

Proposed Modernization of the *Pulp and Paper Effluent Regulations* – Consultation Document

1.0 Purpose

Environment and Climate Change Canada is proposing to modernize the *Pulp and Paper Effluent Regulations* (PPER) that came into force in 1992 pursuant to the *Fisheries Act*. The purpose of this consultation document is to inform interested parties of the key areas in the regulations where the Department sees the need for modernization and to seek feedback on these areas. Interested parties may comment in writing by mail or e-mail (see Section 5 for details) until November 17, 2017.

2.0 *Pulp and Paper Effluent Regulations* and need for modernization

The PPER apply to all pulp and paper mills in Canada. The purpose of the PPER is to manage threats to fish, fish habitat, and human health from fish consumption by limiting the deposit of deleterious substances into fish bearing waters from pulp and paper mills. The PPER set limits on the amounts of biochemical oxygen demand (BOD) matter and suspended solids (SS) that may be deposited by mills, and prohibit deposits of effluents that are acutely lethal to fish. The PPER also require pulp and paper mills to conduct environmental effects monitoring (EEM) studies to identify and investigate potential effects of mill effluent on fish, fish habitat, and the use of fisheries resources on a site specific basis.

Significant improvements in the quality of the effluent from pulp and paper mills have been achieved since the PPER were first published in 1971. The level of compliance with limits and conditions has been high. In 2015, there were 77 mills depositing effluent directly to water. Effluent samples from these mills were compliant with BOD and SS limits 99.9 percent of the time, and were non-acutely lethal to fish 97.6% of the time.

EEM studies have shown¹ that the effluents from 70% of pulp and paper mills are impacting fish and/or fish habitat and the impacts at 55% of these mills are indicative of a higher risk to the environment. There are currently only two mills with reported impacts on the usability of fish resources by humans². Studies investigating the causes and solutions for the impacts observed indicate that a reduction of organic loadings in effluent may reduce these impacts.

The pulp and paper industry is undergoing a major change, known as biotransformation that involves the diversification of products being made from wood. Investments are being made to diversify products from traditional products to new bio-products including bio-fuels, bio-chemicals and nanomaterial from

¹ National Assessment reports are located at <https://www.ec.gc.ca/eseeeem/default.asp?lang=En&n=4866BC23-1>

² The level of dioxin and furans in fish tissue is used to assess the usability of fisheries resources.

wood. These new processes can be integrated into existing pulp and paper mills or as new stand-alone facilities. The PPER's current effluent quality standard only applies to the production of traditional pulp and paper products. Stand-alone bio-product facilities may not be covered under the PPER which would make them subject to the general prohibition under the *Fisheries Act*. The application of different standards to these facilities could create regulatory uncertainty for the industry.

Results from EEM studies and the changing realities of the pulp and paper industry indicate a need to modernize the PPER to improve environmental protection and enable the biotransformation of the sector. In addition, the administration of the PPER over the last 25 years has shown that some provisions could be improved and in some areas the compliance and regulatory burden could be reduced.

Further information on the status of the PPER can be obtained in the [Status Report on the Pulp and Paper Effluent Regulations](#)³ and from the [Environmental Indicators for Managing Pulp and Paper Effluent Quality in Canada](#)⁴. Further information on EEM including National Assessment reports can be found on the Department's [EEM website](#)⁵.

3.0 Proposed areas for modernization⁶

The Department is seeking comments and suggestions on four key areas where changes are being proposed:

1. Environmental protection measures
2. Scope of the regulations
3. Administrative improvements
4. Compliance and administrative requirements

3.1 Environmental protection measures

The Department is proposing to review the current regulatory limits for deleterious substances and determine whether they are appropriate and if new deleterious substances should be added. The Department is considering the following changes:

³ Website is located at <http://publications.gc.ca/site/eng/9.696144/publication.html>

⁴ Website is located at <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=E20C2E23-1>

⁵ Website is located at: <https://www.ec.gc.ca/esee-eem/default.asp?lang=En&n=4B14FBC1-1>

⁶ Please note that this consultation document is not meant to outline all of the changes that may arise if the PPER are amended. A second round of consultation will provide detailed proposed changes; and a third round of consultation will occur when the proposed amendments will be published in *Canada Gazette*, Part I.

- reducing the maximum allowable BOD and SS discharge limits given the link between organic loading and effects on fish and fish habitat identified through EEM studies;
- setting allowable discharge limits for phosphorus and nitrogen to mitigate nutrient enrichment;
- limiting temperature of effluents to prohibit mills from discharging hot water directly in fish bearing waters;
- setting allowable discharge limits for chemical oxygen demand (COD) given that less biodegradable organic materials are not measured by BOD; and
- setting an allowable pH range to ensure effluents are not too alkaline or acidic.

3.2 Scope of the Regulations

The Department is considering a review of the scope of the PPER to provide regulatory certainty for mills undergoing biotransformation. The Department is requesting feedback on:

- which products or processes to capture within the scope of the PPER
- limits for SS and BOD and how to harmonize these limits with those for traditional products
- whether new deleterious substances, such as phosphorus and nitrogen, for bio-products should be included within the scope of the PPER and how should these limits be determined

3.3 Administrative Improvements

The Department is considering addressing various operational issues that have arisen during the course of administering the PPER.

3.3.1 New provisions for closing or idling mills

All pulp and paper mills that meet the definition of a “mill” under the PPER are subject to these regulations. There are currently no specific requirements in the PPER relating to the closure or idling of a mill.

3.3.1a Closure of mills

The Department is considering adding provisions to clarify the requirements for the process of closing a mill:

- providing closed mills with an authority to deposit deleterious substances for a specified period to facilitate the decommissioning process
- adding closure notification requirements and other transitional measures

3.3.1b Idling of mills

The Department is considering clarifying how to determine the reference production rate for mills that have not produced pulp or paper for a period greater than three years.

3.3.2 Improvements to EEM requirements

Changes to improve the efficiency and efficacy of EEM requirements are being considered. The Department is considering the incorporation of the critical effect

sizes (CES), currently described in EEM technical guidance, as criteria for determining when investigation studies are required. The CES, which are based on the size of effects on fish or fish habitat, will focus investigation study efforts where EEM results indicate a potential higher risk to the environment

3.4 Compliance and administrative requirements

The Department is considering more efficient sampling and reporting requirements to reduce compliance and administrative requirements.

3.4.1 Reporting frequency for monitoring results and production information

Currently mills are required to submit monitoring results and production information on a monthly basis. The Department is considering reducing this reporting frequency to a quarterly basis.

3.4.2 Frequency of monitoring acute lethality, SS and *Daphnia magna*

The Department is considering reducing, where feasible, the frequency of monitoring for acute lethality responses of rainbow trout, SS, and *Daphnia magna* to align with the more recent *Fisheries Act* Regulations.

4.0 Next Steps

The key targets for regulatory development are outlined below:

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| November 2017 | Interested parties are welcome to provide feedback on this document until November 17, 2017 (refer to information below). |
| Fall 2017-fall 2018 | Develop a modernization proposal in discussion with interested parties. |
| Winter 2019 | Consultations on the detailed proposal will be held with interested parties. |
| Target date: 2019 | Publication of the proposed amendments to the PPER in the <i>Canada Gazette</i> Part I for a 60-day comment period. |
| Target date : 2021 | Publication of the final version of the PPER in the <i>Canada Gazette</i> Part II |

5.0 Providing Feedback

We would like to invite all interested parties to provide comments and proposals to modernize the PPER. Please send your comments in writing by November 17, 2017.

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