



Surface Water Management Program

Nova Scotia Environment
2016

Surface Water Management



OBJECTIVE:

- to protect surface water resources and ensure sustainable use for all beneficial uses.

Beneficial uses:

- drinking water supplies,
- habitat for aquatic life,
- recreational use,
- Agricultural and industrial uses.

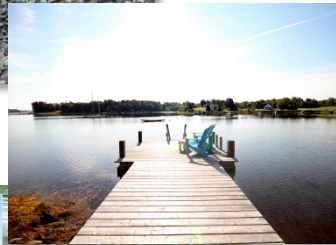
Sustainable uses:

- support economic development,
- health of humans and aquatic ecosystems,
- overall environmental protection, and
- a high quality of life for Nova Scotians.

Surface Water Management

What is a watercourse alteration?

- When someone wants to interact with a watercourse, such as install a crossing, withdrawal water, or add erosion protection, they must follow the rules set in the Activity Designation Regulations and the Nova Scotia Watercourse Alterations Standard.



Management

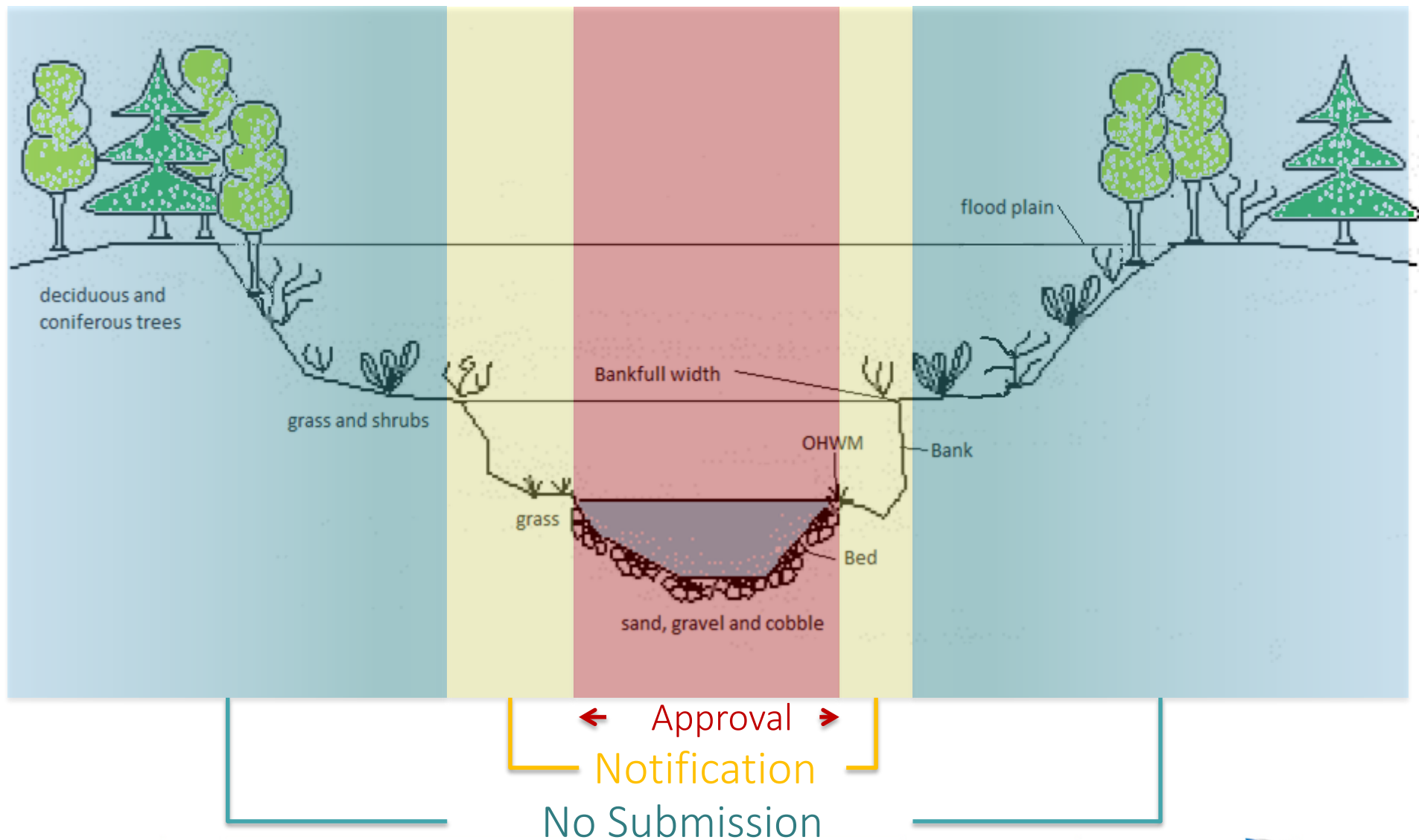


Tools

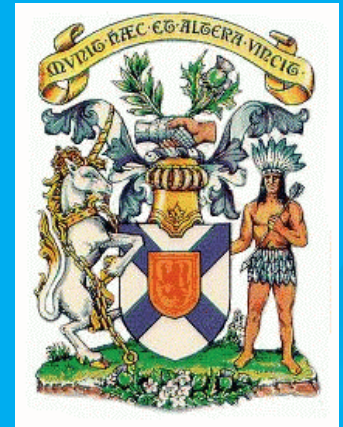
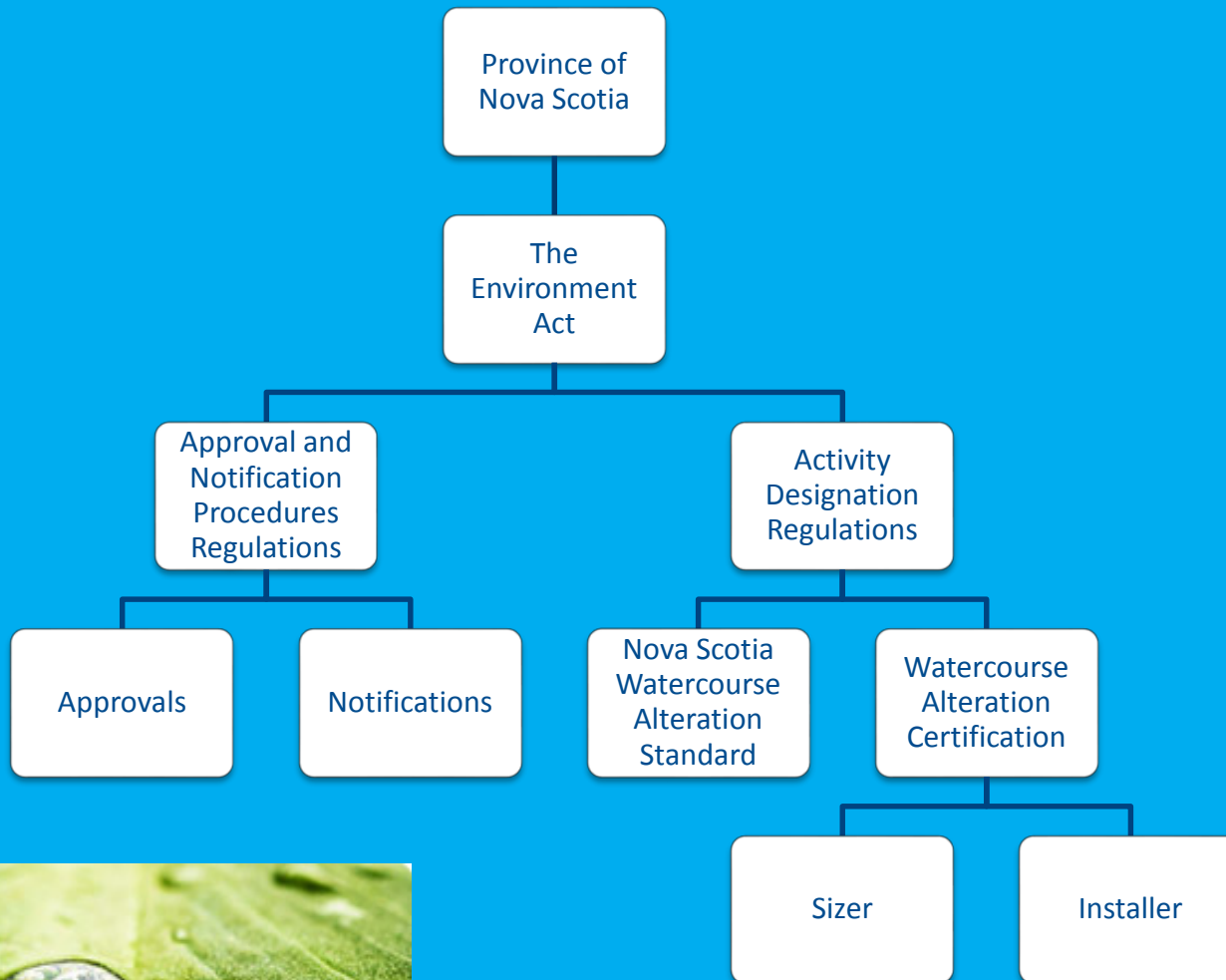
Watercourse Alterations

- Regulations
- Standard
- Approvals
- Notifications
- Training
- Certification
- Audit
- Evaluation

Classic watercourse



The Law in Nova Scotia



Provincial and Federal Acts and Regulations to be Aware of:



Provincial

- The Environment Act (1995)
- Approval and Notification Procedures Regulations
- Activity Designation Regulations
- Nova Scotia Watercourse Alteration Standard
- Environmental Emergency Regulations
- Environmental Assessment Regulations
- Petroleum Management Regulations
- Sulphide Bearing Material Disposal Regulations
- Nova Scotia Endangered Species Act
- Nova Scotia's Wildlife Habitat and Watercourse Protection Regulations



Federal

- Fisheries Act
- Species at Risk Act
- Canadian Environmental Assessment Act
- Canadian Environmental Protection Act
- Navigation Protection Act

Guiding Legislation

- Environment Act
 - Part X “Water-resource Management”
 - Definition of “Watercourse”
 - NSE Authority
 - Regulatory Authority



Environment Act

Section 104:

The Department is designated as the lead agency of Government to

- a) promote sustainable management of water resources;
- b) allocate water resources among competing users in a manner that will further sustainable development;
- c) take such measures as are reasonable to provide access to safe, adequate and reliable water supplies for individual, municipal, industrial and agricultural uses;
- d) promote the health and integrity of aquatic ecosystems, to protect habitats for animals and plants and to provide for continued recreational benefits;
- e) promote informed decision making in water-resource management through public education and participation. *1994-95, c. 1, s. 104; 2006, c. 30, s. 33.*

Release of Substances

It is an offence to release a substance into the environment that may cause an adverse effect or exceeds a term and condition of an Approval. – *Part VI 67(1)&(2)*

Adverse effect: an effect that impairs or damages the environment, or
D changes the environment in a manner that negatively affects aspects of human health

A person responsible must report the release and clean up the damage to a Standard adopted or prescribed by the Department.

(after hours emergency contact: 1-800-565-1633)

Activities Designation Regulations

Approval

Altering any of the following, or the flow of water in any of the following requires an approval, unless eligible for a notification or exempt:

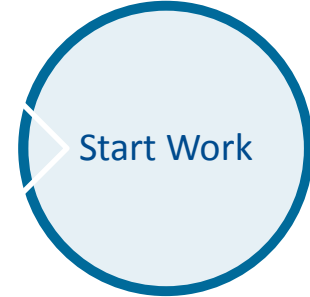
- A watercourse
- A water resource
- A wetland

Water withdrawals, water storage, dams, wetland alterations
status quo

Approval Process



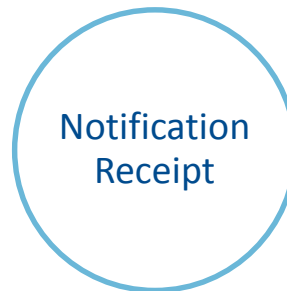
Wait up to 60 days
for NSE review &
approval



Notification Process



Wait 5 days
before
starting work



Activities Designation Regulations

5 **notification** categories with conditions:

Fish Habitat Improvement

Culverts

Bridges & Open Bottom Structures

Bank Alteration

Maintenance

Culverts

Notification if:

- Slope $\leq 0.5\%$ Sizer plan, or
- Slope $< 8\%$ PEng design & meets DFO guidelines
- Watershed $\leq 20\text{km}^2$
- Length $\leq 25\text{m}$
- June 1 - Sept 30
- Follow *standard*

Approval if:

- Notification conditions exceeded
- If wetland altered

Bridges

Notification if:

- Span \leq 15m
- Bed not altered
- Bank altered
- June 1 – Sept 30
- Follow *standard*
- Planned/ designed by sizer or PEng

Approval if:

- Notification conditions exceeded
- If wetland altered

No submission if:

- Clear span bridges with no disturbance to bed or bank

Other open bottom structures

Notification if:

- Span \leq 3600mm
- Length of arch \leq 25m
- Bed not altered
- Bank altered
- June 1 – Sept 30
- Follow *Standard*
- Planned/ designed by sizer or PEng

Approval if:

- Notification conditions exceeded
- If wetland altered

No submission if:

- Clear span open bottom structure with no disturbance to bed or bank

Bank alteration

Notification if:

- $\leq 5\text{m}$ of bank altered
- Bed not altered
- June 1 – Sept 30
- Follow *standard*

Approval if:

- Exceeds notification conditions

Maintenance

Notification if:

- Preserving original structure/ alteration (i.e., footprint of structure does not change)
- Work below OHWM
- June 1 – Sept 30
- Follow *standard*

Approval if:

- Work below OHWM outside summer window (June 1 – Sept 30)

No submission if:

- Maintenance above OHWM, any time of year

Standard

NOVA SCOTIA WATERCOURSE ALTERATIONS STANDARD



For Watercourse Alterations under Notification Process

Approval Date: 2014-09-29 Effective Date: 2014-10-01

Approved By: original signed by the Honourable Randy Delorey, Minister of Environment

Version Control: New Standard

THREE SECTIONS:

- Introduction
- General Conditions
- Activity Specific Conditions
 - Culvert <0.5%
 - Culvert >0.5%
 - Bridge
 - Wharf/Dock
 - Water Intake
 - Removal of Bank
 - Erosion Protection
 - Beaverdams
 - Foreign Material
 - Utility Crossings
 - Decommissioning

Standard...

Culverts

- Watercourse Slope
- Embedded Properly
 - Water backing into the pipe
 - Inlet invert elevation
- Energy dissipation Pool
 - Dimensions
 - Transition into natural stream



Standard...

Bridges

- Abutments
 - Placement in watercourse
 - Material used
- 1:100 year storm flow calculation
- Rip-rap and other erosion protection



Standard...

During Construction

- Water control
 - Cofferdams
 - Pumps sufficient
 - Settling ponds
- Approval/notification on-site
- Certified installer on-site (2016)
- Work area
 - Amount of disturbed soils
 - Exposed soils managed



NOVA SCOTIA
Environment
(Existing letterhead)

DISTRICT OFFICE CONTACT INFO
Appendix E

ACTIVITY NOTIFICATION RECEIPT

Province of Nova Scotia
Environment Act, S.N.S. 1994-95, c.1

NOTIFIER: notifier name
NOTIFICATION #: notification number
SITE: water course name (, tributary to) tributary to
(if tributary to is populated)
Civic address
Community, county
PID (PID), E - (Easting), N - (Northing)
EFFECTIVE DATE: date received+ 5 calendar days
(Minimum June 1), this year
EXPIRY DATE: September 30, THIS YEAR
DETAILS: Activity (with notification criteria hardcoded to activity)

Pursuant to Part V of the Environment Act, S.N.S. 1994-95, c.1 as amended from time to time, notification from the Notifier is acknowledged. The work done under this notification must follow the Nova Scotia Watercourse Alterations Standard.

This Notification Receipt or a copy must be kept on site at all times while work is being done as required under Section 22(3) of the Approval and Notification Procedures Regulations.

All personnel involved on the activity must be made fully aware of the Standard associated with this notification. It is the Notifier's responsibility to ensure that the Standard is followed. Failure to comply with the Standard is an offence under the Environment Act.

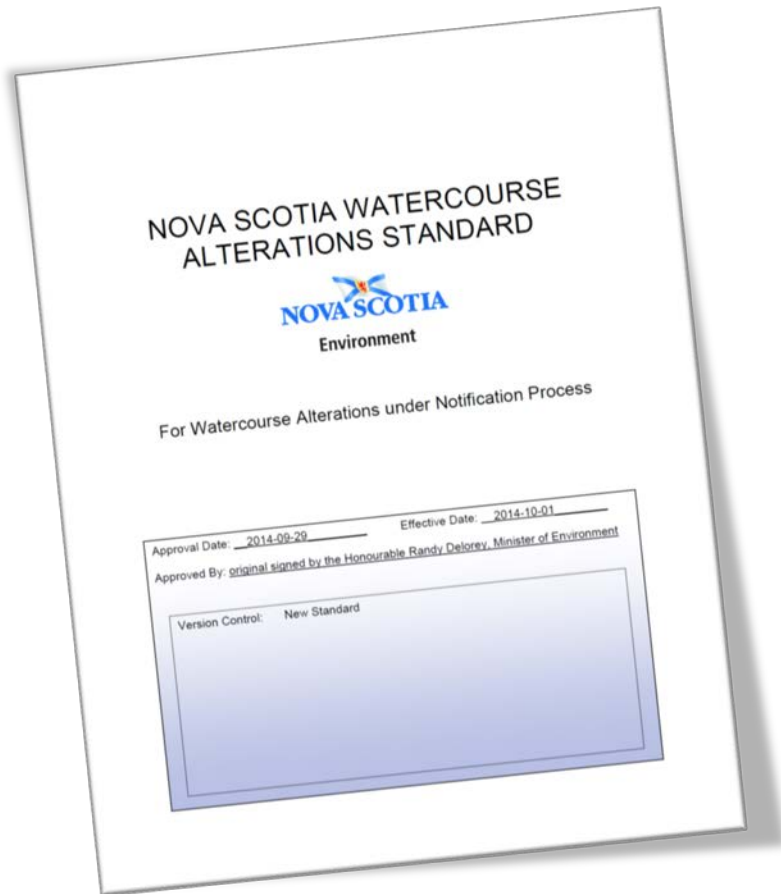
The Notifier must advise the Department of any new and relevant information regarding any adverse effect that results or may result from the activity, which comes to the Notifier's attention after the issuance of the Notification Receipt. This is required under Section 80 of the Environment Act.

If the activity is altered, extended or modified beyond the description given in this Notification, please notify as a new Notification is required.

Despite the issuance of this Notification Receipt, the Notifier is still responsible for obtaining any other authorization which may be required to carry out the activity, including those which may be necessary under provincial, federal or municipal law.

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Standard



Online:

- <http://www.novascotia.ca/nse/watercourse-alteration/>
- Current Version: 2014-09-29

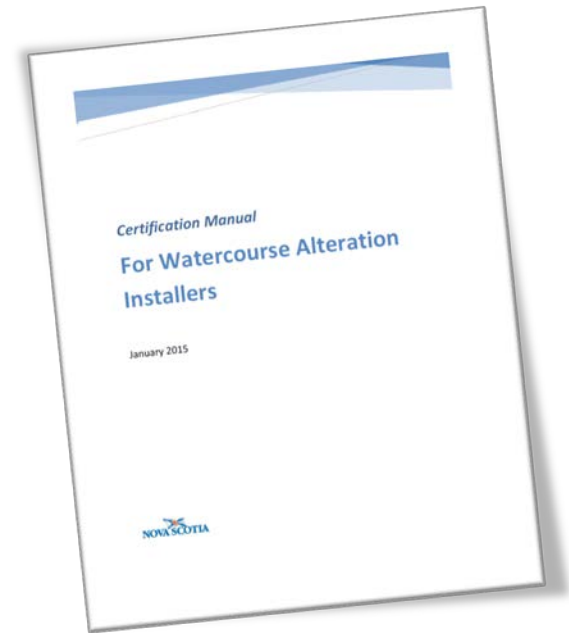
Updates soon to be released:

1. Definition of the Watercourse Slope
2. Clarification of energy dissipation pool outlet
3. Reference to intake screens

Watercourse Alteration Certification

- An **Installer** is required for:

- All watercourse alterations under *Notification*
- All watercourse alterations under *Approval**
(*except wetland alterations, withdraws, or dams)



- A **Sizers** is required for:

- Single Culverts, if
 - Under 25 m
 - Watercourse slope is $< 0.5\%$
 - Watershed is $< 20 \text{ km}^2$
- Bridges, if
 - The bed is not altered
 - The span is max 15 m, or 3600 mm (arch)
 - Arches less than 25 m

Watercourse Alteration Certification

Installer	Sizer
Know, understand, comply with all relevant acts, regulations, and standards, and any guidelines, and policies of NS Environment.	Know, understand, comply with all relevant acts, regulations, and standards, and any guidelines, and policies of NS Environment.
Ensure consideration of best practices for environmental protection for all watercourse alteration sites and land next to the watercourse.	Ensure consideration of best practices for environmental protection for all watercourse alteration sites and land next to the watercourse.
Understand the Nova Scotia Watercourse Alterations Standard for notifications and the terms of conditions of water approvals.	Plan watercourse crossing sites in accordance with training provided for qualifying Watercourse Alteration Sizers.
Plan and install/construct watercourse crossing sites in accordance with training provided for qualifying Watercourse Alteration Installers.	Select types and sizes of watercourse crossing structures.
Be able to recognize and correct problems during work on a watercourse alteration (such as, identifying issues prior to problems occurring and making appropriate adjustments).	Provide your name, phone number and certification number as an Installer on a Notification Form.
Provide your name, phone number and certification number as an Installer on a Notification Form.	If acting as a notifier for a watercourse alteration, comply with the responsibilities of a notifier as per the Approval and Notification Procedure Regulations.
If acting as a notifier for a watercourse alteration, comply with the responsibilities of a notifier as per the Approval and Notification Procedure Regulations.	Assist property owners and others complete notification and application forms for watercourse alterations.
Assist property owners and others complete notification and application forms for watercourse alterations.	Provide information to Nova Scotia Environment in a timely manner when requested related to projects which you are or were involved.
Provide information to Nova Scotia Environment in a timely manner when requested related to projects which you are or were involved.	Provide updated contact information to Nova Scotia Environment in a timely manner so contact lists may be updated.
Provide updated contact information to Nova Scotia Environment in a timely manner so contact lists may be updated.	Sizers are also expected to communicate with the Certified Installer on the type of structure to be installed, watercourse profile, diagrams, erosion protection to be constructed, the EDP, and recommended water control
Communicate with other professionals working on the project and seek assistance from others when needed.	

How to get certified

- Take course approved by Minister
- Maritime College of Forest Technology courses
 - Watercourse Alteration Sizer course
 - Watercourse Alteration Installer course
 - <http://mcft.ca/>
- Valid for 10 years

Existing certifications

- Valid Watercourse Alteration Certifications (since Jan 2008)
- Can do work as a Sizer & as an Installer until **September 30, 2019**
- Update information
- Get on the public list

Transitioning approvals

- Existing approvals, including blanket approvals, valid until expiry date

Going forward

- No “blanket approvals”
- No up-front approval application
- Formalized notification process

More information

Website

- <http://novascotia.ca/nse/watercourse-alteration/>

Questions about program changes

- Kevin Garroway (902) 424-3401
 - Kevin.garroway@novascotia.ca

Questions about other specific projects

- Local NS Environment office