or municipal enactments, and
- (b) if the change in and about a stream will occur on Crown land or land owned by another person, from the requirement to obtain the approval of the owner before proceeding.

[en. B.C. Reg. 241/95.]

Limits on the authority to make a change in and about a stream

38 (1) A person must not make a change in and about a stream unless that person

- (a) provides, on request, information that the engineer, officer or habitat officer requires to assess the impact on the nature of the stream or stream channel, and
- (b) once commenced, completes the change without delay except if a delay is necessary to preserve the nature of the stream or stream channel.

(2) A change in and about a stream must be designed, constructed and maintained in such a manner that the change does not pose a significant danger to life, property or the environment.

[en. B.C. Reg. 241/95.]

Failure to comply with this regulation when making a change in and about a stream

39 In addition to other remedies or penalties that may be imposed on a person who makes a change in and about a stream that does not comply with this regulation, the person must

- (a) within 72 hours report the non-compliance to the closest regional office of the Ministry of Environment, Lands and Parks, and

- (b) to remedy the non-compliance,
 - (i) take the measures the engineer specifies, and
 - (ii) comply with the terms and conditions described in section 42 that a habitat officer specifies.

[en. B.C. Reg. 241/95.]

Notification

40 (1) A person must not make a change in and about a stream unless that person

(a) notifies a habitat officer of the region of the Ministry of Environment, Lands and Parks in which the change in and about a stream will be located, by providing the information specified in the notification form available from the ministry, of the particulars of the proposed change at least 45 days prior to commencing to make the change, and

(b) obtains from a habitat officer the terms and conditions described in section 42 on which the change can proceed prior to commencing to make the change.

(2) Despite subsection (1), if a habitat officer has not contacted the person giving notice under subsection (1) (a) within 45 days of the receipt of the notice by a habitat officer, the person may proceed to make the change.

(3) A person who makes a change in and about a stream under section 44 (1) (o) to (s) or (2) does not have to comply with subsection (1).

(4) A person who makes a change in and about a stream under section 44 (1) (o) or (p) must

(a) within 72 hours report the change to a habitat officer, and

(b) take the measures the engineer specifies and comply with the terms and conditions described in section 42 that a habitat officer specifies respecting the change.

[en. B.C. Reg. 241/95; am. B.C. Reg. 134/98, s. 1.]

Protection of water quality

41 A person making a change in and about a stream must ensure that

(a) no substance, sediment, debris or material that could adversely impact the stream is

(i) allowed or permitted to enter or leach or seep into the stream from an activity, construction, worksite, machinery or from components used in the construction of any works, or

(ii) placed, used or stored within the stream channel,

(b) no standards or objectives published under section 2 (e) of the *Environment Management Act* by the Ministry of Environment, Lands and Parks for the protection of ambient water quality are exceeded or not attained now or in the future due to the change,

(c) there is no disturbance or removal of stable natural materials and vegetation in and about a stream that contribute to stream channel stability except as authorized under this regulation and in accordance with the terms and conditions specified by the habitat officer,

- (d) temporary material, fill, bridge, culvert, pump, pipe, conduit, ditch or other structure used to assist in the construction of any works are constructed and maintained only during the period of construction, and are removed on completion of the works,
- (e) all cast-in-place concrete and grouting is completely separated from fish bearing waters for a minimum of 48 hours,
- (f) rock from acid-generating rock formations is not used for construction, and
- (g) the stream is restored to its natural state on completion of the change in and about a stream.

[en. B.C. Reg. 241/95.]

Protection of habitat

42 (1) To protect habitat, a person making a change in and about a stream under this regulation, other than under section 44 (1) (o) to (s) or (2), must make that change in accordance with terms and conditions specified by the habitat officer with respect to

- (a) the timing window or the period or periods of time in the year during which the change can proceed without causing harm to fish, wildlife or habitat,
- (b) the minimum instream flow or the minimum flow of water that must remain in the stream while the change is being made,
- (c) the removal of material from the stream or stream channel in connection with the change,
- (d) the addition of substance, sediment, debris or material to the stream or stream channel in connection with the change,
- (e) the salvage or protection of fish or wildlife while the change is being made or after the change has been made,
- (f) the protection of natural materials and vegetation that contribute to habitat or stream channel stability,
- (g) the restoration of the work site after the change has been made, and
- (h) the requirement to obtain an approval from the federal Department of Fisheries and Oceans in connection with the change.

(2) In addition to other remedies or penalties that may be imposed on a person who makes a change in and about a stream that damages habitat, the person must

- (a) within 72 hours report the damage to a habitat officer, and
- (b) restore and repair the habitat to its natural state or as directed by the habitat officer.

[en. B.C. Reg. 241/95; am. B.C. Reg. 134/98, s. 2.]

Protection of other water users

43 (1) A person making a change in and about a stream, other than a change under section 44 (1) (o) to (s) or (2), must ensure that persons who are lawfully diverting or using water under the *Water Act* will not be adversely affected.

(2) Despite subsection (1), if persons who are lawfully diverting or using water under the *Water Act* may be adversely affected, a person proposing to make a change in and about a stream, other than a

change under section 44 (1) (o) to (s) or (2), must give 3 days notice to those persons prior to commencing to make the change and must provide an adequate supply of water to those persons, if required by those persons.

[en. B.C. Reg. 241/95; am. B.C. Reg. 134/98, s. 3.]

Authorization for changes in and about a stream

44 (1) For the purposes of section 9 of the *Water Act*, the following changes in and about a stream may be made without the necessity of obtaining an approval or licence for that change, provided that the change is made in accordance with this regulation and in accordance with the terms and conditions, described in section 42, specified by a habitat officer:

- (a) the installation, maintenance or removal of a stream culvert for crossing a stream for the purposes of a road, trail or footpath, provided that
 - (i) equipment used for site preparation, construction, maintenance or removal of the culvert is situated in a dry stream channel or operated from the top of the bank,
 - (ii) in fish bearing waters, the culvert allows fish in the stream to pass up or down stream under all flow conditions,
 - (iii) the culvert inlet and outlet incorporate measures to protect the structure and the stream channel against erosion and scour,
 - (iv) if debris cannot safely pass, provision is made to prevent the entrance of debris into the culvert,
 - (v) the installation, maintenance or removal does not destabilize the stream channel,
 - (vi) the culvert and its approach roads do not produce a backwater effect or increase the head of the stream,
 - (vii) the culvert capacity is equivalent to the hydraulic capacity of the stream channel or is capable of passing the 1 in 200 year maximum daily flow without the water level at the culvert inlet exceeding the top of the culvert,
 - (viii) the culvert has a minimum equivalent diameter of 600 mm,
 - (ix) a culvert having an equivalent diameter of 2 metres or greater, or having a design capacity to pass a flow of more than 6 cubic metres a second, is designed by a professional engineer and constructed in conformance with that design,
 - (x) the culvert is installed in a manner which will permit the removal of obstacles and debris within the culvert and at the culvert ends,
 - (xi) the stream channel, located outside the cleared width, is not altered,
 - (xii) embankment fill materials do not and will not encroach on culvert inlets and outlets,
 - (xiii) the culvert has a depth of fill cover which is at least 300 mm or as required by the culvert manufacturer's specifications,
 - (xiv) the maximum fill heights above the top of the culvert do not exceed 2 m, and
 - (xv) the culvert material meets the standards of the Canadian Standards Association;
- (b) the construction, maintenance or removal of a clear span bridge, provided that

- (i) the bridge and its approach roads do not produce a back water effect or increase the head in the stream,
 - (ii) the equipment used for construction, including site preparation, maintenance or removal of the bridge, is situated in a dry stream channel or is operated from the top of the bank,
 - (iii) the hydraulic capacity of the bridge is equivalent to the hydraulic capacity of the stream channel, or is capable of passing the 1 in 200 year maximum daily flow, and the height of the underside of the bridge is also adequate to provide free passage of flood debris and ice flows, and
 - (iv) the bridge material meets the standards of the Canadian Standards Association, as applicable;
- (c) the construction or maintenance of a pipeline crossing, provided that
- (i) the pipeline and associated works are installed in a dry stream channel at a depth so that the top of the pipe is at least 1 metre below the lowest elevation of the bed of the stream, and
 - (ii) in the case of an aerial crossing, the crossing is constructed in accordance with the requirements prescribed in paragraph (b) for clear span bridges;
- (d) the construction, maintenance or removal of a pier or wharf in a stream, provided that the ebb and flow of water and movement of material under the influence of waves or currents is not obstructed and that the requirements under section 37 (4) are met;
- (e) the construction, maintenance or removal of a flow or water level measuring device in a stream by the Crown in right of either Canada or British Columbia, or their agents;
- (f) the construction or removal of a fish fence, screen or fish or game guard across a stream by the Crown in right of either Canada or British Columbia, or their agents, provided that it is designed, constructed, maintained or used so as not to obstruct the flow of water in the stream;
- (g) the restoration or maintenance of a stream channel by British Columbia or its agents;
- (h) the restoration or maintenance of a stream channel by a municipality;
- (i) the mechanical or manual cutting of annual vegetation within a stream channel;
- (j) the restoration or maintenance of fish habitat by the Crown in right of either Canada or British Columbia, or their agents;
- (k) the repair or maintenance of existing dikes or existing erosion protection works to their original state, provided that the dikes or works were functional during the previous year;
- (l) the construction or maintenance of storm sewer outfalls, provided that the storm sewer outfall is designed by a professional engineer, and constructed, maintained and used so as not to obstruct the flow of water in the stream or to cause erosion or scour in the stream;
- (m) the mechanical or manual control of Eurasian watermilfoil and other aquatic vegetation by a landowner, a municipality or a local authority;
- (n) the construction or maintenance of ice bridges, winter fords or snowfills, provided that
- (i) the materials used are removed from the stream channel before ice breakup and that only clean ice and snow are used, and

- (ii) in the case of ice bridges, any logs, timber and other structural materials used can be removed in a safe manner;
- (o) the construction or placement of erosion protection works or flood protection works during a flood emergency, but not including restoration works, declared under the *Emergency Program Act*, under the direction of the Crown in right of British Columbia, or its agents, or by a municipality;
- (p) the clearing of an obstruction from a bridge or culvert by the Crown in right of British Columbia, or its agents, or by a municipality during a flood event when there exists a potential danger to life or property;
- (q) the installation or cleaning of drain tile outlets;
- (r) the repair or maintenance of the superstructure of a bridge, excluding its foundation, made in accordance with this regulation, particularly the terms and conditions specified in this regulation for the protection of water quality, habitat and water users;
- (s) the installation, repair, maintenance or removal of fences, provided that the fencing materials
 - (i) are not in the stream channel,
 - (ii) do not block debris in the stream channel, and
 - (iii) do not interfere with navigation of the stream;
- (t) Repealed. [B.C. Reg. 134/98, s. 4.]
- (u) the maintenance of a minor and routine nature by a public utility of its works;
- (v) the removal of a beaver dam under section 9 of the *Wildlife Act*, provided that the removal is carried out in such a manner that downstream flooding and erosion do not occur;
- (w) the construction of a temporary ford across a stream, provided that
 - (i) the construction occurs at a time in the year during which the construction can occur without causing harm to fish, wildlife or habitat,
 - (ii) the 1 in 10 year maximum daily flow over the ford is accommodated without the loss of the ford and without scouring the stream,
 - (iii) a stream culvert, if used, is designed and installed to pass the average low flow during the period of use,
 - (iv) the channel is protected against any anticipated erosion
 - (A) during the period of construction and use of the ford, and
 - (B) after the ford crossing is removed,
 - (v) sediment from approach ditches does not enter the stream,
 - (vi) the driveable running surface is erosion-free,
 - (vii) the stream remains in its channel and cannot be diverted down the road,
 - (viii) the ford will pass channel debris, and

(ix) the ford is removed at the end of the period of use at a time, before the next freshet, when the removal can proceed without causing harm to fish, wildlife or habitat;

(x) the construction of a temporary diversion around or through a worksite for the purposes of constructing or maintaining bridge abutments, constructing or maintaining piers other than bridge piers, or maintaining bridge piers or constructing works authorized under this section, provided that the worksite is no larger than the minimum area required, and

(i) if pumps, pipes or conduits are used to divert water around or through the worksite,

(A) the pumps, pipes or conduits are sized to divert the 1 in 10 year maximum daily flow for the period of construction, and

(B) any pump or intake withdrawing water from fish bearing waters is screened in accordance with the Fish Screening Directive of the Department of Fisheries and Oceans (Canada),

(ii) if cofferdams are used to isolate successive parts of the construction at the worksite,

(A) the cofferdams are designed by a professional engineer and constructed in accordance with that design, and

(B) the natural channel remaining outside of the cofferdams is adequate to pass the 1 in 10 year maximum daily flow during the period of construction, or

(iii) if ditches are used to divert flow around the worksite,

(A) the flow of water diverted remains within the stream channel,

(B) the ditches are designed and constructed to divert the 1 in 10 year maximum daily flow around or through the worksite and are protected from any anticipated erosion during the period of construction and use of the ditch, and

(C) the ditches are completely backfilled and the area returned as closely as possible to the natural state on completion of the works.

(2) Subsection (1) does not apply to a change in and about a stream to which a standard or regulation under the *Forest Practices Code of British Columbia Act* applies if the change is carried out

(a) by a person

(i) holding an agreement under the *Forest Act* or the *Range Act* or holding a special use permit under the *Forest Practices Code of British Columbia Act*, or

(ii) referred to in section 58 (2) (c) of the *Forest Practices Code of British Columbia Act*, in the construction, modification, maintenance or de-activation of a road under that Act, or

(b) by the Crown in right of British Columbia or by someone under contract to the Crown in right of British Columbia,

provided that the person carrying out the change complies with the *Forest Practices Code of British Columbia Act*, including the regulations and standards established under it.

(3) Subsection (1) does not apply to a change in and about a stream that is carried out by a person who holds a permit under section 10 of the *Mines Act* if the person carrying out the change complies with

(a) Part 11 of the Health, Safety and Reclamation Code for Mines in British Columbia, and

(b) all conditions in the permit respecting changes in and about the stream.

(4) For the purposes of section 40, an application for a permit to carry out exploration activities under section 10 of the *Mines Act* constitutes notice of the change.

[en. B.C. Reg. 369/97; am. B.C. Reg. 134/98, s. 4.]

8 GLOSSARY

A number of terms are defined in the Regulation. The following additional definitions may also be useful.

Active floodplain: An area of land within a boundary that is indicated by the visible high water mark or water level of a stream that is reached during annual flood events as evidenced by riparian area conditions.

Approval: An approval of the comptroller, regional water manager or engineer under sections 8 or 9 of the *Water Act*.

Benthic macro-invertebrates: Animals without backbones that live in the substrates of aquatic systems and are visible without magnification (e.g., aquatic worms, larval flies and midges, molluscs).

Bridge abutment: That part of a bridge structure which supports the bridge span at the ends;

Ditch: A long narrow excavated channel for drainage or to mark a boundary. A “ditch” may also be constructed to replace a stream channel;

Engineer: A professional engineer employed by the government and designated in writing by the comptroller as an engineer and includes a regional water manager;

Existing vegetation: Includes both native and non-native vegetation.

Fish: All fish, shellfish, crustaceans and marine animals, and the eggs, spawn spat and juvenile stages of fish, shellfish, crustaceans and marine animals.

Fish-bearing stream: A stream in which fish are present or potentially present if introduced barriers or obstructions are either removed or made passable for fish

Fish passage: Means fish in a stream are able to pass by or through in both upstream and downstream directions;

Non-fish-bearing stream: A stream that is not inhabited by fish, and provides water, food and nutrients to a downstream fish bearing stream or other water body.

Non-permanent stream: A stream that typically contains surface waters or flows for periods less than six months in duration.

Notification: A requirement under Part 7 of the *Water Act* regulation consisting of administrative process and documentation to allow the undertaking of certain routine works in or about streams when carried out in compliance with the Regulation .

Permanent stream: A stream that typically contains surface waters or flows for periods for a period more than six months in duration.

Permanent structure: Any building or structure that was lawfully constructed, placed or erected on a source and long lasting foundation on land in accordance with any local government bylaw or approval condition in effect at the time of construction, placement or erection.

Potential vegetation: This is considered to exist if there is a reasonable ability for regeneration either with assistance through enhancement or naturally, and is considered to not exist on that part of an area covered by a permanent structure.

Public utility: A person, or his lessee, trustee, receiver or liquidator, who owns or operates in the Province, equipment or facilities for:

- the production, generation, storage, transmission, sale, delivery or furnishing of electricity, natural gas, steam or any other agent for the production of light, heat, cold or power to or for the public or a corporation for compensation, or
- the conveyance or transmission of information, messages or communications by guided or unguided electromagnetic waves, including systems of cable, microwave, optical fibre or radio communications where that service is offered to the public for compensation.

“public utility” does not include:

- a municipality or regional district in respect of services furnished by the municipality or regional district within its own boundaries,
- a person not otherwise a public utility who furnishes the service or commodity only to himself, his employees or tenants, where the service or commodity is not resold or used by others,
- a person not otherwise a public utility who is engaged in the petroleum industry or in the wellhead production of oil, natural gas or other natural petroleum substances, or
- a person not otherwise a public utility who is engaged in the production of a geothermal resource.

Ravine: A narrow, steep sided valley that is commonly eroded by running water and with slope grades greater than 3:1.

Residential, commercial and industrial development: Any of the following associated with or resulting from the local government regulation or approval of residential, commercial, or industrial activities or ancillary activities to the extent that they are subject to local government powers under Part 26 of the Local Government Act:

- removal, alteration, disruption or destruction of vegetation,
- disturbance of soils,
- construction or erection of building and structures,
- creation of nonstructural impervious or semi- impervious surfaces,
- flood protection works,
- construction of roads, trails, docks, wharves and bridges,
- provision and maintenance of sewer and water services,
- development of drainage systems,

- development of utility corridors, and
- subdivision as defined in section 872 of the Local Government Act.

Riparian area: The area adjacent to a stream that may be subject to temporary, frequent or seasonal inundation, and supports plant species that are typical of an area of inundated or saturated soil conditions, and that are distinct from plant species on freely drained adjacent upland sites because of the presence of water.

Species at risk: A species designated as a species at risk by provincial or federal legislation or policy due to its vulnerable, threatened, or endangered status.

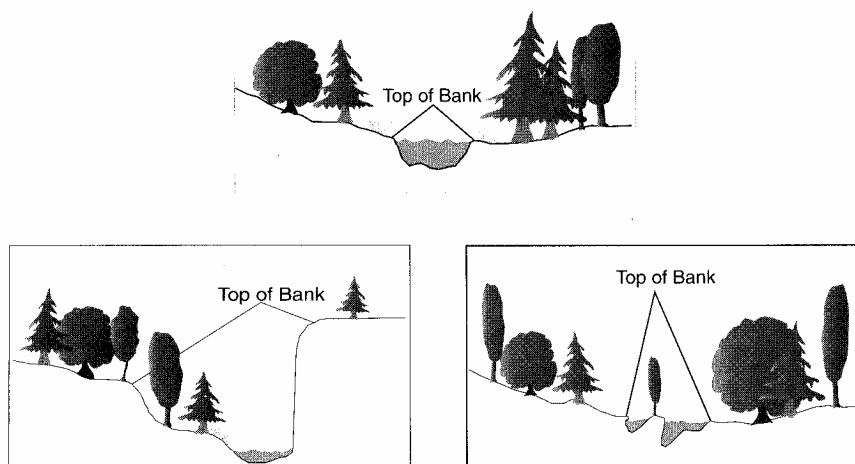
Stream: A natural watercourse or source of water supply, whether usually containing water or not, ground water, and a lake, river, creek, spring, ravine, swamp and gulch;

Stream bed: The bed of a stream and the banks of a stream, whether above or below the natural boundary and whether usually containing water or not, including all side channels.

Stream channel: The bed of a stream and the banks of a stream, whether above or below the natural boundary and whether usually containing water or not, including all side channels.

Streamside protection and enhancement area: An area adjacent to a stream that links aquatic to terrestrial ecosystems and includes both the riparian area vegetation and the adjacent upland vegetation that exerts an influence on the stream.

Figure 5. A stream channel in various topographic settings.



Top of the bank: Includes:

- (a) the point closest to the boundary of the active floodplain of a stream where a break in the slope of the land occurs such that the grade beyond the break is flatter than 3:1 at any point for a minimum distance of 15 metres measured perpendicularly from the break; and
- (b) for a floodplain area not contained in a ravine, the edge of the active floodplain of a stream where the slope of the land beyond the edge is flatter than 3:1 at any point for a minimum distance perpendicularly from the edge.

Top of the ravine bank: The first significant break in a ravine slope where the break occurs such that the grade beyond the break is flatter than 3:1 for a minimum distance of 15 metres measured perpendicularly from the break, and the break does not include a bench within the ravine that could be developed.

Wetland: Land is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal conditions that supports vegetation typically supports vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, fens, estuaries and similar areas that are not part of the active floodplain of a stream.

Works: Anything capable of or useful for:

- diverting, storing, measuring, conserving, conveying, retarding, confining or using water,
- producing, measuring, transmitting or using electricity,
- collecting, conveying or disposing of sewage or garbage, or
- preventing or extinguishing fires.

In addition, “works” means booms and piles placed in a stream, obstructions placed in or removed from streams or the banks or beds of streams, and changes in and about a stream, and includes access roads to these.

9 REFERENCES

The following publications provide additional information about working near water.

Fish-stream Crossing Guidebook (Forest Practices Code). 2002.

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Riparian Rights and Public Foreshore Use in the Administration of Aquatic Crown Land. 1995. Ministry of Environment, Lands and Parks.

Standards and Best Practices for Instream Works. 2004. Ministry of Water, Land and Air Protection. (<http://wlapwww.gov.bc.ca/sry/fwh/hp/iwn.htm>)

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Obtaining Crown Lands for Private Use. 1993. Ministry of Environment, Lands and Parks.

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