

MODULE 1 – INTRODUCTION APPLICABILITY SNAP-SHOT

Alterations Permitted under the Watercourse Alteration Certification Program

- Installation and replacement of culverts:
 - closed-bottom: minimum diameter of 600 millimetres (24 in) or equivalent end area; maximum diameter/end area is the equivalent capacity for a drainage area of 20 km² (8 Mi²)
 - open-bottom: minimum span of 1.2 metres (4 ft); maximum span is the equivalent capacity for a drainage area of 20 km² (8 Mi²)
 - new culverts must have a maximum length of 25 metres (82 ft)
 - culvert replacements must have a maximum length of 30 metres (100 ft)
- Installation and replacement of permanent single-span bridges
- Construction of approaches to a watercourse crossing
- Maintenance and removal (decommissioning) of culverts and single-span bridges
- Stabilization measures for watercourse crossings, roads, and ditches
- Installation and construction of temporary bridges
- Beaver dam removal and management
- Erosion protection works
 - Biotechnical (*i.e.* vegetation) products: maximum length of 30 metres (100 ft) if combined with a rock toe; otherwise must be designed by a P. Eng.
 - Rip-rap/armor stone: maximum length of 30 (100 ft); otherwise must be designed by a P. Eng.
- Water withdrawal (temporary or maintenance/replacement of permanent intake structure)
- Timber harvesting
- Vegetation clearing for a watercourse crossing installation or replacement

1.0 INTRODUCTION

1.1 OBJECTIVE

One of the mandates of the New Brunswick Department of Environment and Local Government (DELG) is to promote environmental protection measures for activities potentially impacting watercourses and wetlands to sustain them and protect their aquatic habitats.

The purpose of this manual is to provide practical information focused on environmental protection throughout all stages of a watercourse alteration. These stages include but are not limited to, planning, construction, installation, stabilization, and maintenance.

The goals of the Watercourse Alteration Certification Program are to:

- Improve the level of compliance with the ***Watercourse and Wetland Alteration Regulation – Clean Water Act***
- Provide a better understanding of the importance of environmental protection and the requirements under the Federal ***Fisheries Act***
- Improve the serviceability of the process for obtaining a watercourse and wetland alteration permit

1.2 DISCLAIMER

The manual and course materials outline the permissible alterations under the Watercourse Alteration Certification Program and provide information to help navigate through the watercourse and wetland alteration (WAWA) permit application process.

The guidelines and technical information contained in this manual are intended to provide guiding principles for planning a watercourse or wetland alteration. None of the information contained should be considered as a code for the design or construction of any type of watercourse or wetland alteration.

It should be noted that the permittee may have to enlist other professionals to facilitate the submission of a WAWA permit application. For certain alterations, an individual qualified in identifying wetlands may be required. In other cases, a professional engineer, environmental consultant, registered professional forester, etc. may be required.

Responsibility for any action arising from any watercourse or wetland alteration must be borne by the permittee and no liability shall be incurred by the Minister or the Department of Environment and Local Government. Any permit issued under the ***Watercourse and Wetland Alteration Regulation – Clean Water Act*** does not exempt or exclude the permittee from the provisions of any Act of the Legislature of

New Brunswick or of Canada to serve as legal defense to any action commenced by landowners who are adversely affected by the alteration.

1.3 REGULATIONS

The following sections explain the current regulating system, permitting agency, and approval process associated with watercourse and wetland alterations.

1.3.1 Permitting Agency

DELG is responsible for processing and issuing watercourse and wetland alteration permits as outlined in the ***Watercourse and Wetland Alteration Regulation*** (90-80) under the authority of New Brunswick's ***Clean Water Act***, C-6.1.

1.3.2 Legal Definitions

The following definitions are included in New Brunswick's ***Clean Water Act***, C-6.1, making them legally binding.

- A **watercourse** is the full width and length, including the bed, banks, sides and shoreline, or any part, of a river, creek, stream, spring, brook, lake, pond, reservoir, canal, ditch or other natural or artificial channel open to the atmosphere, the primary function of which is the conveyance or containment of water whether the flow be continuous or not.
- A **wetland** is land that, either periodically or permanently, has a water table at, near or above the land's surface or that is saturated with water and sustains aquatic processes as indicated by the presence of hydric soils, hydrophytic vegetation and biological activities adapted to wet conditions.
- An **alteration** is any temporary or permanent change made at, near, or to a watercourse or wetland or the water flow in a watercourse or wetland and includes:
 - any change made to existing structures in a watercourse or wetland including repairs, modifications or removal, whether the water flow in the watercourse or wetland is altered or not;
 - the operation of machinery on the bed of a watercourse other than at a recognized fording place;
 - the operation of machinery in or on a wetland;
 - any deposit or removal of sand, gravel, rock, topsoil, organic matter, or other material into or from a watercourse or wetland or within 30 metres (100 ft) of a wetland or the bank of a watercourse;
 - any disturbance of the ground within 30 metres (100 ft) of a wetland or the bank of a watercourse, except grazing by animals, the tilling, plowing, seeding and harrowing of land, the harvesting of vegetables, flowers, grains and ornamental

shrubs and any other agricultural activity prescribed by regulation, that occurs more than 5 metres (16.4 ft) from a wetland or the bank of a watercourse;

- any removal of vegetation from the bed or bank of a watercourse;
- any removal of trees from within 30 metres (100 ft) of the bank of a watercourse;
- any removal of vegetation from a wetland or from within 30 metres (100 ft) of a wetland except the harvesting of vegetables, flowers, grains and ornamental shrubs and any other agricultural activity prescribed by regulation, that occur more than 5 metres (16.4 ft) from a wetland.

1.3.3 Working Definition of a Watercourse

The legal definition of a watercourse is very broad and all-encompassing, making it impractical from a permitting point of view. As such, an internal policy containing a working definition for a watercourse has been adapted by DELG. This policy reads:

A feature for which its primary function is the conveyance or containment of water is described as being:

- a) the bed, banks and sides of any watercourse that is depicted on the New Brunswick Hydrographic Network (NBHN) (available on [GeoNB Map Viewer](#));
- b) the bed, banks and sides of any incised channel greater than 0.5 metre (1.6 ft) in width that displays a rock or soil (mineral or organic) bed, that is not depicted on the New Brunswick Hydrographic Network (NBHN) (available on [GeoNB Map Viewer](#)); water/flow does not have to be continuous and may be absent during any time of year; or
- c) a natural or human-made basin (*i.e.* lakes and ponds).

For permitting purposes:

- A permit is not required to modify an existing basin that is not depicted on the New Brunswick Hydrographic Network (NBHN), provided it is located 30 metres (100 ft) or more from a wetland or the shoulder of the bank of a watercourse, and it is not connected to or does not discharge directly to a watercourse/wetland. Examples may include ponds created by mining operations, retention/detention ponds, and human-made impoundments.
- A permit is not required to construct an inline pond in a channel less than 0.5 metre (1.6 ft) in width.
- A permit is not required to create a pond at a seep or spring provided the near side of the pond is 30 metres (100 ft) or more from a wetland or the shoulder of the banks of a watercourse.

The working definition of a watercourse does not supersede the exemptions listed in the ***Watercourse and Wetland Alteration Regulation***. These exemptions are treated the same as always – no permit is required for the following:

- Any alteration of or to those parts of a watercourse named in the first column of Schedule A that are on the seaward or downstream side of the line joining the associated location described in the second and third columns of Schedule A (as listed in the [Watercourse and Wetland Alteration Regulation](#))
- The maintenance of a roadway, railway or agricultural drainage ditch if (i) the ditch does not break the bank of a watercourse, (ii) no change is made to the alignment of the ditch, (iii) there is no deposit of any material in a wetland, and (iv) there is no danger of pollution as a result of the maintenance

JUST A REMINDER

*Environmental protection measures apply to all watercourses regardless of size.
All watercourses are treated equally.*

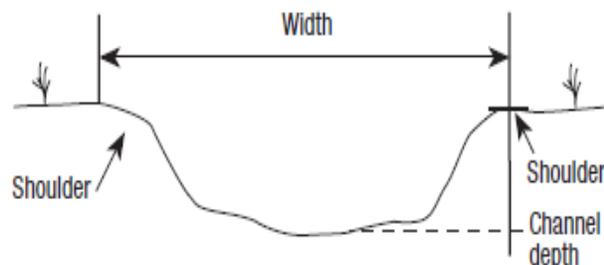
1.3.4 Tips on Identifying Watercourses

The following can assist in the identification of a watercourse:

- If a watercourse is depicted on the New Brunswick Hydrographic Network (NBHN) (available on [GeoNB Map Viewer](#)), it is considered a watercourse by DELG.
- If aerial photos less than 40 years old show evidence of a watercourse, then it may be a watercourse. Evidence would include visible water, visible stream channel (riffles, eroded areas, bars, rapids, pools, etc.) and vegetation.
- Visit the site. Look for a clearly defined stream channel. If the channel is greater than 0.5 metre (1.6 ft) (bankfull width) and two or more of the characteristics described below are present, then it is a watercourse unless otherwise determined by DELG.

Things to look for:

- The channel has a mineral, organic, or soil channel
- There is sand, gravel, and/or cobbles present in a continuous pattern over a continuous length, with little to no vegetation
- There is an indication that water has flowed in a path or channel for a length of time and at a rate sufficient to erode a channel or pathway



- There is water flowing in this channel
- The channel contains pools, riffles, rapids, and/or runs
- There are aquatic animals, insects, fish, or aquatic plants

See *Appendix E Watercourse Identification Checklist* for an example of notes that can be used during the field assessment of determining if a channel is a watercourse or not.

1.3.5 Regulating Precepts

The watercourse and wetland alteration permitting system is regulated by the ***Watercourse and Wetland Alteration Regulation (90-80)***, under the authority of New Brunswick's ***Clean Water Act***. Watercourse and wetland alterations must also comply with the habitat provisions of the federal ***Fisheries Act***. Fish habitat is defined in the ***Fisheries Act*** as "water frequented by fish and any other areas on which fish depend directly or indirectly in order to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas". Section 35.1 of the ***Fisheries Act*** states that the Minister of Fisheries and Oceans Canada may issue a permit to carry on any work, undertaking or activity which the Minister considers likely to result in the death of fish or the harmful alteration, disruption or destruction of fish habitat. Also, Section 36 (3) of the ***Fisheries Act*** states that "no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water".

Certified individuals are responsible for ensuring that there are no species listed under the [***Species at Risk Act***](#) (see the [***Species at Risk Public Registry***](#)) or critical habitat or residences of endangered or threatened aquatic species present in the work zone or the vicinity of the works, undertakings and activities. The [***aquatic species at risk maps***](#) should be consulted to determine where at-risk populations occur and where critical habitats are located.

Other constraints placed on projects through legislation are those relating to the design, construction, or the carrying out of a watercourse/wetland alteration by specific clauses in various Acts and Regulations of the Legislature of New Brunswick and the Parliament of Canada. See *Table 1-1*.

Table 1-1 Provincial and Federal Acts and Regulations applicable to the Source and Surface Water Management Branch. **Please note:** It is the applicant's responsibility to ensure compliance with the Acts listed in this table and any other applicable Acts of the Legislature of New Brunswick and the Parliament of Canada.

PROVINCIAL

Clean Environment Act	Water Quality Regulation (82-126) Environmental Impact Assessment Regulation (87-83) Petroleum Product Storage and Handling Regulation (87-97)
Clean Water Act	Watercourse and Wetland Alteration Regulation (90-80) Wellfield Protected Area Designation Order (2000-47) Watershed Protected Area Designation Order (2001-83)
Crown Lands and Forests Act	Timber Regulation (86-160) Lands Administration Regulation (2009-62)
Heritage Conservation Act	General (H-4-05)
Protected Natural Areas Act	Establishment of Protected Natural Areas Regulation (2003-8) General Regulation (2004-57)
Species at Risk Act	List of Species at Risk Regulation (2013-38) Prohibitions Regulation (2013-39)
Fish and Wildlife Act	Wildlife Refuges and Wildlife Management Areas Regulation (94-43)

FEDERAL

Impact Assessment Act	Purposes (Sec. 6) Prohibitions (Sec. 7)
Canadian Environmental Protection Act	Objectives, Guidelines and Codes of Practice (Sec. 54)
Fisheries Act	Purposes (Sec 2.1) Fish and Fish Habitat Protection and Pollution Prevention (Sec. 34 - 42) Regulations (Sec. 43)
Species at Risk Act	Purposes (Sec. 6) General Prohibitions (Sec. 32) Protection of Critical Habitat (Sec. 56)
Navigation Waters Act	General (Sec. 5, 6, 15, 16, 21, 22, 23)

1.3.6 Permitting System

An application for a watercourse and wetland alteration permit must be completed and submitted to DELG. No watercourse or wetland alteration may begin until a permit is granted or that DELG has confirmed that a permit is not required.

The permitting system consists of the following types of permit:

- Standard: issued for a single alteration
- Multiple: issued for multiple alterations with a common factor
- Provisional: issued for alterations that potentially have little to no detrimental impact on a watercourse/wetland
- Renewal: issued for alterations not commenced/completed in the period the original permit is valid for
- Revision: issued for modifications of the original project design, requiring further review and revision to a current permit

1.4 COMPLETION OF TRAINING PROGRAM

Individuals successfully completing this training program will become certified in watercourse alterations. Certified individuals will then be able to apply for permits for specific types of alterations performed during certain periods of the year.

1.4.1 Activities Permitted Under Certification

The permits issued under the Watercourse Alteration Certification Program only pertain to the following alterations.

- Installation/replacement of culverts:
 - closed-bottom: minimum diameter of 600 millimetres (24 in) or equivalent end area; maximum diameter/end area is the equivalent capacity for a drainage area of 20 km² (8 Mi²)
 - open-bottom: minimum span of 1.2 metres (4 ft); maximum span is the equivalent capacity for a drainage area of 20 km² (8 Mi²)
 - new culverts must have a maximum length of 25 metres (82 ft)
 - culvert replacements must have a maximum length of 30 metres (100 ft)
- Installation, replacement, maintenance, and removal (decommissioning) of single-span bridges (permanent)
- Construction of approaches to a watercourse crossing
- Maintenance and removal (decommissioning) of culverts

- Stabilization measures for watercourse crossings, roads, and ditches
- Installation/construction of temporary bridges
- Beaver dam removal/management
- Erosion protection works
 - Biotechnical (*i.e.* vegetation) products: maximum length of 30 metres (100 ft) if combined with a rock toe; otherwise must be designed by a P. Eng.
 - Rip-rap/armor stone: maximum length of 30 (100 ft); otherwise must be designed by a P. Eng.
- Water withdrawal (temporary or maintenance/replacement of permanent intake structure)
- Timber harvesting
- Removal of non-merchantable vegetation

1.4.2 **Working on Crown Land**

All activities on Crown Land require approval from the New Brunswick Department of Natural Resources and Energy Development. The following applies to Crown Land:

- For licensees (and sub-licensees) working in or within 30 metres (100 ft) of a wetland: If the alteration complies with the *Forest Management Agreements* under the authority of the ***Crown Lands and Forests Act***, a watercourse and wetland alteration (WAWA) permit from DELG is not required.
- For licensees (and sub-licensees) working in or within 30 metres (100 ft) of a watercourse that drains an area of 600 hectares, or less, at the site of the alteration: If the alteration complies with the *Forest Management Agreements* under the authority of the ***Crown Lands and Forests Act***, a WAWA permit from DELG is not required.
- For licensees (and sub-licensees) working in or within 30 metres (100 ft) of a watercourse that drains an area greater than 600 ha at the site of the alteration: a WAWA permit from DELG is required.
- For all non-licensees working in or within 30 metres (100 ft) of a watercourse/wetland, regardless of size*: a WAWA permit from DELG is required. In addition, the applicant must demonstrate to DELG that they have obtained landowner permission.

Note:** Wetlands that are less than one hectare in area, and not contiguous to a watercourse are exempt in the ***Watercourse and Wetland Alteration Regulation and therefore do not require a WAWA permit.

1.4.3 Responsibilities of Certified Individuals

The responsibilities of certified individuals include, but are not limited to, the following:

- Know, understand, comply with all relevant acts, regulations, standards, guidelines, permit conditions, requirements of the application process, and policies of DELG.
- Ensure consideration of best practices for environmental protection for all watercourse alteration sites.
- Plan watercourse alterations in accordance with the training related to the Watercourse Alteration Certification Program.
- Select types and sizes of watercourse crossing structures in accordance with the Watercourse Alteration Certification Program. Efforts should also include planning the entire road system (for new roads) and not just individual crossing sites.
- On-site supervision of each alteration to ensure compliance of all conditions listed on the WAWA permit.
- Provide information to DELG in a timely manner when requested related to projects in which you are or were involved.
- The activities of any individual working on the project.
- The activities of any individual delegated as supervisor of the project.
- Execution of the project in an environmentally responsible and diligent manner.
- The reporting of any spills or environmental mishaps to the appropriate authority throughout the duration of the project.

1.5 AUDITING WATERCOURSE AND WETLAND ALTERATIONS

All watercourse and wetland alterations are subject to audit at any time. Audits can be carried out by inspectors with DELG, the New Brunswick Department of Natural Resources and Energy Development, the New Brunswick Department of Justice and Public Safety, and Fisheries and Oceans Canada.

Inspectors will be looking at all aspects of the alteration, including, but not limited to, installation, construction, stabilization, and follow-up maintenance.

Failure to comply with the requirements of the Watercourse Alteration Certification Program and any associated permit conditions may result in an investigation that may result in a Ministerial Order to remediate any damage and/or possible prosecution. DELG also reserves the right to revoke an individual's certification should the requirements of the Watercourse Alteration Certification Program not be adhered to. See Section *1.4.3 Responsibilities of a Certified Individual*.