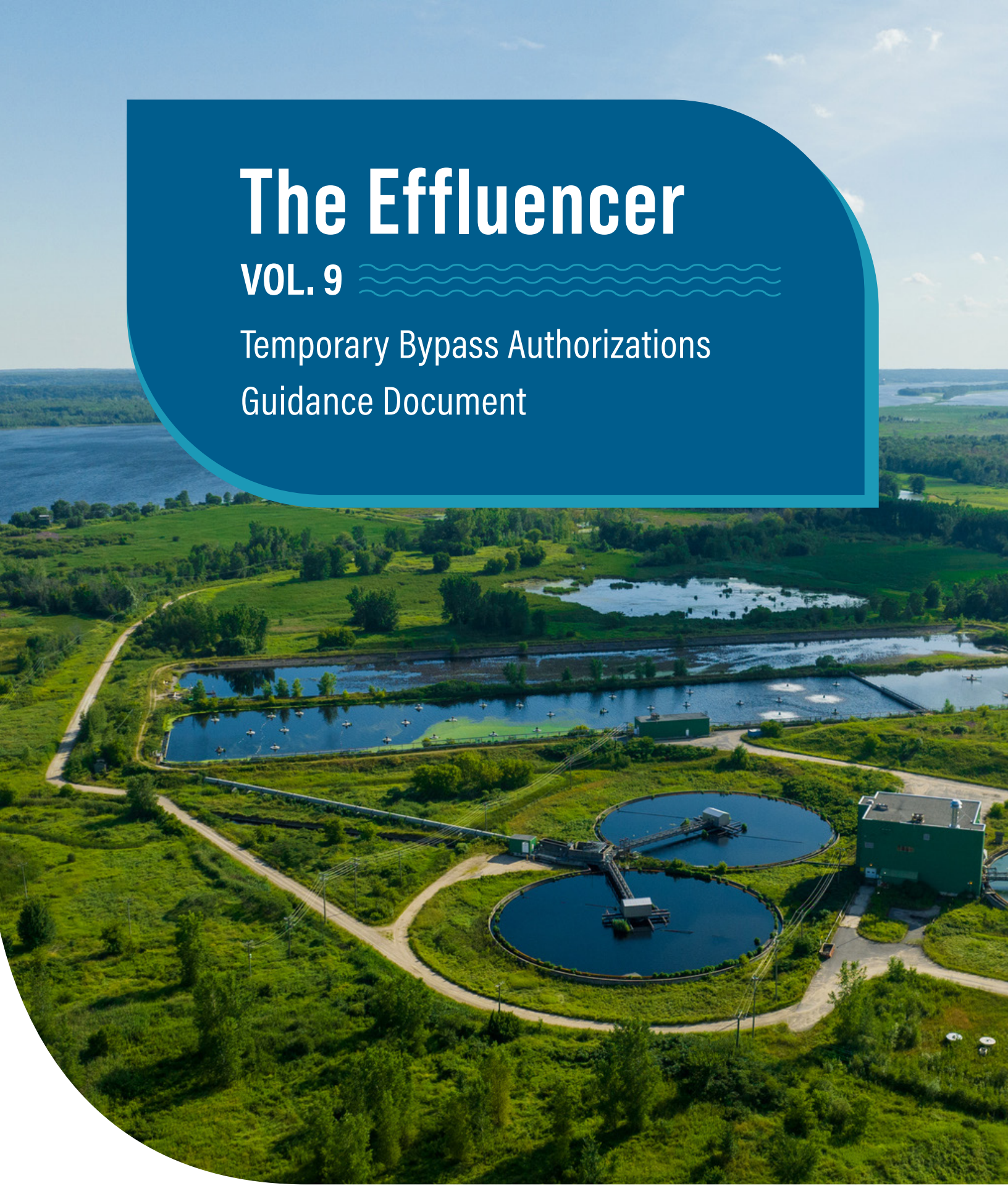
# The Effluencer

## VOL. 9

## Temporary Bypass Authorizations Guidance Document



Environment and Climate Change Canada
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Canada

## For Additional Information

Visit the Wastewater website at Canada.ca/wastewater

If the information you need is unavailable on our website, please contact Environment and Climate Change Canada at eu-ww@ec.gc.ca.

## Disclaimer

This information does not in any way supersede or modify the *Wastewater Systems Effluent Regulations* or the *Fisheries Act*, or offer any legal interpretation of those Regulations or Act. Where there are any inconsistencies between this information and the Regulations or Act, the Regulations or Act take precedence, respectively. A copy of the Regulations is available at the following website: https://laws-lois.justice.gc.ca/eng/Regulations/SOR-2012-139/FullText.html.

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# Summary

Temporary bypass authorizations (TBAs) allow the owner or operator of a wastewater system to bypass one or more treatment processes for a **defined period of time**. This could result in exceeding effluent standards outlined in the *Wastewater Systems Effluent Regulations* (the Regulations). TBAs may be issued in the following circumstances:

- to allow owners or operators to perform necessary construction or maintenance work at their wastewater treatment plant;
- for anticipated events out of control of the owner or operator.

A temporary bypass can be authorized from one or more **final discharge points or overflow points**.

## Eligibility

To be eligible for a TBA, the applicant must meet the following criteria:

- Treatment capacity is reduced due to:
  - construction work to make changes to the system;
  - maintenance of the system; or
  - an anticipated event outside the control of the owner or operator.
- The bypass is designed, within technical and economic constraints to minimize the:
  - volume of undertreated effluent deposited; and
  - concentrations of deleterious substances*.

*Deleterious substances in wastewater are carbonaceous biochemical oxygen demand (CBOD), suspended solids (SS), total residual chlorine (TRC) and un-ionized ammonia as specified in section 5 of the Regulations.

Any planned release of deleterious substances that may enter water frequented by fish, or any place, under any conditions where it may reach water frequented by fish, and that is not authorized by a temporary bypass authorization issued under the Regulations, is considered an unauthorized deposit and subject to subsection 36(3) of the Fisheries Act. Please consult our **factsheet on unauthorized deposits** for more information.

# Before Applying

## Determine Bypass Category

Applications for TBAs are based on risk. Applications fall into Category 1 (low risk), Category 2 (medium risk) or Category 3 (high risk), based on:

- quality of effluent deposited during the bypass;
- volume of wastewater effluent to be deposited during the bypass (in $m^3$);
- duration of the bypass (in hours);
- whether the work reduces the treatment capacity, which could result in the release of untreated wastewater mixed with precipitations during rainfall events;
- time required to complete the work (in hours);
- whether the release occurs in or near a shellfish harvesting area or a critical habitat for aquatic species.

A bypass will fall under one of the three options below based on the wastewater effluent quality:

### The three options are:

1. wastewater effluent receives physical or biological treatment
2. wastewater effluent receives no treatment
3. wastewater effluent release is due to precipitation events during a period of reduced treatment capacity

Applicants must use the table below that best describes their effluent to determine the corresponding category.

**Table 1. Wastewater Effluent Receives Physical or Biological Treatment**

Wastewater undergoes any treatment process, other than preliminary treatment, for the purpose of removing SS and/or CBOD matter. Examples of treatment technologies that would qualify include aerated lagoons and clarifiers.

| Characteristics of the Bypass | | Bypass Category |
|---|---|---|
| 1 | a) Estimated volume less than or equal to 25,000 $m^3$ and the approximate duration of the bypass is less than or equal to 240 hours (10 days); **and** | Category 1 |
| | b) Bypass is at a final discharge point or overflow point(s) that enter a receiving environment hat regularly receives wastewater under normal conditions | |
| 2 | a) Estimated volume more than 500,000 $m^3$ or approximate duration of the bypass is more than 2,160 hours (90 days); **and** | Category 3 |
| | b) Bypass meets one of the Receiving Environment Criteria (see table below) | |
| 3 | All other bypasses | Category 2 |

**Table 2. Wastewater Effluent Receives No Treatment**

During the bypass, wastewater receives no physical or biological treatment or only undergoes preliminary treatment. Examples of preliminary treatment that would qualify include screening and grit removals.

| Characteristics of the Bypass | | Bypass Category |
|---|---|---|
| 1 | a) Estimated volume less than or equal to 2,500 $m^3$ or the approximate duration of the bypass is less than or equal to 48 hours (two days); | Category 1 |
| | b) Bypass is at the final discharge point or overflow point(s) that enter a receiving environment that regularly receives wastewater under normal conditions; **and** | |
| | c) The bypass does not meet the requirements to qualify as a Category 3 bypass | |
| 2 | a) Estimated volume more than 50,000 $m^3$ or approximate duration of the bypass is more than 720 hours (30 days); **or** | Category 3 |
| | b) Estimated volume more than 25,000 $m^3$ or approximate duration of the bypass is more than 360 hours (15 days); and bypass meets one of the Receiving Environment Criteria (see table below) | |
| 3 | All other bypasses | Category 2 |

**Table 3. Wastewater Effluent Release Due to Precipitation Events During a Period of Reduced Treatment Capacity**

The construction or maintenance work will reduce the capacity of the wastewater system. Untreated wastewater mixed with surface runoff and stormwater will be deposited **only** if a precipitation event occurs during the period of reduced treatment capacity. The release that may result from the reduced capacity would fall under this option. A precipitation event excludes the melting of snow or ice.

This table indicates the duration of the **period of work**, not the duration of the deposit. The period of work is the period that the system will have a reduced capacity due to construction work or maintenance.

| | Characteristics of the Bypass | Bypass Category |
|---|---|---|
| **1** | a) Estimated volume less than or equal to 5,000 $m^3$ or a period of work less than or equal to 96 hours (four days); | Category 1 |
| | b) Bypass is at the final discharge point or overflow point(s) that enter a receiving environment that regularly receives wastewater under normal conditions; **and** | |
| | c) The bypass does not meet the requirements to qualify as a Category 3 bypass | |
| **2** | a) Estimated volume more than 100,000 $m^3$ or a period of work more than 1,440 hours (60 days); **and** | Category 3 |
| | b) Bypass meets one of the Receiving Environment Criteria (see table below) | |
| **3** | All other bypasses | Category 2 |

**Receiving Environment Criteria**

Two receiving environment criteria could cause a bypass to fall into a Category 3 (high risk).

| Receiving Environment | Criteria |
|---|---|
| **Shellfish Harvesting Area** | A shellfish harvesting area is within 1,500 meters of the bypass location.<br>To determine if this criterion applies to the bypass, use the shellfish harvesting area classification map. Areas on the map that would qualify as a shellfish harvesting area include:<br>▸ Approved (green);<br>▸ Conditionally Approved (yellow);<br>▸ Conditionally Restricted (orange); and<br>▸ Restricted (red).<br>The prohibited areas (black) do not qualify as a shellfish harvesting area. |
| **Critical Habitat** | An identified critical habitat for a federal protected aquatic species is within 500 meters of the bypass location.<br>To determine if this criterion applies, use this critical habitat map. All areas shown in red on the map linked above qualify as Critical Habitat for aquatic species at risk. |

The maps can either be downloaded for external use or viewed using Government of Canada Open Maps. In Government of Canada Open Maps, multiple ESRI layers can be combined to view the data together. Additionally, external ESRI files can be uploaded to the viewer. Individual points can be searched in the viewer using the geolocation search and inputting the latitude/longitude coordinates in decimal degrees.

# Notify

Before submitting an application, the applicant must:

1. Notify the public, and any community or Indigenous group if there are reasonable grounds to believe the bypass could impact them. They must also be notified if they have used or may use the receiving environment before, during or after the bypass.

Consider that the public, community or Indigenous group may be affected due to the bypass impacting water usage, such as:

- drinking water
- subsistence fishing and harvesting
- sports (fishing, water sports, etc.)
- recreational activities
- water aesthetics (odor, visible changes, etc.)

Considerations for the applicant when determining who to notify:

- environmental impacts that may result due to the volume, duration, and concentration of deleterious substances of the bypassed effluent
- current and anticipated uses of the receiving environment
- existing relationships with neighboring communities, Indigenous communities, landowners, etc.

Consider notifying an Indigenous community if the head office is within 25 km of the point of entry (upstream or downstream). It is the responsibility of the applicant to determine the acceptable radius to notify Indigenous communities, depending on the volume and duration of effluent released.

Use the Government of Canada website ATRIS to identify Indigenous groups that may be affected by the planned bypass.

When you notify, consider many communication methods, including:

- written letters
- emails
- social media campaigns
- public websites
- written notices
- local media (newspaper, radio)
- phone calls

Consider who is being notified and existing relationships when deciding what method(s) of communication to use.

Provide a rationale for the selected method of communication, for example:

- post on social media feed that receives high activity/interactions
- send emails if the community indicated this is their preferred method of communication

ECCC will review each application to ensure adequate Indigenous notification has been given. If notification is inadequate, the application is considered incomplete and the authorization may not be issued.

**2.** Notify ECCC's Shellfish Water Classification Program if the proposed bypass will result in the deposit of effluent within a 20 km radius of marine waters or a shellfish harvesting area.

This notification should include:

- name of the wastewater system
- name of the body of water and the latitude and longitude of the point(s) where the deposit will occur
- approximate duration in hours
- estimated volume in cubic meters
- expected effluent quality

Shellfish harvesting area maps are available on the Government of Canada open maps website.

Areas on the map that would qualify as a shellfish harvesting area include:

- Approved (green)
- Conditionally Approved (yellow)
- Conditionally Restricted (orange)
- Restricted (red)

The prohibited areas (black) do not qualify as shellfish harvesting areas.

The Regulations define marine waters as:

- open marine waters: salt waters in an area defined by an arc of 135° extending 20 km from the point of entry in relation to the final discharge point, if there is no land within that area.
- marine port waters: well-flushed marine waters, such as a seaport or harbour.

### Send the Notification To:

**Shellfish Water Classification Program**
Environment and Climate Change Canada
Science and Technology Branch

**For applications in NS, PE, NB and NL, email:**
atlantic.shellfish@ec.gc.ca

**For applications in QC, email:**
f.dmsqepcecquebec-wqmsdswcpquebec.f@ec.gc.ca

**For applications in BC, email:**
pcec-pacifique-rimd-swcp-pacific-dgir@ec.gc.ca

include eu-ww@ec.gc.ca on email

# How to Apply

The applicant must submit a temporary bypass application through the online Effluent Regulations Reporting Information System (ERRIS). The application must be submitted a set number of days before the start of the bypass. The number of days is determined by the level of risk of the release:

- **at least 21 days before the deposit** if the release is Category 1 (low risk)
- **at least 45 days before the deposit** if the release is Category 2 (medium risk)
- **at least 90 days before the deposit** if the release is Category 3 (high risk)

To be eligible, the application must meet specific requirements based on the category and level of risk. The applicant must include this information in the TBA application (section 44). Appendix A contains examples of the required information.

**Category 1**

| Required Information | Description |
|---|---|
| **The period (start and end dates) of the authorization** | Should correspond to the period needed to complete the construction work, the maintenance or in response to an anticipated event.<br>This is the period that the applicant would be authorized to release undertreated effluent. |
| **The approximate duration of the deposits (in hours)** | The duration of the deposits is the amount of time that undertreated wastewater will be deposited due to work being performed.<br>The authorization is only for the duration of deposits specified in the application. Any deposits that exceed the duration stated in the application would be unauthorized.<br>Report a **reasonable** estimate for the duration and include a buffer if there is uncertainty. |
| **The duration of the work (in hours)** | The duration of the work is the amount of time the work will be performed that may result in a bypass.<br>The authorization is only for the duration of work specified in the application. Any work that exceeds the duration stated in the application would be unauthorized.<br>Report a **reasonable** estimate for the duration of work and include a buffer if there is uncertainty. |
| **The estimated volume ($m^3$) of the deposits and an explanation of how the volume was estimated** | Provide the volume of undertreated wastewater that will be deposited in $m^3$. Historical data can be used to estimate the volume. The estimated volume should factor in the time of year and time of day, if relevant. State any assumptions made about the expected volume.<br>The authorization is only for the volume of the deposits specified in the application. Any deposits that exceed the volume stated in the application would be unauthorized.<br>Report a **reasonable** estimate of the volume of deposits and include a buffer if there is uncertainty. |

| Required Information | Description |
|---|---|
| **A description of the treatment, if any, that will be applied to effluent prior to deposit, and whether deposits will be caused by precipitation events occurring during a period of reduced capacity** | Provide a description of the treatment that effluent will receive. Provide effluent quality data on SS, CBOD, un-ionized ammonia and TRC to support the description, if available.<br><br>If the planned work will reduce the capacity of the wastewater system, provide information on the normal capacity and expected reduced capacity. If possible, estimate effluent quality of the diluted effluent. |
| **An explanation of how the bypass is designed to minimize the volume of effluent deposited and the concentrations of deleterious substances** | Describe how the bypass is designed to minimize the volume of effluent deposited as well as the concentration of deleterious substances. Deleterious substances are CBOD, SS, total residual chlorine (TRC) and un-ionized ammonia. |
| **The point(s), in latitude and longitude, from where effluent will be deposited** | Select the point(s) where effluent will be deposited during the bypass. If the point is not found in the drop-down list, add it first to the Identification Report in ERRIS.<br><br>The "main" discharge point selected should represent the point where the largest volume of effluent will be bypassed. Select additional discharge points under "other" discharge points.<br><br>If the system has multiple final discharge points, please contact the Wastewater Section for support to complete the application. |
| **A description of the water or place where bypass will be deposited** | Describe the water or place where effluent will be deposited. State the name of the water or place and the name of the larger body of water, if applicable. Include a description of the use of the water or place as well as the rate of flow in the receiving environment, if available.<br><br>If there are different waters or places for each point where effluent may be deposited, list and describe them in the application. Provide additional information specifying which point enters which waterbody. |
| **If the bypass is at an overflow point, a statement indicating whether the water or place the overflow point releases into regularly receives wastewater under normal conditions** | State whether the water or place where bypassed effluent will be deposited regularly receives wastewater under normal conditions.<br><br>The regular wastewater deposited could be from the system's final discharge point, or another source. Provide information to support that the environment regularly receives wastewater.<br><br>Include the location and daily volume of the final discharge point upstream. |
| **A description of the work and an explanation of why it is necessary to bypass at least one of the treatment processes normally applied to the wastewater** | Provide details on the work and why it cannot be completed without a bypass.<br><br>Aerial photos and arrows of process flow may be helpful to support the explanation. |

| Required Information | Description |
|---|---|
| **An explanation of how the bypass follows the previously declared plan to reduce bypasses over time (if required)** | If the wastewater system has previously received a TBA for:<br>▸ a Category 2 bypass that had no treatment<br>▸ a Category 2 bypass that was due to precipitation events occurring during a period of reduced capacity<br>▸ a Category 3 bypass<br>The applicant must submit, with the final report, a declaration that a plan exists to reduce large and untreated bypass in the future. If the applicant has declared a plan exists previously, they must explain how the new authorization falls under the plan for subsequent TBA applications. |
| **A list of measures that will be implemented to avoid or mitigate the adverse effects of the bypass on fish, fish habitat or the use of fish by persons** | Provide a list of measures that will be implemented before, during or after the bypass. The measures implemented should avoid or limit the effects on the receiving environment.<br>These measures should be tailored to the specific work and the resulting bypass. More information on mitigation measures is provided in the section below and examples are in appendix A.<br>Include the choice of appropriate timing for the proposed work to reduce the risk of harm. |
| **A description and the results of notifications to and engagements with members of the public, communities or Indigenous groups that may be impacted by the proposed bypass** | Provide the names of the people and/or organizations that were notified, and the method used to notify them. Provide information on who to notify was determined as well as why the notification method was chosen.<br>Provide a summary of any responses received from the people and/or groups notified. If concerns about the bypass were raised, explain how the concerns will or have been addressed.<br>If no responses have been received at the time of submission, the application can still be submitted. A summary of responses to notification can be provided to ECCC via email (ww-eu@ec.gc.ca) after an application has been submitted. |

### Category 2

Provide all information required for a category 1 application. In addition, provide a detailed description of mitigation measures that will be put in place to avoid or lessen the negative effects of bypass on fish, fish habitat or the use of fish by persons.

- These measures should be rigorous and tailored to the system and work being performed.
- The description should include an overview of the measures, the dates during which the measures will be implemented and what the measures will achieve.

The next section provides more information on mitigation measures.

**Category 3**

Provide all information required for Categories 1 and 2 applications. In addition, provide the following information:

- A review of methods considered but not used to avoid or minimize the bypass, including their technical feasibility and an estimate of costs:
  - Feasibility and costs should consider the location or remoteness of the system.
  - Recommend including one or two alternatives considered with an order of magnitude cost.
- An assessment of the geographical scope where the effluent mixes with the receiving waters and where there is a distinguishable difference from the ambient water:
  - Include a description of the methodologies used to prepare the assessment.
  - An existing plume delineation model would be acceptable if it shows the extent of the bypass.
- A detailed description of the monitoring of the effluent or of the receiving environment:
  - The description must be based on the assessment of the physical extent of the bypass that will be implemented in order to assess the effectiveness of the mitigation measures.
  - Provide a detailed plan and schedule for monitoring before, during and after the bypass occurs.
    - Design the sampling and monitoring plans for the specific bypass.
    - If possible, include both wastewater effluent samples and receiving environment samples in the sampling and monitoring plans.

## Mitigation Measures

Applications for all categories require information on mitigation measures that will be implemented to avoid or reduce the effects of the bypass on fish, fish habitat or the use of fish by persons. These measures should be specific to the work being performed, the resulting bypass and the receiving environment.

Consider more sensitive receiving environments in the development of mitigation measures and when selecting the timing of the work. Sensitive receiving environments can include:

- Marine Protected Area (map);
- Ecologically and biologically sensitive area (map);
- Ramsar Convention Wetland (map);
- National Park (map);
- National Marine Conservation Area (map);
- Culturally significant area for Indigenous peoples (consider ATRIS land claims as well as regional knowledge);
- Critical habitats under provincial regimes (check provincial resources).

Provide an explanation on how the proposed mitigation measures will reduce the impacts on the receiving environment during the bypass. If it is determined that the bypass will have adverse effects on fish and fish habitat that cannot be mitigated, ECCC may refuse the application.

## Additional Information

ECCC may request additional information if it is required to assess the potential adverse effects of the bypass on fish, fish habitat or the use of fish by persons. ECCC must specify in writing the information needed and a timeline for providing it.

# After a Temporary Bypass Authorization Has Been Issued

## Conditions on Temporary Bypass Authorizations

A TBA holder is authorized to deposit effluent during the period of work as long as they meet the conditions specified in their authorization. This includes implementing the mitigation and monitoring measures of the application.

## Compliance Obligations

During the TBA, the holder must comply with other sections of the Regulations.

### If the bypass occurs at least at one final discharge point, the TBA holder must still comply:

- At the final discharge point(s), with sections 7 to 10, subsections 11(1) to (3) and (7), sections 12 to 19, 21, 22, and 48 of the Regulations.
  - While the authorization is in effect, the TBA holder is not required to comply with the effluent quality standards for SS, CBOD, TRC or un-ionized ammonia.
  - Effluent must still be tested for acute lethality according to the system's frequency (monthly, quarterly, or annually). However, a failed acute lethality test during a temporary bypass authorization does not trigger the need for additional acute lethality testing, as stated in subsection 11(4).
- At the combined sewer overflow point(s), with paragraph 17(b) and section 20 of the Regulations.

### If the bypass occurs only at overflow point(s), the TBA holder must still comply:

- At the final discharge point(s), with sections 5 to 19, 21, 22 and 48 of the Regulations.
  - This means that the TBA holder is required to meet all of the effluent quality and monitoring requirements at the final discharge point(s) while the authorization is in effect at overflow point(s).
  - at the combined sewer overflow point(s), with paragraph 17(b) and section 20 of the Regulations.

During the authorization, the TBA holder must continue to monitor and report under the Regulations. If the TBA holder cannot during the bypass measure the volume or rate of flow of influent or effluent of the wastewater system in accordance with section 9, they may use a method of estimation to determine the daily volume in accordance with subsection 7(4).

## Corrected Information

A TBA can be extended, modified or reissued after it has been approved if new information or a situation outside of the control of the owner or operator arises. If the category of the TBA changes, the TBA may be reissued if the additional information required under the new category has been submitted.

## Final Report

The TBA holder must, within 90 days after the last day of the period of the authorization, send to ECCC a final report that contains:

- the actual duration of the deposits (in hours);
- the actual or estimated volume of all deposits (in $m^3$);
- a description of the actual treatment applied to effluent, if any;
- a description of how the mitigation and monitoring measures were implemented during the bypass; and
- the results of any sampling and monitoring conducted during the bypass period, if applicable.
    - This includes samples of the bypassed effluent and any samples collected in the receiving environment.

For Category 2 bypasses with no treatment, Category 2 bypasses that are due to precipitation events during a period of reduced capacity and all Category 3 bypasses, provide the following information:

- A confirmation of the existence of a plan that describes future planned modifications to the wastewater system and other measures that will be taken to reduce the need for future temporary bypass authorizations that have large volumes, long durations and are untreated. The plan must include a schedule for implementation:
    - A goal of the plan should be to reduce adverse effects on fish, fish habitat or the use of fish by persons when performing work that requires bypassing effluent.
- A declaration that this plan is available to the public.

Existing plans that have already been developed for a wastewater system such as asset management plans or combined sewer overflow reduction plans can be considered. They must contain sufficient information to meet the criteria.

Applicants should provide information on their plan and how it is publicly accessible, for example by providing a website link.

# Refusal and Revocation

## Refusal of Temporary Bypass Authorization

ECCC may refuse a TBA application if:

- ECCC believes the bypass would result in adverse effects on fish, fish habitat or use of fish by persons that cannot be mitigated (subsection 45(3));
- the TBA application is not submitted in ERRIS in the required timeline (21, 45 or 90 days before the start of the bypass) (subsection 43(3));
- ECCC believes that the information provided in the application is false or misleading (subsection 45(4));
- the application does not contain the required information (section 44).

## Revocation of a Temporary Bypass Authorization

A TBA may be revoked by ECCC after it has been issued if:

- the information contained in the temporary bypass authorization application is false or misleading;
- the TBA holder has failed to comply with the conditions set out in the authorization. Specifically, the holder may have:
  - failed to implement the mitigation and monitoring measures that were proposed in the application;
  - failed to comply with the compliance obligations.
- new information indicates that the authorized deposit had or is likely to have an effect on fish, fish habitat or the use of fish by persons that is more adverse than the effects that were anticipated when the authorization was issued.

ECCC must provide in writing the reasons for the proposed revocation to the TBA holder. Additionally, the TBA holder must be given the opportunity to discuss the proposed revocation in writing.

# Annex 1: Application Examples

| Required Information | Example Scenario |
|---|---|
| **The period (start and end date) of the authorization** | Work will be performed on a wastewater system over a two-week period in September 2024.<br>The start date is September 1st, 2024 and the end date is September 14th, 2024. |
| **The approximate duration of the deposit (in hours)** | Work at a mechanical treatment plant is being performed to clean out the wet well of the facility. The plant will be put into bypass on Monday and will be put back in operation on Friday.<br>This bypass occurred over five days, so the approximate duration of this deposit in hours would be 120 hours. |
| **The duration of the work (in hours)** | Work is being performed on a lagoon system for three months, however a bypass will only occur for two weeks while a lagoon cell is drained.<br>Duration of work in hours is 2,184 hours (three months).<br>Duration of the deposit in hours is 336 hours (two weeks). |
| **The estimated volume ($m^3$) of the deposit and an explanation of how the volume was estimated** | **Example 1:**<br>Work is being performed at a pumping station. Based on historical data, it is expected that 3,000 $m^3$ of wastewater will need to be diverted. To be conservative, the applicant adds a 15% buffer to the expected value. This 15% corresponds with the 10-year peak they have measured at the pumping station.<br>Estimated volume of the deposit: 3,450 $m^3$<br>Explanation: 3,000 $m^3$ expected based on historical data plus a conservative buffer of 15% (450 $m^3$).<br>**Example 2:**<br>Work is being performed at a mechanical plant that has two treatment trains. One treatment train will be taken offline to perform the work, while the other will remain operational. The estimated flow through each treatment train is 20,000 $m^3$ per day (40,000 $m^3$ total for the entire system per day).<br>Estimated volume of the deposit: 20,000 $m^3$ x # of days work is performed.<br>Explanation: 20,000 $m^3$ per day based on normal capacity. Expect to divert as much flow as possible to functional treatment train. Undertreated wastewater will be mixed with treated wastewater before deposit.<br>**Example 3:**<br>Work is being performed at a pumping station. For the duration of the work, a temporary pipe will be installed that is 70% of the normal capacity. The temporary pipe will be able to handle base flows, however, a deposit of untreated wastewater will occur if there is a large rainfall event.<br>Estimated volume of the deposit: 50 $m^3$<br>Explanation: Based on historical flow volumes, the temporary pipe should be able to handle all flows while the work is performed. Factoring in expected rainfall at the time of year, only 50 $m^3$ of untreated wastewater is expected to be deposited if there is a large rainfall event. |

| Required Information | Example Scenario |
|---|---|
| **A description of the treatment, if any, that will be applied to effluent prior to deposit, and whether deposits will be caused by precipitation events occurring during a period of reduced capacity** | **Example 1:**<br>Work is being performed at a mechanical treatment plant. The secondary clarifiers will be taken offline for maintenance. Effluent will still be treated by the preliminary bar screens and primary clarifiers. Based on intermediary samples, the effluent quality is expected to be approximately 50 mg/L SS and 50 mg/L CBOD.<br>**Example 2:**<br>Work is being performed at a pumping station and a temporary pipe is put in place. If it rains, effluent may be bypassed and deposited into the receiving environment. As a conservative estimate, it is expected bypassed wastewater will be a mixture of 50% rainwater and 50% wastewater. Based on raw wastewater influent quality data, this ratio would result in bypassed effluent quality to be approximately 100 mg/L TSS and 100 mg/L CBOD. |
| **An explanation of how the bypass is designed to minimize the volume of effluent deposited and the concentrations of deleterious substances** | Work is being performed during the night to ensure the lowest volume of effluent is bypassed. Preliminary treatment will be maintained such that debris and large solids are removed. |
| **The point(s), in latitude and longitude, from where effluent will be deposited** | Select final discharge point(s) and overflow point(s) as applicable. |
| **A description of the water or place where bypass will be deposited** | The release occurs into Y river that has a flow rate at the bypass location of 100 $m^3$/s. |
| **If bypass is at an overflow point, a statement indicating whether the water or place the overflow point releases into regularly receives wastewater under normal conditions** | X overflow point where the bypass is occurring is located downstream of the final discharge point of the wastewater system. |
| **A description of the work and an explanation of why it is necessary to bypass at least one of the treatment processes normally applied to the wastewater in the system** | This work requires changes to the headworks of the mechanized treatment system. Due to the configuration of the system and lack of redundancy, a bypass is required to complete this work. |
| **An explanation of how the bypass follows the previously declared plan to reduce bypasses over time (if required)** | This work is part of our previously declared plan to reduce combined sewers in the collection network and add redundancies to our system.<br>More details could be added to discuss the phase of the plan the work falls under and whether it is expected to meet timelines. |

| Required Information | Example Scenario |
|---|---|
| **A list of measures that will be implemented to avoid or mitigate the adverse effects of the bypass on fish, fish habitat or the use of fish by persons.** | Examples of measures that could be provided:<br>▸ installing temporary treatment systems, pumps and/or piping;<br>▸ continuing to provide treatment through other treatment processes;<br>▸ phasing work to allow for the most treatment capacity;<br>▸ sampling effluent and/or the receiving environment for substances of concern;<br>▸ scheduling the work during a period of low flow and/or avoiding a period when the receiving environment is more sensitive (i.e. fish spawning).<br>Include the choice of appropriate timing for the proposed work to reduce the risk of harm. |
| **A description and the results of notifications to and engagements with members of the public, communities or Indigenous governing bodies that may be impacted by the proposed bypass** | The applicant has notified nearby communities and the local Indigenous groups via email.<br>We notified these groups by email as this is how we have previously committed to communicate with them. We notified these groups as they are within a 25 km radius of the final discharge point and they may utilize the waterbody during the bypass. We provided all groups with a summary of the work being performed, the dates during which the work will be performed. The approximate duration, estimated volume and estimated effluent quality were also provided. To date, none of the groups voiced any concerns regarding the work, however we will update ECCC if we receive a different response. |