

Maintenance and Repair of F Drains

Many rural watercourses in Ontario have been designated as municipal drains under the *Drainage Act, 1990*. These municipal drains are classified into a number of categories to facilitate the review and approval of drain maintenance activities with respect to fishes and fish habitat. This is done under a Class Authorization Process developed by Fisheries and Oceans Canada (DFO). “F” type drains are intermittent watercourses (intermittent means dry for three months of the year except after storms), that do not contain federally listed Aquatic Species at Risk. This document lists the maintenance and repair activities that can be conducted in a municipal “F” type drain without a review by DFO.

This list does not apply to any drains in which aquatic Species at Risk are present in the work zone or impact zone. (Note: Impact Zone = 1000 metre section of drain/watercourse immediately downstream of proposed works). To confirm there are no aquatic Species at Risk present, refer to the document, [A Guide for Interpreting Fish and Mussel Species at Risk Maps in Ontario](http://www.dfo-mpo.gc.ca/Library/356763.pdf) which can be found at: <http://www.dfo-mpo.gc.ca/Library/356763.pdf>. Links for Ontario Conservation Area specific fish and mussel maps that include critical habitat extents and a list of aquatic Species at Risk found within the conversation authority boundary can be found on Page 5 of [A Guide for Interpreting Fish and Mussel Species at Risk Maps in Ontario](#).

All municipal, provincial, or federal legislation that applies to the work being proposed must be respected.

Table 1 lists the drain maintenance and repair activities that do not require review by DFO and the key considerations when conducting this type of activity.

How to use Table 1:

- 1) Check to see if your activity is listed.
- 2) If listed, confirm your proposed activity meets the definition listed in the table.
- 3) Note the key considerations associated with your activity and confirm that you can incorporate these and the Standard Measures to Avoid Causing *Serious Harm to Fish* listed below.
- 4) If yes to all of the above, you can proceed with your project without formal review by DFO. No drain notification form is required for DFO. **If you cannot meet the meet these conditions, please complete the drain notification form and submit it to the Fisheries Protection Program at: FisheriesProtection@dfo-mpo.gc.ca.**

Note: If your project must be conducted without delay in response to an emergency (e.g. the project is required to address an emergency that poses a risk to public health or safety or to the environment or property), you may apply for an Emergency Authorization (<http://www.dfo-mpo.gc.ca/asp/forceDownload.asp?FilePath=/pnw-ppe/reviews-revues/Emergency-Authorizations-Autorisations-Urgences-eng.pdf>).

Table 1. Maintenance and Repair Activities Not Requiring DFO Review in F Drains

Activity	Definition	Key Considerations
Bank Repair or Stabilization and Pipe Outlet Repair	Restoration of bank slopes to the original design in the Engineer’s Report and localized activities to prevent bank failure, such as the placement of rip rap, seeding the bank, and the use of geotextile materials.	<ul style="list-style-type: none"> • If the drain has no flow, is dry, frozen, or the work site can be isolated (i.e. using a turbidity curtain), no Timing Windows¹ apply. • If the drain has flow and the work site cannot be isolated, work shall be limited to 10 m within one day in any 1 km stretch within a Timing Window¹.
Bottom Cleanout	Removal of accumulated sediment in a drain that includes spreading of the spoil. Removal of vegetation in bottom of channel only. Work shall not go beyond design grade or cross-section.	<ul style="list-style-type: none"> • The drain must have no flow or be frozen to the bottom. • If there is any flow, timing windows apply.
Beaver Dam Removal	The removal of beaver dams.	<ul style="list-style-type: none"> • See Beaver Dam Removal Best Management Practices (BMP).
Bridge Repair (for culverts – refer to culvert replacement below)	<p>All removal activities and all maintenance activities including cleaning, removal and application of protective coatings, surface replacement, and removal of debris to protect piers and abutments.</p> <p>Repairs</p> <ul style="list-style-type: none"> • No increase in footprint below the High Water Mark • No new fill placed below the High Water Mark <p>Construction of ice bridges, temporary bridges and clear-span bridges</p> <ul style="list-style-type: none"> • No earth fill below the High Water Mark (temporary snow fill only) • No complete obstruction to fish passage during timing windows 	<ul style="list-style-type: none"> • Timing windows¹ do not apply.
Brushing Bank Slope	The removal of vegetation along the slope of the bank. Brushing the bank slope should not disturb soil or remove the roots of any trees or shrubs.	<ul style="list-style-type: none"> • To preserve slope stability, the vegetative root structure should be preserved. • Timing windows¹ do not apply.
Brushing Top of Bank	<p>The removal of trees and other vegetation from the top of a bank. If possible, leave vegetation on the south or west side as this is the shade producing vegetation.</p> <p>In certain situations, brushing the top of bank may require the removal of roots or the disturbance of soil.</p>	<ul style="list-style-type: none"> • Timing windows¹ do not apply.
Culvert replacement	<p>Replacement of existing road or private access culverts (like-for-like replacement) on all drain types without SAR.</p> <p>This can also include replacements with extensions and end walls for the purposes of providing the property or road with safe access. The footprint impact must be no greater than 250 m² below the high water mark.</p>	<ul style="list-style-type: none"> • Follow Culvert BMP
Debris Removal	Removal of log jams, garbage, or other obstructions.	<ul style="list-style-type: none"> • Draw the water down slowly to reduce downstream impacts (i.e. high flows, sedimentation) to the drain. • Unless the drain has no flow, is dry, or frozen, timing windows¹ apply. • Ensure applicable permits for relocating fish are obtained and capture any fish trapped within any isolated pools at the work site and safely relocate them to an

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Dyke Maintenance and Repair	Repair of breaches or bank restoration of dykes as set out in the original Engineer's Report.	<p>appropriate location in the same waters.</p> <ul style="list-style-type: none"> • Unless the drain has no flow, is dry, or frozen, timing windows¹ apply. • Ensure applicable permits for relocating fish are obtained and capture any fish trapped within an isolated/enclosed area that is being dewatered at the work site and safely relocate them to an appropriate location in the same waters.
Full Cleanout	<p>Removal of accumulated sediment in a drain that includes spreading of the spoil. Removal of vegetation in the bottom of the channel and removal of slope vegetation, including root removal; the removal of trees and other vegetation from the top of a bank (as required).</p> <p>Full cleanouts shall not go beyond design grade or cross-section.</p>	<ul style="list-style-type: none"> • In June, July, or August, a full cleanout can be conducted if there is no flow in the drain.
Inlet Repair	Any repairs to an inlet (e.g. surface inlet, catchbasin, Hickenbottom, etc.) where there is no changes to channel or channel or bank habitat features.	<ul style="list-style-type: none"> • Unless the drain has no flow, is dry, or frozen, isolate the work site from flow and prevent sediment from entering the waterbody. • Ensure applicable permits for relocating fish are obtained and capture any fish trapped within an isolated/enclosed area that is being dewatered at the work site and safely relocate them to an appropriate location in the same waters. • Timing windows¹ do not apply.
Leveling Spoil	Leveling the spoil excavated from open drains and deposit on the top of the bank.	<ul style="list-style-type: none"> • Prevent spoils and sediment from entering the waterbody. • Timing windows¹ do not apply.
Pump Station Maintenance and Repairs	Structural repairs or replacing a pump station in accordance with the specifications under the Engineer's Report.	<ul style="list-style-type: none"> • Unless the drain has no flow, is dry, or frozen, isolate the work site from flow and prevent sediment from entering the waterbody. • Ensure applicable permits for relocating fish are obtained and capture any fish trapped within an isolated/enclosed area that is being dewatered at the work site and safely relocate them to an appropriate location in the same waters. • Timing windows¹ do not apply.
Spot Cleanout	<p>Cleanout of isolated sediment build-up that is significant enough to cause erosion or flow blockage/flooding concerns in the channel. This may include a sediment trap (dug below design grade) cleanout.</p> <p>Spot cleanout are not continuous along the drain; they will not exceed a combined total of 250 m² within the drain in a six month period.</p>	<ul style="list-style-type: none"> • Minimize movement of sediment downstream. • Unless the drain has no flow, is dry, or frozen, time work in water to respect timing windows to protect fish.
Tile Repair	Any repair or replacement of all or parts of a tile drain system.	<ul style="list-style-type: none"> • Timing windows¹ do not apply.
Water Control Structure Maintenance and Repair	Structural maintenance, repair or replacement of a water control structure in accordance with the specifications under the Engineer's Report.	<ul style="list-style-type: none"> • Isolate the work site from flow and use standard methods to avoid harm. • Ensure applicable permits for relocating fish are obtained and capture any fish trapped within an isolated/enclosed area that is being dewatered at the work site

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		and safely relocate them to an appropriate location in the same waters. <ul style="list-style-type: none"> Unless the drain has no flow, is dry, or frozen, time work in water to respect timing windows to protect fish.

Note: Flow is defined as the movement of water between two points.

Timing Windows

Figure 1 and Tables 2 and 3 can be used to determine the Restricted Activity period for the drain based on its classification. Note: Timing windows identified on [Conservation Authority](#) permits or [Ministry of Natural Resources](#) (Government of Ontario) work permits may differ and take precedence.



Figure 1. Ontario’s Northern and Southern Region boundaries for determining application of restricted activity timing windows.

Table 2. Restricted Activity timing windows for the protection of spawning fish and developing eggs and fry in the Northern Region. Dates represent when work should be avoided.

Drain Type	Restricted Activity Period
A	September 1 to July 15
B	September 1 to July 15
C	April 1 to July 15
D	September 1 to July 15
E	April 1 to July 15

Table 3. Restricted Activity timing windows for the protection of spawning fish and developing eggs and fry in the Southern Region. Dates represent when work should be avoided.

Drain Type	Restricted Activity Period
A	September 15 to July 15
B	March 15 to July 15
C	March 15 to July 15
D	October 1 to July 15
E	March 15 to July 15

Standard Measures to Avoid Causing *Serious Harm to Fish*

When undertaking any maintenance or repair activities in an “F” type municipal drain, the *Fisheries Act* still requires a Municipality/Contractor to ensure they avoid causing *serious harm to fish* during any activities in or near water. The following advice will help one avoid causing harm and comply with the *Act* (for additional information see <http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html>).

1. Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.
2. Whenever possible, operate machinery on land above the high water mark or on ice and in a manner that minimizes disturbance to the banks and bed of the municipal drain.
 - Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks.
 - Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.
 - Keep an emergency spill kit on site in case of fluid leaks or spills from machinery.
3. Install effective sediment and erosion control measures before starting work to inhibit sediment from entering the municipal drain. Inspect them regularly during the course of maintenance and repair, and make all necessary repairs if any damage occurs.
4. Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the municipal drain and runoff water is clear.
5. Implement measures for containing and stabilizing waste material (e.g. excavated spoils, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the high water mark of nearby waterbodies to prevent re-entry.
6. Stabilize banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through re-vegetation with native species suitable for the site.
7. If replacement rock reinforcement/armouring is required to stabilize eroding or exposed areas, then ensure that appropriately-sized, clean rock is used; and that rock is installed at a similar slope to maintain a uniform bank and natural stream alignment.
8. Remove all construction materials from site upon project completion.