Ministry of Natural Resources and Forestry

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Ontario

Stormwater Management Pond Clean-out Best Management Practices

Ministry of Natural Resources and Forestry Aurora District

1.0 General

These best management practices are intended to assist proponents planning to undertake stormwater management pond clean-outs by providing advice and a description of what authorizations may be required from the Ministry of Natural Resources and Forestry (MNRF). Each individual stormwater management pond clean-out must be assessed by District staff in order to determine what authorizations may be required.

2.0 Authorizations for Stormwater Management Pond Clean-Outs

Stormwater management ponds are considered 'Sewage Works' under the Ontario Water Resources Act. These facilities are not intended to provide public green space or recreational opportunities such as fishing. Stormwater management ponds are often connected to natural watercourses (streams and rivers) through an inflow and/or outflow or are located within floodplains. As a result, stormwater management ponds are considered to be "Ontario" waters. Due to these connections, and accessibility by the public, stormwater management ponds may become inhabited by fish from adjacent natural sources or through unlawful introductions. Stormwater management ponds may also attract and become inhabited by wildlife such as turtles and frogs. While it may not be known if a stormwater management pond is inhabited by fish and/or wildlife prior to clean-out activities being carried out, it is best to anticipate the need to handle or remove these species prior to operations which may require a licence or authorization under the *Fish and Wildlife Conservation Act, 1997* (FWCA).

2.1 Fish Capture Authorization

Where stormwater management ponds are considered "Ontario" waters as described above, a Licence to Collect Fish for Scientific Purposes under O. Reg. 664/98 of the FWCA will be required to capture and remove fish from the stormwater management pond prior to clean-out operations. Almost all stormwater management ponds support fish, even if the fish are not clearly visible.

2.2 Fish Capture, Handling and Relocation Methods

Fish capture should be undertaken by a qualified professional. The most common techniques used to capture fish for stormwater management pond clean-outs are electrofishing and seine netting. Dip nets and minnow traps can also be used.

However, the methods used will largely depend on the stability of the substrate and the clean-out method being implemented.

In general, the MNRF requires that all fish captured during a stormwater management pond clean-out be euthanized and not returned to the water. These stormwater management ponds may contain invasive species and/or introduced species, and fish may also carry diseases that should not be introduced into connected waterbodies. The MNRF does not prescribe euthanasia procedures in the conditions of a licence, but can provide guidance on euthanasia methods if requested.

In some circumstances, native fish species that are removed are not required to be euthanized. The conditions of the licence will prescribe where these fish are to be released. This may include release back into the stormwater management pond they were removed from, into suitable habitat in an adjacent waterbody or, in some cases, relocation to another area. To relocate fish to another area, a Licence to Transport Fish is required.

2.3 Wildlife Capture Authorizations, Animal Care

A Wildlife Scientific Collector's Authorization (WSCA) under the FWCA may be required for stormwater management pond clean-outs where there will be intentional or anticipated incidental capture, handling and/or relocation of herpetofauna (e.g. frogs, turtles). This is assessed by MNRF staff based on the likelihood of suitable habitat in the immediate area and the likelihood of the stormwater management pond being used by herpetofauna. Most stormwater management ponds contain herpetofauna, even if they are not clearly visible. In some cases, a site visit and/or herpetofauna surveys will be required in support of an application.

While most applications for a WSCA require an approved Animal Care Protocol (ACP) from either an affiliated University, Organization with an Animal Care Committee, or the MNRF's Wildlife Animal Care Committee (WACC), an approved ACP is NOT a requirement for herpetofauna rescues associated with stormwater pond clean-outs whereby herpetofauna are being collected by nets, hands, etc. However, an ACP is a requirement if the clean-out is to involve any form of trapping device(s). All WSCA applications, containing detailed collection methods, must be cc'd to WACC to Sarah Fraser, WACC Chair, at sarah.fraser@ontario.ca. The MNRF Aurora District then requires written confirmation from WACC that there are no concerns with the proposed herpetofauna rescue prior to issuing the WSCA.

2.4 Wildlife (Herpetofauna) Capture Methods and Relocation

A qualified professional should be present during a clean-out to collect, by hand, any herpetofauna that are incidentally encountered. If live holding containers are used, they should be kept well ventilated and shaded at all times and inspected regularly.

Specimens are usually released immediately outside of the removal area/work zone. In some cases, they can also be relocated to other stormwater management pond facilities or suitable habitat in the immediate area, subject to the conditions prescribed in the

authorization. Efforts should be made to capture herpetofauna prior to commencing any electrofishing.

3.0 Application Requirements / Details

When seeking an authorization to support stormwater management pond clean-outs, specific details should be made available to support the application.

Clean-Out Methods: stormwater management ponds can be cleaned using a variety of methods including dewatering and dredging, hydraulic dredging, vacuum truck and others. Methods should be clearly outlined in the application in order to better assist staff in determining potential impacts to fish and wildlife. Where possible, it is best to employ techniques that do not require the removal of fish and/or wildlife. For example, it is sometimes possible to capture and isolate all fish into a single cell/area while the rest of the stormwater management pond is cleaned. Fish can then be relocated to the cleaned area while the remainder of the pond is completed.

Clean-Out Timing: Due to the invasive nature of stormwater management pond clean-outs, they are generally only permitted to occur between April 15 and September 30 of any year in order to protect hibernating herpetofauna. However, this timing can be flexible based on site characteristics and weather conditions. The latest that the MNRF WACC recommends a clean-out to occur is October 15 in order to prevent harmful impacts to hibernating herpetofauna.

Other Relevant Details: Include any other relevant details that may assist MNRF staff in undertaking their review. For example, please indicate in the application if fish or wildlife surveys have been completed (and the results), if there are unique site characteristics that should be considered (e.g. pond age, depth, design), if the pond is isolated (not connected to flowing waters), if the pond is located in a floodplain, etc.

4.0 Maintenance

After a clean-out is completed, it is recommended that measures be put in place to prevent the re-introduction of any native and non-native fish and wildlife species. This could be done by several means including signage or public exclusion.

5.0 Species at Risk and Sensitive Species

If aquatic or terrestrial Species at Risk (SAR) are known to occur in the area of the stormwater management pond or if surveys within and around the pond have confirmed the presence of SAR, additional information and/or an authorization may be required under the *Endangered Species Act, 2007* (ESA). For more information please refer to the “Best Management Practices for Minimizing Impacts to Redside Dace during Stormwater Facility Clean-outs” (see below).

If any species listed on the Species at Risk in Ontario List, under Ontario Regulation 230/08, pursuant to the ESA are incidentally encountered during a clean-out, they must be captured and released at the point of capture or immediately upstream / downstream

of the capture site into an area providing suitable habitat. The capture must be reported within 48 hours to the MNRF Aurora District office at esa.aurora@ontario.ca.

Redside Dace: In Aurora District, many stormwater management ponds are located in or connected to Redside Dace habitat. This minnow species is Endangered in Ontario and it and its habitat are protected under the ESA.

6.0 Non-native and/or Invasive Species

Stormwater management ponds often contain introduced or invasive species (e.g. Goldfish, Koi) which are not native to Ontario and can be a threat to native species.

It is a condition of licences and authorizations for the collection of fish or wildlife that if any invasive species is captured outside of its previously known range (as determined by the distribution information available at http://www.invadingspecies.com/invaders/, it must be immediately reported to the Aurora District office (scp.aurora@ontario.ca). The capture must also be registered and reported through the Ontario Federation of Anglers and Hunters (OFAH) at http://www.invadingspecies.com/report/. Any such specimens must be euthanized and not returned to the water. This includes Red-eared Slider, a non-native turtle commonly found in the Greater Toronto Area.

The accessibility and availability of stormwater management ponds to the general public increases the likelihood for the introduction and establishment of invasive species. For example, invasive species can be introduced into stormwater management ponds by individuals wanting to humanely dispose of household aquarium plants or pets. There have also been instances of introductions of colourful fish species like Koi because nearby residents believe that they add to the aesthetic appeal of the area. Another potential pathway of introduction is through releases that are linked with religious or cultural practices.

To target the introduction pathways related to intentional releases, posting educational signage around stormwater management ponds may deter citizens from releasing aquarium or water garden species into stormwater management ponds. This signage is a proactive action that can be taken to reduce introductions and the spread of invasive species.

BEST MANAGEMENT PRACTISES FOR MINIMIZING IMPACTS TO REDSIDE DACE DURING STORMWATER MANAGEMENT POND CLEAN-OUTS
Ministry of Natural Resources and Forestry
Aurora District

The clean-out and maintenance of stormwater management ponds are becoming increasingly common in the Greater Toronto Area. Many stormwater management ponds are located adjacent to sensitive aquatic habitats, including streams that are the protected, regulated habitat for Redside Dace under the *Endangered Species Act, 2007* (ESA). The following guidelines are intended to assist proponents in providing the appropriate information to the Ministry of Natural Resources and Forestry (MNRF) Aurora District where stormwater management pond clean-outs are proposed in or adjacent to Redside Dace habitat. This information will assist in the review of the clean-out proposal and to identify potential requirements under the ESA.

Submission Requirements

Provide a map and drawings for the stormwater management pond and include, at a minimum, the following details:

- Erosion and sediment control measures;
- Drawing scale;
- North arrow;
- Contour lines (at 0.5-1.0 m intervals);
- Exact locations of all watercourses and wetlands;
- Access route;
- Phasing, staging, and storage areas;
- Location of discharge outlet (i.e. surface draw vs. bottom draw);
- Provide a description of the proposed work including:
    - Proposed start and completion dates;
    - Pond clean-out methodology; and
    - Plan for the disposal/removal of dredgeate

Standard Mitigation Measures

The following are mitigation measures that should be incorporated into the stormwater management pond clean-out proposal:

- Work should occur within the MNRF's recommended construction timing window for Redside Dace (July 1 – September 15). Any proposals to work outside of this window must be discussed with the MNRF. It should be noted that most stormwater management ponds support amphibians and reptiles and as such, the clean-out will likely need to be completed during the active season for these species, which is generally April 15 to September 30. Please see the MNRF Aurora District, *Stormwater Pond Clean-out Best Management Practices,* for more information;

- Water pumped from the stormwater management pond is to be discharged to a filter bag located in a well-vegetated area a minimum of 30 metres from any watercourse or wetland;
- No sediment-laden water or deleterious substances will be released into the watercourse at any time;
- Whenever possible, dredgeate should be removed from the site immediately. If dredgeate must be temporarily stored on-site, then it is not to be stored within the limits of Redside Dace habitat or directly adjacent to a watercourse or wetland;
- Any dredgeate stored on site must be effectively contained using the appropriate controls (e.g. silt fencing);
- Appropriate erosion and sediment control measures will be installed prior to beginning the works and will be maintained in working order throughout all stages of the works;
- Appropriate erosion and sediment control measures will be inspected daily and before and after every rainfall event as well as cleaned, maintained and/or adjusted accordingly to ensure sediment does not enter the watercourse at any time;
- All construction equipment used for the purpose of carrying out the works will be operated in a way that prevents deleterious substances from entering the watercourse;
- Stormwater management pond dewatering discharge is to be monitored to ensure that it does not exceed 8 Nephelometric Turbidity Units (NTU's)/25 mg/L Total Suspended Solids (TSS) above background stream measures;
- All disturbed areas will be appropriately and effectively stabilized and restored immediately following the completion of the works using appropriate native seed mixes and vegetation; and
- All erosion and sediment controls will be removed upon completion of the works.

Under most circumstances, surface draw stormwater management ponds will exceed 30°C discharge temperature in summer months. Should it be determined that the existing stormwater management pond is having a negative impact on Redside Dace and its habitat, project proponents should investigate retrofitting to address the impact.