AMENDING THE *WASTEWATER SYSTEMS EFFLUENT REGULATIONS (WSER)*

MNL CONSULTATION SESSION
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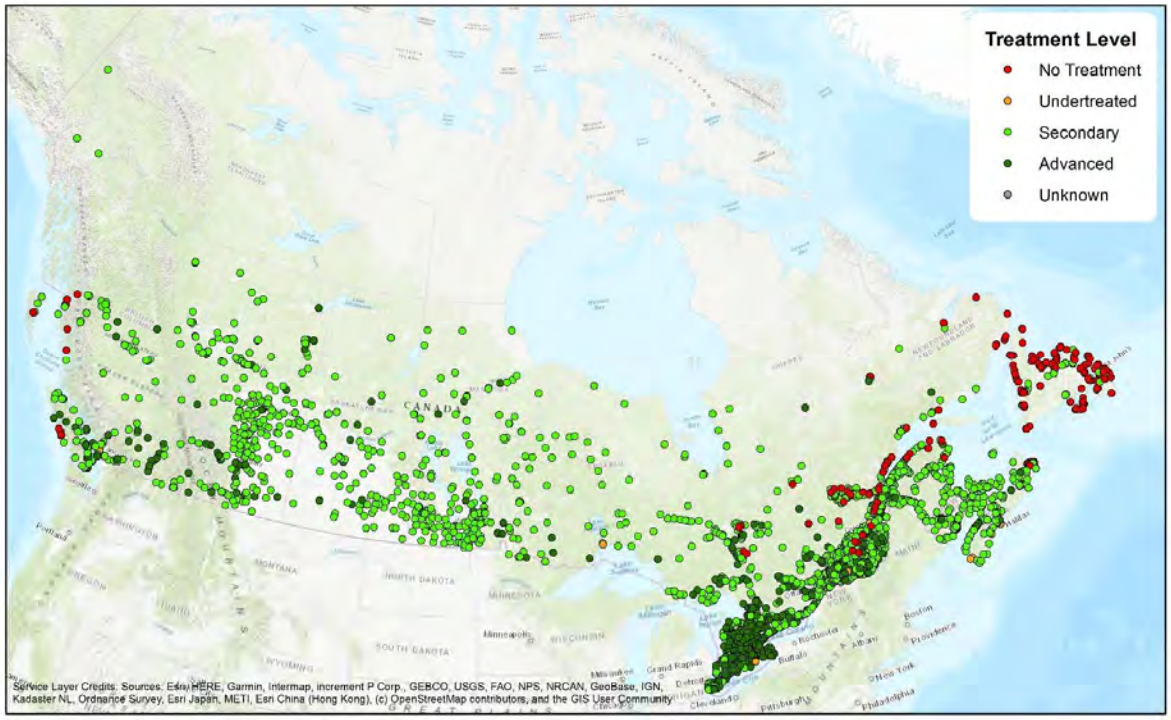
PURPOSE

- Provide overview of the Regulations
- Describe proposed amendments
  - Transitional Authorizations
  - Administrative Amendments
  - Temporary Bypass Authorizations
- Review next steps and timelines

WASTEWATER SYSTEMS EFFLUENT REGULATIONS

- Came into force in 2012
  - National effluent quality standards came into effect in 2015
  - Bring systems to secondary treatment level
- ~1,700 wastewater systems regulated under the Regulations
  - Collect an average daily wastewater volume of 100 m3 /day or more (≈ 200-250 people)
- The Regulations do not apply to:
  - Very small systems
  - NWT, NU, and north of the 54th parallel in QC and NL due to Arctic climatic conditions
  - Municipal and provincial systems in Yukon and Quebec which have equivalency agreements



Map includes wastewater systems covered under the QC and YK equivalency agreements

NATIONAL EFFLUENT QUALITY STANDARDS

- To comply with the WSER, the deposit of treated wastewater must meet specific effluent quality standards:
  - Limits on certain conventional pollutants
  - Effluent deposited cannot be acutely lethal to fish (i.e. kills >50% of fish in laboratory testing)
- The effluent quality standards are typically achievable through a secondary level of wastewater treatment

Deleterious Substances	Limit
Carbonaceous Biochemical Oxygen Demand (CBOD)	≤ 25 mg/L
Suspended Solids (SS)	≤ 25 mg/L
Total Residual Chlorine	≤ 0.02 mg/L
Un-ionized Ammonia	< 1.25 mg/L

REGULATORY REQUIREMENTS

Regulatees are required to monitor effluent and submit reports to ECCC on a regular basis

- The frequency for monitoring and reporting vary depending on type of wastewater system (intermittent versus continuous systems) and average daily flow

Monitoring Requirements:

- Final Discharge Point
  - Average daily volume
  - Concentrations of CBOD and SS
  - Acute lethality of the effluent, when applicable
- Combined Sewer Overflow Points (because of precipitation)
  - Volumes

Reporting Requirements: (electronic submission in ERRIS)

- Identification report
- Monitoring reports
- Combined sewer overflow (CSO) reports

TRANSITIONAL AND TEMPORARY AUTHORIZATIONS

- The Regulations include three mechanisms to apply for an authorization to deposit effluent that does not meet the effluent quality standards at the final discharge point

Temporary Bypass Authorization	Allows for a temporary exceedance of effluent quality limits to undertake maintenance, repairs and upgrades to wastewater treatment plants; to ensure the longevity and proper functioning of wastewater infrastructure
Transitional Authorization	Allows for extended compliance timelines for systems not designed to meet the standards; to provide time to plan and finance wastewater system upgrades
Temporary Authorization to Deposit Un-ionized Ammonia	Allows systems to discharge acutely lethal effluent due to unionized ammonia, that are otherwise compliant with SS/CBOD limits

PROPOSED AMENDMENTS TO THE REGULATIONS

- Transitional Authorization Provisions
  - Provide a new opportunity to apply for a transitional authorization to upgrade or build wastewater treatment facilities to meet effluent quality standards
- Temporary Bypass Authorization Provisions
  - Expand the temporary bypass provisions to include planned releases of wastewater throughout wastewater infrastructure
  - Introduce a risk-based approach to set clear conditions to improve transparency and reduce environmental impacts
- Operational and Administrative Provisions
  - To provide greater clarity and resolve implementation issues

CURRENT REGULATORY REQUIREMENTS: TRANSITIONAL AUTHORIZATION

- The effluent quality standards came into effect in 2015
  - Applied to all wastewater systems, except those issued a transitional authorization (TA)
- TAs could be issued to provide an extension for regulatees to upgrade their system if:
  - Regulatees applied before June 2014
  - Regulatees collected 12 months of data to demonstrate:
    - System could not meet effluent standards (CBOD/SS exceedances); and
    - System was not designed to meet the standards
- Extended timelines to 2020, 2030, or 2040 were issued based on environmental risk: effluent quality, daily volume, and receiving environment
- TA holders must meet site specific effluent limits (no AL testing), regularly submit monitoring reports and submit progress reports on upgrades

POINT BASED APPROACH FOR TRANSITIONAL AUTHORIZATIONS

Level of Risk	Extension period	Point based risk assessment
High Risk	End of 2020	≥ 70
Medium Risk	End of 2030	50 to < 70
Low Risk	End of 2040	< 50

- Two systems of points in WSER:
  - Schedule 2: Final Discharge Point
  - Schedule 3: Combined Sewer Overflow Points

- Takes into consideration:
  - Effluent quality (CBOD, TSS, Ammonia, TRC)
  - Daily volume
  - Type of receiving environment
  - Impact of CSO points

OBJECTIVES OF PROPOSED AMENDMENTS TO TRANSITIONAL AUTHORIZATIONS

1. Provide a new opportunity for eligible owners of wastewater systems to apply and receive a transitional authorization to the end of 2030 or 2040 using a similar application process
   - Allow regulatees to use historical data in their TA application (when available)
   - Use the same point-based system that was used for current TA holders (Schedules 2 and 3)
2. Amend monitoring and reporting requirements for continuous systems with a TA
3. Add flexibility to administrative measures for better accuracy and accountability

It is proposed that current transitional authorization holders or those that would have received a 2020 deadline would not be eligible to apply

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NEW OPPORTUNITY TO APPLY

PROPOSED ELIGIBILITY CRITERIA

- A wastewater system would be eligible for a TA if the system:
  - did not meet effluent limits for CBOD and/or suspended solids based on the earliest monitoring report(s) submitted to ECCC
  - is still not meeting the same limits in half or more of the reports submitted two years before the application
  - is not designed to meet secondary level treatment; and
  - could not be upgraded before applying for a transitional authorization due to costs or technical issues

- There would be <u>no deadline to apply</u>
  - Any systems coming into the Regulations could apply in the future
  - Regulatees would have to be actively reporting to ECCC to be eligible

PROPOSED APPLICATION PROCESS

Applicant would have to fill one application per wastewater system

Exception: Consolidation

If a regulatee has 2 or more wastewater systems with little to no treatment (e.g. sewage outfalls), and plans to merge them into one future treatment system, they could be consolidated under one application

- *Currently allowed for 10 or more outfalls*

INFORMATION REQUIRED TO APPLY

- CBOD and SS averages determined over a 12-month period
  - Select CBOD and SS concentrations entered in the first 24 months of monitoring report(s) submitted in ERRIS
  - 1 report for annual reporters and 4 consecutive reports for quarterly reporters → examples later in presentation
  - One or both parameters must be above the limit of 25 mg/L to proceed
- Volume deposited during the same 12-month period (in m^3/day)
- Maximum concentration of un-ionized ammonia during the first 12-month period; where
  - For an intermittent system, at least one sample per discharge period was collected
  - For a continuous system, at least four samples, taken at least 60 days apart, were collected
    - Allowing the use of historical data; doesn't have to be the same 12-month period as used for CBOD/SS
- If applicable, a statement the effluent is not dechlorinated and exceeds the limit on chlorine
- Type of receiving environment: open marine, marine port, lake, watercourse, etc.
  - Note: The definition for *Marine port waters* is proposed to include harbours
- If applicable, information on CSO points (number and size of deposits, receiving env.)
- A plan for the modifications needed with a schedule

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AMENDMENTS TO MONITORING AND REPORTING REQUIREMENTS

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PROPOSED CONDITIONS FOR TA HOLDERS

Similar conditions would be tied to new transitional authorizations:

- Site-specific effluent quality limits for CBOD, SS and unionized ammonia that are 1.25x the values reported in the transitional authorization application
- If using chlorine, a dechlorination system would have to be installed so that its effluent does not exceed:
  - 0.02 mg/L of total residual chlorine, on average
  - 0.10 mg/L in a grab sample - NEW

PROPOSED COMPLIANCE OBLIGATIONS

Current TA holder must:

- Do regular sampling, monitoring, reporting and record keeping requirements at final discharge point
  - Exception: no acute lethality testing required
- Execute the plan for modifications

Adjustments to compliance obligations are being proposed to current and new TA holders

	Current Requirements	Proposed New Requirements
Minimum Sampling Frequency*	Monthly	Quarterly
Reporting Frequency*	Quarterly	Annually
Volume determination*	Monitoring equipment	Monitoring equipment or method of estimation
Progress Reports	Every 5 years	Every 2 years

* For small continuous systems discharging less than 2,500 m^3/day on an annual basis (including raw sewage outfalls)

OTHER PROPOSED AMENDMENTS FOR REGULATEES WITH AN EXISTING OR NEW TA

- Proposed amendments on how regulatees can:
  - Update their transitional authorization
  - Update their plan of modifications and/or schedule
  - Transfer ownership of their transitional authorization
  - Terminate their TA early once upgrades are completed

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KEY ADMINISTRATIVE AMENDMENTS

AMENDED/NEW DEFINITIONS

SECTION 1

- Proposing to add or adjust definitions for greater clarity or to support new provisions to the Regulations

Key definitions:

- New *Composite sample* – based off other provincial/FA definitions 
- New *Authorized representative* 
- New *Licensed professional* 
- Adjustments to *Final discharge point* – amended to add plural form 

For more information on definitions, please review this factsheet or proposed amended regulations

SUSPENDED SOLIDS EXEMPTION

SECTION 6

Current Requirement: Lagoon systems that exceed the suspended solids limits of 25 mg/L in the summer do not have to take these results into account when calculating the average concentration for their monitoring reports

- Only allowed from July to October

Proposed Amendment: Add a requirement to indicate in monitoring reports if the exemption was used

DECHLORINATION

SECTION 6

Current Requirement: An average total residual chlorine (TRC) limit of 0.02 mg/L is set out in the Regulations.

Proposed Amendment:

- Require regulatee to install, operate and maintain a dechlorination system, if chlorine is used
- That the TRC concentration cannot exceed 0.10 mg/L in a grab sample;
- That the following records be kept onsite:
  - Information on the dechlorination system (e.g. manufacturer's specifications)
  - any results of TRC measured in the field

CALIBRATION

SECTION 9

Current Requirement: Monitoring equipment must be calibrated at least once every calendar year and at least five months apart.

Proposed Amendment: Monitoring equipment would have to be calibrated in accordance with:

- Recommendations from the manufacturer; or
- Recommendations of a licensed professional; or
  - If using the recommendations of a licensed professional, a document detailing the calibration procedure must be available onsite.
- At least once every calendar year and at least five months apart

SAMPLES TAKEN AT OTHER LOCATION

SECTION 10

Current Requirement: Samples can only be collected at the final discharge point.

Proposed Amendment: Allow sampling at another location of the treatment system if:

- It's an intermittent lagoon
- Representative effluent samples can be collected; and
- Sampling procedure and location have been determined by a licensed professional
  - A document detailing the sampling location and sampling procedure must be available onsite

SAMPLES TAKEN PRIOR TO DISCHARGE

SECTION 10

Current Requirement: Intermittent lagoon must be sampled:

- At least once during the first 30 days of discharge; and
- Every two weeks if discharging for a longer period

Samples collected prior to discharge cannot be used for compliance

Proposed Amendment: A sample collected two weeks or less prior to the discharge of an intermittent lagoon may be used as the sample for the first 30 days of discharge, if it is collected to meet another federal or provincial requirement

- Regulatees would have to sample every two weeks after the 30 days

ACUTE LETHALITY TESTING

SECTION 11

Current Requirement: Owners of intermittent systems with an average daily effluent volume of more than 2,500 m^3 are required to do acute lethality testing once per quarter

Proposed Amendment: Require intermittent systems with an average daily effluent volume of more than 2,500 m^3 to do acute lethality testing once per discharge event

ACUTE LETHALITY FAILURE

SECTION 11

Current Requirement: If a sample is determined to be acutely lethal, regulatees are required to collect samples twice a month and determine if the effluent is still acutely lethal

Proposed Amendment: If a sample is determined to be acutely lethal, regulatees would be required to:

- collect a sample without delay for acute lethality testing; and
- collect samples every two weeks for acute lethality testing

UNAUTHORIZED DEPOSITS

NEW SECTION 19.1

Current Requirements: There are no requirements in the Regulations.

- Regulatees must notify, mitigate and report in the event of an unauthorized deposit under the *Fisheries Act*

Proposed Amendment: Regulatees would be required to notify an inspector, without delay, if their effluent:

- Exceeds the total residual chlorine grab concentration
- Exceeds the unionized ammonia maximum concentration; or
- Is determined to be acutely lethal

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TEMPORARY BYPASS AUTHORIZATIONS

PLANNED RELEASES FOR MAINTENANCE AND CONSTRUCTION ACTIVITIES

CURRENT REGULATORY REQUIREMENTS: TEMPORARY BYPASS AUTHORIZATIONS

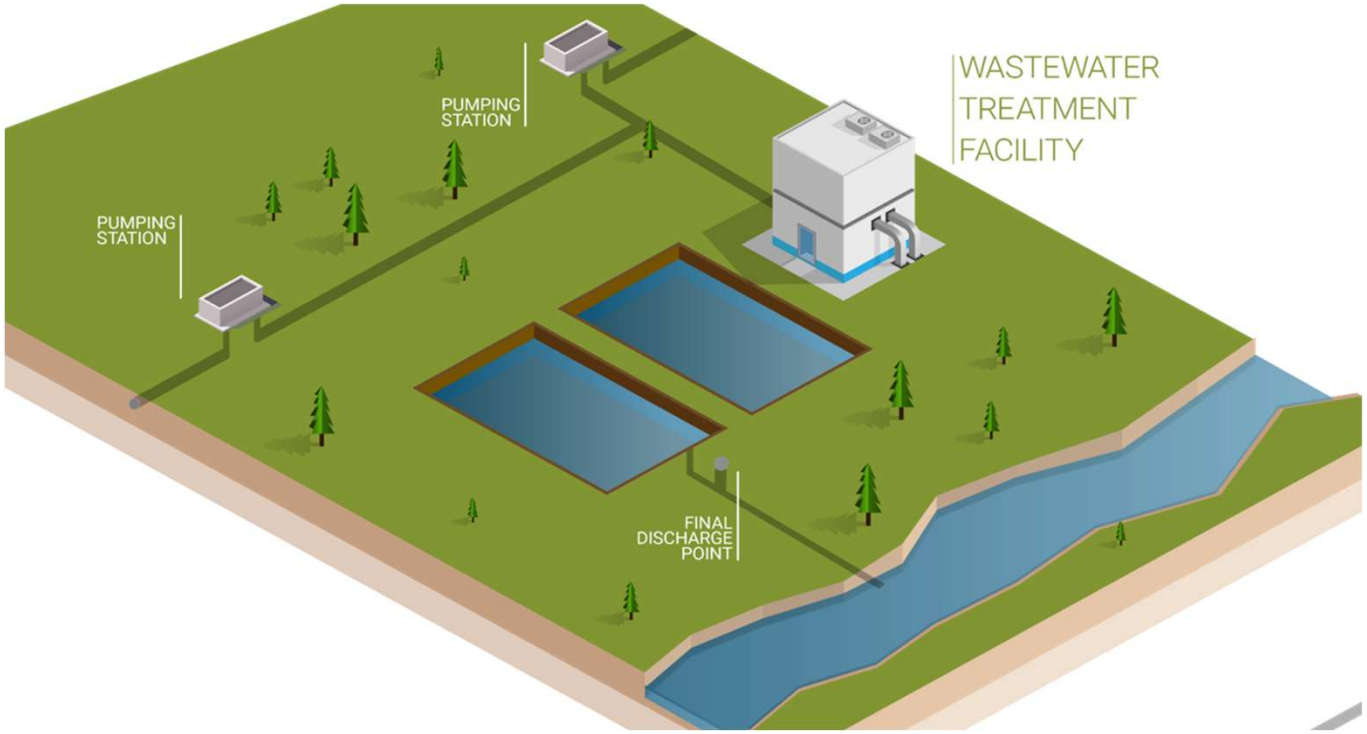
- Allows regulatee to bypass one or more treatment processes normally applied to wastewater resulting in an exceedance of WSER limits
- Temporary bypass authorizations may be issued if:
  - The release only occurs at the wastewater system's final discharge point
  - The bypass is required for construction, maintenance or repairs
  - The bypass is designed to minimize volume of effluent deposited and concentration of deleterious substances
  - The application is made at least 45 days in advance
- Regulatees must put in place financially and technically feasible mitigation measures to reduce environment impacts
- ECCC may refuse to issue these authorizations if there is reasonable grounds to believe that the authorization would result in adverse effects on fish, fish habitat or the use of fish by human that cannot be mitigated

CURRENT REGULATORY REQUIREMENTS: TEMPORARY BYPASS AUTHORIZATIONS

Information required in an application:

- Location of final discharge point, where effluent is deposited
- Start and end date of the bypass
- Approximate duration
- Estimated volume of the deposit
- Explanation of how the bypass is designed to minimize the volume of effluent deposited and the concentration of pollutants
  - Must include a schedule and description for all steps to be taken

FINAL DISCHARGE POINT



OBJECTIVE OF PROPOSED AMENDMENTS

- Expand the temporary bypass provisions to include planned releases of wastewater throughout the wastewater infrastructure, such as:
    - Final discharge point
    - Overflow points
    - Pumping stations
    - etc.

- Introduce a risk-based approach to set clear requirements to improve transparency, accountability and reduce the environmental impacts of planned releases through:
    - Notification
    - Mitigation measures
    - Monitoring
    - Additional reporting

NEW TIERED APPROACH BASED ON LEVEL OF RISK

Level of risk of a planned release is based on:

- Level of treatment of effluent
- Volume released
- Duration of bypass
- Whether releases are caused by precipitation
- Sensitive receiving environment

Category 1
Low Risk

- Small volume, short length of releases
- Generally some level of treatment
- Not released into sensitive receiving environments

Category 2
Medium Risk

- Standard volumes and lengths of release
- May or may not be treated
- If untreated, not released into sensitive receiving environment

Category 3
High Risk

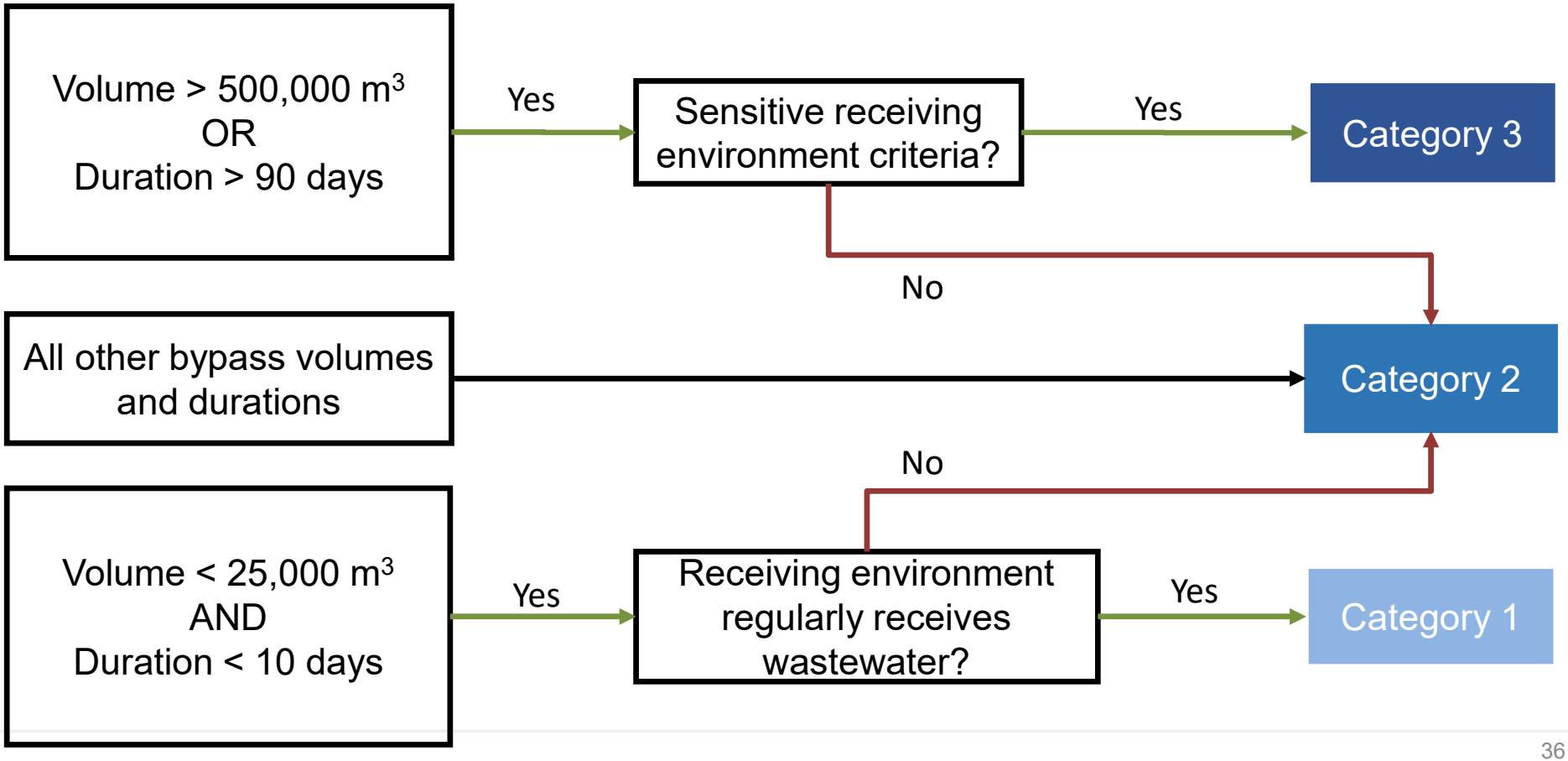
- Large volumes, long length of release, may be untreated
- Generally untreated or very large partially treated
- Could be released into sensitive receiving environment

HOW TO DETERMINE THE CATEGORY

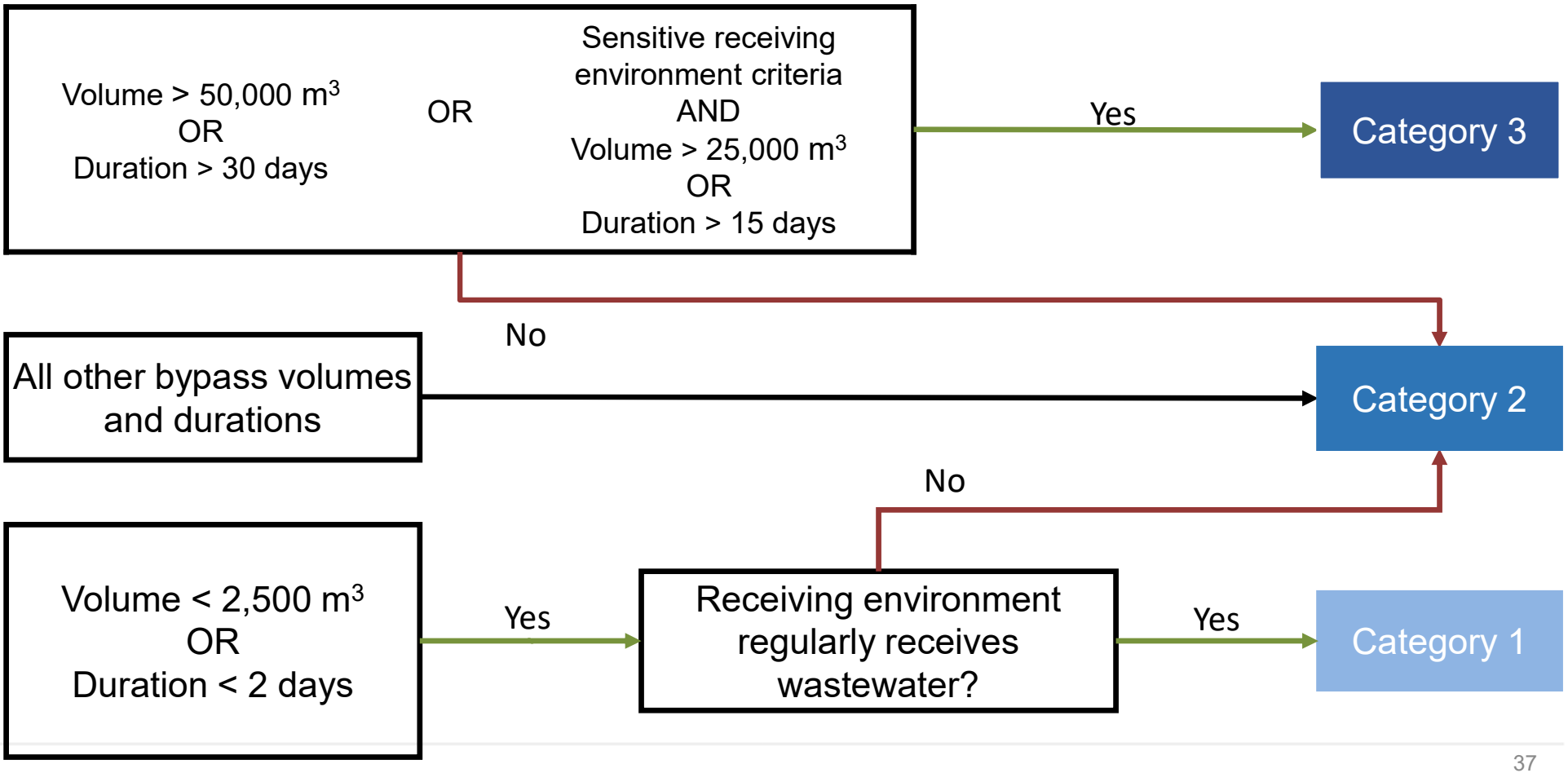
Three ways are proposed to determine the bypass category:

1. Effluent receives physical and/or biological treatment
   - Removal of CBOD and SS
   - Includes aerated lagoons, clarifiers, etc.
2. Effluent receives no treatment and/or pre-treatment
   - Removal of large solids, if any
   - Includes grinders, screens, etc.
3. Effluent released during the bypass is caused by precipitation events

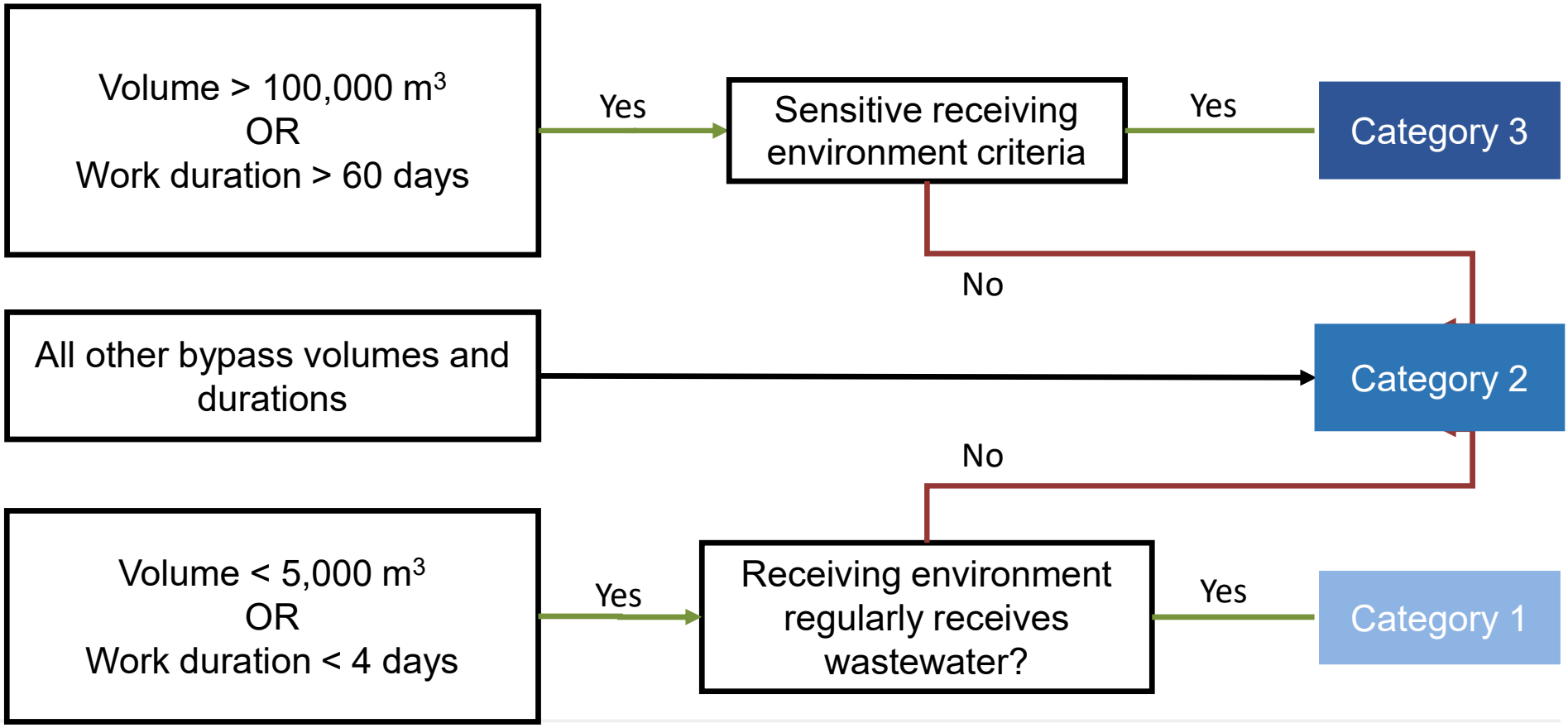
BYPASS WITH PHYSICAL TREATMENT AND/OR BIOLOGICAL TREATMENT



BYPASS WITH NO TREATMENT OR PRETREATMENT



BYPASS DEPENDENT ON PRECIPITATION



CRITERIA FOR SENSITIVE RECEIVING ENVIRONMENTS

	Receiving Environment	Criteria
1	Shellfish Harvesting Area	A shellfish harvesting area is within 1,500 m of where effluent is released during the bypass Shellfish Harvesting Area Classification in Canada
2	Critical Habitat	A critical habitat for protected aquatic species is within 500 m of where effluent is released during the bypass Critical Habitat in Canada: Critical Habitat of Species at Risk Map

APPLICATION REQUIREMENTS

The approach would require the owner/operator to meet different application requirements based on whether the bypass is low risk, medium risk, or high risk

Requirements prior to submitting an application (all categories):

- Shellfish Water Classification Program must be notified if bypassed effluent is released in marine waters or within a 20 km radius of such waters
- The public, and any community or Indigenous governing body must be notified if it is reasonably believed they could be affected by the bypass or may use the receiving environment before, during or after the bypass

Category 1	Category 2	Category 3
Streamlined process	Standard Process	Enhanced process
Low Risk	Medium Risk	High Risk

PROPOSED STREAMLINED PROCESS (CATEGORY 1)

Application must be made **at least 21 days before proposed bypass** and must include:

- Details about the planned bypass, such as:
  - Start and end date
  - Estimated duration and volume
  - Description of the treatment applied to the effluent prior to discharge and whether the bypass will be caused by precipitation
  - Location of point where bypass will occur
  - Description of the receiving water
- Explanation of why the bypass is necessary
- List of measures that will be taken to minimize the volume of effluent deposited and the concentration of pollutants, including timing considerations
- A description of notifications and of any engagements, including results

PROPOSED STANDARD PROCESS (CATEGORY 2)

Application must be made **at least 45 days before proposed bypass** and must include:

- All requirements from Category 1, as well as:
  - Expand on the list of measures taken to reduce environmental effects and provide more details
  - Explanation of how the bypass coincides with the plan to reduce large, untreated bypasses in the future, if required

PROPOSED ENHANCED PROCESS (CATEGORY 3)

Application must be made **at least 90 days before proposed bypass** and must include:

- All requirements from Categories 1 & 2, as well as:
  - Assessment of alternative methods to perform bypass, including their technical feasibility and cost estimates
  - Assessment of where effluent mixes with receiving waters. For example, a plume delineation study
  - Detailed description of monitoring and sampling that will be taken, including a detailed plan and schedule for monitoring before, during and after the bypass

APPLICATION REQUIREMENTS CONT'D

- Provide additional information, if requested
  - ECCC may request additional information from an applicant if the information is required to asses potential adverse effects of the bypass on fish, fish habitat or the use by man of fish
  - ECCC must specify in writing the information required and the timeline for providing it

PROPOSED CONDITIONS FOR TEMPORARY BYPASS AUTHORIZATION

- Notify ECCC immediately if information provided in the authorization is incorrect and provide corrections
- Comply with Sections 7 to 22 and 48 of the Regulations
- Send a follow-up report to ECCC within 90 days after the bypass has ended that contains:
  - Duration and volume of the release
  - Description of treatment applied to effluent
  - Description of how the mitigation measures were implemented
  - Results of monitoring conducted during the bypass (Category 3)
  - A confirmation of the existence of a publicly available plan to reduce large, untreated bypasses

NEXT STEPS

- ECCC invites all interested parties to review the amended regulations and provide feedback and comments
  - Comments can be submitted directly on the webpage
  - Comments will be made publicly available online to increase transparency
- Factsheets are available on our Consultations webpage
- 60-day consultation period ends July 26, 2023
- All comments and inputs provided during the Consultation phase will be considered in the drafting of the final amended regulations
- Publication in Canada Gazette Part II – targeting fall 2024

QUESTIONS?

PROPOSED
TA APPLICATION PROCESS

PROPOSED ELIGIBILITY CRITERIA

- A system would be eligible for a TA if it exceeded the effluent limits for CBOD and/or suspended solids in earlier years
  - One or both concentrations must be above the limit of 25 mg/L to proceed

- CBOD and SS averages must be determined over a 12-month period using the concentrations entered in the first monitoring report(s) submitted to ECCC in ERRIS
  - 1 report for annual reporters
  - 4 consecutive reports for quarterly reporters

- The 12-month period used to determine the average concentrations of CBOD and SS must be consecutive and within the first two years of reporting under the Regulations
  - Flexibility proposed for those consistently reporting in earliest years

ANNUAL REPORTERS

Annual reporters are owners or operators of either:

- an intermittent lagoon that discharges ≤ 17 500 m^3/day of effluent; or
- a continuously discharging lagoon that discharges ≤ 2 500 m^3/day of effluent

Applicants would need to use the concentrations from one report

	Number of days that effluent was deposited	Total volume of effluent deposited (m^3)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
Limit			*25mg/L*	*25mg/L*
Reporting Period				
January To December	58	220697.4	12.3	43.0

*Excerpt from ERRIS

These concentrations represent the CBOD and SS average concentrations over the 12-month period for the application

- These would be compared against effluent limits to determine if CBOD and/or SS exceed 25 mg/L

QUARTERLY REPORTERS

Quarterly reporters are owners or operators of either:

- an intermittent lagoon that discharges > 17 500 m^3/day of effluent;
- a continuously discharging lagoon that discharges > 2 500 m^3/day of effluent; or
- any other continuously discharging wastewater system (e.g. mechanical plants)

Applicants would need to use the concentrations from four consecutive reports

	Number of days that effluent was deposited	Total volume of effluent deposited (m^3)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
Limit			*25mg/L*	*25mg/L*
Reporting Period				
January To March	90	118725.0	59.0	29.0
April To June	91	114280.0	38.0	34.0
July To September	92	53001.0	92.0	38.0
October To December	92	104318.0	46.0	31.0

*Juxtaposition of excerpts from ERRIS

Concentrations reported in each four reports would be averaged together to determine the overall CBOD and SS concentrations over the 12-month period

- They would then be compared against effluent limits to determine if CBOD and/or SS exceed 25 mg/L

PROPOSED AMENDMENTS
ANNUAL REPORTER – EXAMPLE 1

- The regulatee reported two years in a row starting in 2014
  - The system failed to meet the effluent quality standards in both years

	Number of days that effluent was deposited	Total volume of effluent deposited (m^3)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
Limit				
Reporting Period				
2014 January To December	10	11600.0	15.5	28.0
2015 January To December	40	18000.0	10.0	40.0

The regulatee can use the data from either the year 2014 or 2015 in its TA application:

- the system exceeded the effluent quality standards in both years; and
- monitoring reports were submitted consecutively

Of note, it is not proposed that the regulatee could mix and match i.e., choosing the CBOD concentration of 2015 and SS concentration of 2014

PROPOSED AMENDMENTS
ANNUAL REPORTER – EXAMPLE 2

- The regulatee reported consecutively in 2013 and 2014:
  - The system exceeded effluent quality standards in one of the first two years of reporting

		Number of days that effluent was deposited	Total volume of effluent deposited (m^3)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit				
	Reporting Period				
2013	January To December	21	408110.0	5.4	10.8
2014	January To December	21	412500.0	2.7	58.3

The regulatee would only be allowed to use data from their 2014 monitoring report for the TA application

PROPOSED AMENDMENTS
ANNUAL REPORTER – EXAMPLE 3

- The regulatee reports every year since 2013
  - The system did not fail the effluent quality limits in its first two years of reporting

		Number of days that effluent was deposited	Total volume of effluent deposited (m³)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit				
	Reporting Period				
2013	January To December	100	672244.0	8.9	18.0
2014	January To December	124	456601.3	22.6	18.2
2015	January To December	102	639369.0	13.0	30.1

- The system is not eligible for a TA
  - the system did not exceed the effluent limits in the first two annual reports,
  - It does not matter the system exceeded the SS concentration in its third year

PROPOSED AMENDMENTS
ANNUAL REPORTER – EXAMPLE 4

- The regulatee reported in 2016
  - the system exceeded effluent limits
- The regulatee failed to submit a report in 2017 and resumed reporting in 2018
  - the system exceeded again

	Number of days that effluent was deposited	Total volume of effluent deposited (m^3)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
Limit			*25mg/L*	*25mg/L*
Reporting Period				
2016 January To December	28	110000.0	26.5	28.0
2017 January To December	Overdue	Overdue	Overdue	Overdue
2018 January To December	19	60000.0	35.7	25.0

- The regulatee would only be allowed to use data from the 2016 report
  - Since effluent was discharged in 2017 but no monitoring was conducted, it is considered a breach in reporting
  - The 2018 report cannot be used; it wasn't submitted consecutively

PROPOSED AMENDMENTS
ANNUAL REPORTER – EXAMPLE 5

- The system released effluent in 2013, did not discharge in 2014, and released again in 2015

		Number of days that effluent was deposited	Total volume of effluent deposited (m³)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit				
	Reporting Period				
2013	January To December	9	81584.0	18.0	35.0
2014	January To December	0	0	0	0
2015	January To December	13	173492.0	19.0	27.0

- The regulatee would be allowed to use data from reports submitted in either 2013 or 2015:
  - Since the system did not discharge in 2014, the regulatee can use the report from the following year (in this case, 2015) as it would be seen as consecutive

PROPOSED AMENDMENTS
QUARTERLY REPORTER – EXAMPLE 1

- The regulatee started reporting in April 2018 and submitted eight consecutive quarters in the first two years of reporting

		Number of days that effluent was deposited	Total volume of effluent deposited (m³)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit			*25mg/L*	*25mg/L*
	Reporting Period				
2018	April To June	46	5527.0	15.0	7.0
2018	July To September	92	9383.0	53.0	59.0
2018	October To December	92	45007.7	46.0	81.0
2019	January To March	90	35751.0	109.0	117.0
2019	April To June	91	33630.0	29.0	55.0
2019	July To September	92	17806.0	116.0	126.0
2019	October To December	92	36754.0	76.0	71.0
2020	January To March	91	29757.0	81.0	81.0

PROPOSED AMENDMENTS
HOW TO CALCULATE QUARTERLY AVERAGES

- 12-month overall CBOD and SS concentrations are calculated by averaging separately the concentrations of CBOD and SS reported across four consecutive monitoring reports

		Average CBOD (mg/L)
	Limit	*25mg/L*
	Reporting Period	
2018	April To June	15.0
	July To September	53.0
	October To December	46.0
	January To March	109.0
2019	April To June	29.0
	July To September	116.0
	October To December	76.0
2020	January To March	81.0

$$Av = \frac{(15+53+46+109)}{4} = 55.75 \text{ mg/L of CBOD}$$

PROPOSED AMENDMENTS
QUARTERLY AVERAGES

- The 12-month CBOD and SS averages are summarized in the table on the right

		Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit	*25mg/L*	*25mg/L*
	Reporting Period		
2018	April To June	15.0	7.0
	July To September	53.0	59.0
	October To December	46.0	81.0
2019	January To March	109.0	117.0
	April To June	29.0	55.0
	July To September	116.0	126.0
	October To December	76.0	71.0
2020	January To March	81.0	81.0

12-month period	CBOD average* (mg/L)	SS average* (mg/L)
Apr 18 to Mar 19	55.75	66.00
July 18 to June 19	59.25	78.00
Oct 18 to Sep 19	75.00	94.75
Jan 19 to Dec 19	82.50	92.25
Apr 19 to Mar 20	75.50	83.25

* marked in red above to show conc. above limit

- the regulatee can select the monitoring data from any 12-month period in the first two years of reporting (all exceed limits):
  - Selecting four consecutive quarters within these eight consecutive monitoring reports

PROPOSED AMENDMENTS
QUARTERLY REPORTER – EXAMPLE 2

- The regulatee started reporting on April 2019
  - submitted eight consecutive quarters in the first two years of reporting
  - CBOD and SS concentrations are sometimes exceeding effluent limits

	Reporting Period	Number of days that effluent was deposited	Total volume of effluent deposited (m^3)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit			*25mg/L*	*25mg/L*
2015	October To December	80	30064.0	171.0	224.0
2016	January To March	91	127396.0	69.0	98.0
	April To June	91	90275.0	4.0	20.0
	July To September	92	79792.0	4.0	20.0
	October To December	92	46473.0	20.0	25.0
2017	January To March	90	15572.0	24.0	15.0
	April To June	91	190800.0	20.0	35.0
	July To September	92	60924.0	37.0	44.0

12-month period	CBOD average* (mg/L)	SS average* (mg/L)
Oct 15 to Sep 16	62.00	90.50
Jan 16 to Dec 16	24.25	40.75
Apr 16 to Mar 17	13.00	20.00
July 16 to June 17	17.00	23.75
Oct 16 to Sep 17	25.25	29.75

* marked in red above to show conc. above limit

- the regulatee can select the data from the 12-month period (four consecutive quarters) where the overall average concentration of CBOD and/or SS is over 25 mg/L

PROPOSED AMENDMENTS
QUARTERLY REPORTER – EXAMPLE 3

- The regulatee failed to submit monitoring reports for eight consecutive quarters

	Limit	Number of days that effluent was deposited	Total volume of effluent deposited (m³)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Reporting Period				
2013	July To September	92	634800.0	0	21.0
	October To December	92	634800.0	14.0	41.0
2014	January To March	90	621000.0	14.0	41.0
	April To June	91	627900.0	19.7	33.3
	July To September	92	634800.0	28.0	19.3
	October To December	92	634800.0	26.0	33.0
2015	January To March	Overdue	Overdue	Overdue	Overdue
	April To June	Overdue	Overdue	Overdue	Overdue
	July To September	Overdue	Overdue	Overdue	Overdue
	October To December	92	634800.0	38.0	30.0

12-month period	CBOD average* (mg/L)	SS average* (mg/L)
July 13 to June 14	11.93	34.08
Oct 13 to Sep 14	18.93	33.65
Jan 14 to Dec 14	21.93	31.65
Apr 14 to Mar 15	Not eligible	Not eligible
July 14 to June 15	Not eligible	Not eligible

* marked in red above to show conc. above limit

- The regulatee will be allowed to use the monitoring reports from any 12-month period between July 2013 to December 2014
  - SS average concentration exceed 25 mg/L in all three instances
  - Not allowed to use reports from the last quarter of 2015 onwards since these reports were not submitted consecutively

PROPOSED AMENDMENTS
QUARTERLY REPORTER – EXAMPLE 4

- The regulatee submitted two incomplete* reports prior to submitting eight consecutive reports, starting in October 2015
  - Incomplete reports can be discarded; still maintains the flexibility of chosing in the first 2 years of reporting

	Reporting Period	Number of days that effluent was deposited	Total volume of effluent deposited (m³)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
	Limit			*25mg/L*	*25mg/L*
2015	April To June	91	83114.0	0	0
	July To September	92	6228.0	0	0
	October To December	92	20046.0	88.0	207.0
2016	January To March	91	92212.0	83.0	74.0
	April To June	91	92777.0	46.0	51.0
	July To September	92	92435.0	41.0	74.0
	October To December	92	106093.0	31.0	17.0
2017	January To March	90	18201.0	8.0	10.0
	April To June	91	9520.0	26.0	43.0
	July To September	92	92435.0	41.0	74.0

12-month period	CBOD average* (mg/L)	SS average* (mg/L)
Apr 15 to Mar 16	Discard	Discard
July 15 to June 16	Discard	Discard
Oct 15 to Sep 16	64.50	101.50
Jan 16 to Dec 16	50.25	54.00
Apr 16 to Mar 17	31.50	38.00
July 16 to June 17	26.50	36.00
Oct 16 to Sep 17	26.50	36.00

**An incomplete is a report that contains unusable or missing data. This includes volume, CBOD concentration and SS concentration*

PROPOSED AMENDMENTS
QUARTERLY REPORTER – EXAMPLE 5

- The regulatee has only recently begun monitoring
  - has only three consecutive reports

	Number of days that effluent was deposited	Total volume of effluent deposited (m³)	Average CBOD (mg/L)	Average concentration of suspended solids (mg/L)
Limit			*25mg/L*	*25mg/L*
Reporting Period				
2022 July To September	92	8802.0	158.0	124.0
2022 October To December	92	14352.0	67.0	62.0
2023 January To March	90	17680.0	100.0	38.0

- the regulatee does not have enough consecutive reports to calculate the averages
  - will have to wait at least one more quarter before being allowed to calculate the averages and determine eligibility
  - may also choose to wait an additional four consecutive quarters to have more flexibility in the data chosen for the application

ANNEX

MORE INFORMATION ON THE WSER

- Additional information may also be obtained on the Canada.ca website: https://www.canada.ca/wastewater
- WSER sampling guidance
- WSER videos on compliance and reporting
- Unauthorized deposits factsheet

SAMPLING – INTERMITTENT SYSTEM

Annual Average Daily Volume (m^3)	**100 to ≤ 2,500**	**> 2,500 to ≤ 17,500**	**> 17,500 to ≤ 50,000**	**> 50,000**
CBOD/SS* (mg/L)	annual average ≤ 25	annual average ≤ 25	monthly average ≤ 25	monthly average ≤ 25
Sampling frequency**	•once per discharge period	•once per discharge period	•once per discharge period	•once per discharge period
Reporting Frequency	•annually	•annually	•quarterly	•quarterly

* A SS exemption is in place for results exceeding 25 mg/L in warmer months to account for algea
**If discharge period > 30 days: every 2 weeks but at least 7 days after any other sample

SAMPLING – CONTINUOUS HRT ≥ 5 DAYS

Annual Average Daily Volume (m^3)	**100 to ≤ 2,500**	**> 2,500 to ≤ 17,500**	**> 17,500 to ≤ 50,000**	**> 50,000**
CBOD/SS* (mg/L)	annual average ≤ 25	quarterly average ≤ 25	monthly average ≤ 25	monthly average ≤ 25
Sampling frequency	•quarterly	•every two weeks	•weekly	•3 days per week
Reporting Frequency	•annually	•quarterly	•quarterly	•quarterly

* A SS exemption is in place for results exceeding 25 mg/L in warmer months to account for algea

SAMPLING – CONTINUOUS SYSTEM*

Annual Average Daily Volume (m^3)	**100 to ≤ 2,500**	**> 2,500 to ≤ 17,500**	**> 17,500 to ≤ 50,000**	**> 50,000**
CBOD/SS (mg/L)	quarterly average ≤ 25	quarterly average ≤ 25	monthly average ≤ 25	monthly average ≤ 25
Sampling frequency	monthly	every 2 weeks	weekly	3 days per week
Reporting Frequency	quarterly	quarterly	quarterly	quarterly

* Includes raw sewage outfalls