

Appendix 2 – Background for Compliance Challenges, Engineering Consulting Services, and Other Pertinent Reports

Compliance Challenges

The Niagara Falls WWTP has experience compliance challenges due to the degradation of existing treatment equipment which has resulted in the MECP issuing two (2) Provincial Officer Orders to the Niagara Region, two (2) written warnings from Environment and Climate Change Canada (ECCC), and a number of non-compliances/exceedances for both Provincial MECP Environmental Compliance Approvals (74 in total) and Federal Wastewater System Effluent Regulation (53 in total) from 2018 to 2024.

The poor effluent quality is a direct result of secondary treatment equipment at the plant that has passed its useful life expectancy. This results in frequent breakdowns and equipment out-of-service regularly and impacts the plant's ability to remove pollutants effectively. Despite ongoing repair and maintenance efforts, treatment efficiency was reduced by an average of 30% in 2024 due to the state of deterioration of the secondary treatment process.

Staff have been working hard to remain in compliance with all applicable regulations and work co-operatively with regulatory authorities. Degradation of existing treatment equipment has hindered staff's ability to meet regulatory requirements at the Niagara Falls WWTP. The following actions have been completed or are currently underway to address the range of exceedances at the Niagara Falls WWTP:

- A capital project is underway to replace the secondary treatment process. The new equipment is anticipated to come online by mid-2025.
- Maintenance efforts will continue to support the existing secondary treatment equipment to the extent possible.
- A polymer is being added in the primary and secondary clarifiers to optimize settling of solids and TSS removal.
- Hauled sewage receiving has been restricted to domestic sewage from sources within the City of Niagara Falls boundaries only. Specifically, barring winery waste helps to reduce CBOD and TSS loading to the facility.
- Increase sewershed monitoring activities to identify any additional pollutant loading to the facility.

Engineering Consulting Services

- Environmental Infrastructure Solutions as retained through a competitive bid process 2019-RFP-239 and awarded detailed design and tendering of the Niagara Falls Wastewater Treatment Plant Secondary Treatment and Digester Upgrades-Phase 1 Design and Phase 2 Sludge Handling and Storage (Provisional) on October 22, 2019.
- Subsequently EIS was awarded Phase 1 Secondary Treatment Construction and Inspection Services.
- The original contract competitively bid and awarded to EIS totalled \$2,450,725 (excluding HST) and was subsequently increased by \$991,221 (excluding HST) between September 2020 and December 2020 pursuant to the Procurement By-Law Section 18(a)(i) and Schedule B.
- Additional contract administration and inspection work by EIS of \$350,000 (excluding HST) was approved by Council in September 2022 via PW 38-2022 as a single source purchase pursuant to the Procurement By-Law Section 18(a)(i) and Schedule B, which required Council approval given the cumulative value of additional work associated with the contract exceeded \$1,000,000.
- Phase 1 of the upgrades involves replacing the existing Rotating Biological Contactors and other liquid treatment processes that will improve the NFWWTP performance and effluent quality with construction beginning in April 2022.
- Additional solids treatment capacity are required to support the liquid treatment upgrades; as such, Phase 2 works will increase the capacity, efficiency, and reliability of the existing solids management process. Phase 2 upgrades are currently in design.

Other Pertinent Reports

[PW 9-2023 Niagara Falls Wastewater Treatment Plant Secondary Upgrades Project Green Municipal Funding Update](#)

(<https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=4ba16d6b-1c45-4514-8372-f02f6bd2e6c5&Agenda=Merged&lang=English&Item=17&Tab=attachments>)

[PW 38-2022 Asbestos Remediation Associated with the Niagara Falls Wastewater Plant Secondary Treatment Upgrades](#)

(<https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=a9972d29-13ff-4e8f-9318-aeae86a746cc&Agenda=Agenda&lang=English&Item=21&Tab=attachments>)

[PW 53-2021 Niagara Falls Wastewater Treatment Plant Secondary Treatment Upgrades Contract Award](#)

(<https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=b17015c6-f064-4a98-9663-96710d69cc3c&Agenda=Merged&lang=English&Item=16&Tab=attachments>)

[CWCD 2024-16 Communication to Owner Niagara Falls WWTP Non-Compliance](#)

(<https://www.niagararegion.ca/council/Council%20Documents/2024/council-correspondence-dec-20-2024.pdf>)