CITY OF MISSION

STAFF REPORT

To: Chief Administrative Officer **Date:** June 2, 2025

From: Kyle D'Appolonia, Environmental Coordinator

Subject: **Sewer Bylaw Amendments for Regulation of Excessive Turbidity**

Recommendation(s)

That Council grant first, second, and third reading to amend the Sewer Bylaw 5033-2009 as described within the report from the Environmental Coordinator dated June 2, 2025.

Purpose

The purpose of this report is to provide background context and a summary of recommended amendments and additions to the Sewer Bylaw 5033-2009. These revisions are necessary to establish limits and prohibit the discharge of excessive turbidity to storm sewers and watercourses. This is in support of the relevant readings being done as part of the "Bylaws for Consideration" section of the agenda.

Background

The Sewer Bylaw 5033-2009 contains an extensive list of "prohibited" and "restricted" wastes that are not permitted to be discharged into a storm sewer or watercourse. However, these wastes do not specify limits for turbidity, which is often the most common pollutant discharged from development sites. Failure to adequately phase construction or implement erosion and sediment controls can result in sediment laden runoff. This runoff typically enters fish habitat, either directly or indirectly via the storm sewer.

Elevated suspended solids negatively impact fish by reducing visibility (and their ability to find food), clogging gills, and potentially smothering eggs. In addition, sediment accumulation within the storm sewer and watercourses increases flood risks and increases maintenance cost and frequency at the burden of the City. Erosion and Sediment Control (ESC) measures are thoroughly integrated into industry best management practices. Section 4.1.5 of the Development and Subdivision Control Bylaw 5650-2017, pertains to ESC and states that development must be "completed in such a way that prevents sedimentation of watercourses and is compliant with the City's Sewer Bylaw 5003-2009". However, it has proven to be difficult to hold developers accountable when there is noncompliance or deficiencies since Sewer Bylaw 5003-2009 does not specify discharge limits for turbidity. To ensure development sites within Mission are utilizing effective ESC mitigation measures, staff have determined that the ability to fine non-compliant sites is necessary. In addition, the City could be liable to senior government agencies should sediment laden effluent from the municipal storm sewer result in the death of fish. As such, it is critical that we implement controls over what enters the drainage system.

Turbidity discharge standards are typically cited in watercourse protection or ESC bylaws. Given the existing bylaw framework in Mission, it would be most efficient to include it in the Sewer Bylaw 5033-2009, as a Restricted Waste. This strategy would not require further amendments to the Ticket Information Bylaw 2646-1993, as the discharge of a Restricted Waste is already subject to a $500 fine. An additional amendment is proposed to refine the definition of a pH waste, to ensure that it is not limited to discharge to the sanitary sewer. This is being added as

concrete wastewater is high in pH and is often discharged by contractors retained by builders and developers. Further, two new definitions are suggested to clarify turbidity and the unit by which it is measured.

Discussion and Analysis

To establish discharge limits for turbidity under normal conditions and during periods of significant rainfall (refer to Attachment A) the following amendments and additions are proposed, in general accordance with the table below.

Section	Type	Amendment
Schedule F 2. pH Waste	Amend	Revise entire section to: *"Any Wastewater or sediment, earth, construction or excavation wastes, cements, concrete, or other substances, which when mixed with water, having a pH value outside the range of 5.5 to 9.0; or with any other corrosive property that reasonably could be hazardous to the environment, structures, equipment, or persons such as, but not limited to, battery or plating acid and Wastes, copper sulphate, chromium salts and compounds, or salt brine."*
Schedule F New section	Add	Add new section for "Excessive Turbidity Waste" following pH Waste as follows: *"Any Wastewater or runoff that has a Turbidity exceeding 25 NTU at any time; or 100 NTU when the site from which the Wastewater or runoff originates has received at least 25 mm of rain within the last 24 hours, where it is measured at the immediate point of Discharge into the Storm Sewer or Watercourse."*
Definitions	Add	Add the following definitions: ***"NTU"*** *means Nephelometric Turbidity Unit, a standard unit measure of water Turbidity.* ***"Turbidity"*** *means a measure of the lack of clarity or degree of transparency of water caused by inorganic and organic suspended or dissolved substances. Turbidity values are generally reported in Nephelometric Turbidity Units (NTU).*

Financial Implications

Financial implications are anticipated to be marginal. City staff are already responding to complaints pertaining to sediment laden runoff. As such, staff resources are already expended with minimal repercussions to offenders, with the City often relying on senior levels of government to take any action.

Limited tools are currently available to staff to address sediment laden runoff from sites in Mission. If staff recommendations are approved, the City could impose daily fines for discharge exceeding the established limit. The City already owns several turbidity meters, one of which is dedicated to Environmental Services, and can be used to monitor compliance with this amended bylaw.

Communication

A dedicated webpage for “Water Quality” will be added to the City’s Environment & Sustainability homepage. As indicated, these amendments align with the majority of municipalities in the lower mainland and industry best management practices. Developers and builders should already be accustomed to operating within these discharge limits; however, this amendment will be conveyed to the Development Liaison Committee (DLC) during the next meeting. An information email will also be sent to builders and developers in Mission should the amendments be adopted.

Summary and Conclusion

To protect fish and storm sewer assets, discharge limits for turbidity and pH waste are proposed by means of an addition to Schedule F of the Sewer Bylaw 5033-2009.

Report Prepared by: Kyle D’Appolonia, Environmental Coordinator

Reviewed by: Erin Blaney, Manager of Environmental Services

Approved for Inclusion: Mike Younie, Chief Administrative Officer

Attachment(s)

Attachment A: 6366-2025-5033(8) Sewer Amending (Excessive Turbidity)