



May | 2026

Wastewater Management System

– National Standard of Canada

Contact:

Jeff Menard

Program Manager, Standards – Natural Resources

CSA Group

T: 289.962.0737

E: jeff.menard@csagroup.org

The information in this Proposal (which includes all related appendices and attachments) is supplied in explicit expectation of confidentiality. Disclosure of this document or any of its contents could result in significant harm to the competitive position or interfere significantly with the negotiating position of CSA Group, or could result in undue financial loss, or undue financial gain, to other persons or organizations in competition with CSA Group.

Table of Contents

Executive Summary	1
Project Overview	2
Background	2
Objectives	3
Scope	3
Relevant Works	4
Proposed Methodology and Workplan	5
Methodology	5
Assumptions	6
Proposed Work Plan	6
Pre-Committee	6
Content development	7
Enquiry and editing	8
Approval	8
Publication	9
Maintenance	9
View Access	10
Project Budget and Schedule	10
Project Budget	10
Project Schedule	10
Offer of Service	11

Executive Summary

Canadian Standards Association, operating as CSA Group, is a not-for-profit organization. Our mission is to enhance the lives of Canadians through the advancement of standards in the public and private sectors. We are a leader in standards research, development, education, and advocacy. The technical and management standards developed with our more than 11,000 members improve safety, health, the environment, and economic efficiency in Canada and beyond.

Building on CSA W217:25 *Ontario wastewater management system*, CSA Group proposes to develop a new National Standard of Canada (NSC), to extend this Ontario framework nationwide. Published in 2025, CSA W217 establishes a structured, risk-based wastewater management system (WWMS) requirements that support consistent, defensible, and transparent operations through the application of management system principles tailored specifically to the wastewater sector.

The project will use CSA W217's technical foundation and operating principles as the seed document and starting point for a new NSC. The new NSC will assist wastewater owners and operators with strengthened management practices that include environmental, social, and governance performance. The NSC will support national alignment and proactive management through documented planning, risk assessment, asset life-cycle practices, emergency preparedness, performance monitoring, and continual improvement.

The proposed new NSC will follow the Plan-Do-Check-Act (PDCA) cycle as does the CSA W217, as well as aligning with ISO 9001 (quality management), ISO 14001 (environmental management), and ISO 31000 (risk management) international standards. This approach supports integration into existing governance frameworks and reduces burdens in both duplication and implementation. Furthermore, the project will draw on proven practices, and Ontario leadership, which will reduce implementation efforts – particularly for small and medium-sized municipalities – and improve national consistency in wastewater management.

CSA Group proposes a 20-month project schedule, to commence September 2026, with a completion date of May 2028. The enclosed proposal provides an overview of the project methodology, schedule and proposed costs associated with the project. In addition, project details, assumptions and highlights of CSA Group's ability and commitment to complete the proposed work are provided.

The total value of the proposed project as outlined is \$179,525 CAD, which includes no-fee view access of the resulting National Standard of Canada for the life of the first edition.

Project Overview

Background

Following the 2000 Walkerton water quality crisis, Ontario implemented the Drinking Water Quality Management Standard (DWQMS), establishing a risk-based and preventative management framework for drinking water systems. The success of DWQMS, and its subsequent codification within Ontario regulation, demonstrated the value of structured management systems in improving public health protection, regulatory compliance, and public confidence.

In the wastewater sector, similar drivers exist. Wastewater systems manage complex inputs – including sanitary sewage, combined flows, inflow and infiltration, rainfall-derived flows, and hauled waste – and produce outputs that directly affect human health and the receiving environment, such as treated effluent, biosolids, odours, air emissions, and residual discharges. Despite this complexity and risk profile, wastewater management practices across Canada remain fragmented and uneven.

CSA W217:25 *Ontario wastewater management system* standard was developed in response to this gap. It reflects a growing trend among larger municipalities to implement wastewater management systems, while recognizing that the cost and effort of developing standalone systems can be prohibitive for small and medium-sized organizations. CSA W217 provides a sector-specific, scalable framework that defines requirements for the quality and environmental management of wastewater systems through a risk-based decision-making process.

Extensive academic research and operational experience show that management system standards improve due diligence, reduce regulatory and liability risks, support infrastructure renewal and lifecycle planning, and incentivize continual performance improvement. By grounding wastewater management in a structured system that integrates risk assessment, asset management, and emergency preparedness, CSA W217 supports consistent, defensible, and transparent decision-making.

The proposed project builds directly on this foundation, using CSA W217 as the technical and conceptual baseline to further advance harmonized wastewater management practices.

Objectives

The primary objective of the proposed project is to build upon CSA W217 to support the broader adoption of consistent, risk-based wastewater management systems that enhance environmental protection, public health, and system resilience.

Specifically, the objectives are to:

- Promote increased consistency in wastewater operational practices and management processes, leading to more reliable compliance outcomes;
- Strengthen environmental protection through systematic identification, assessment, and control of quality and environmental risks;
- Reduce the likelihood and impact of regulatory non-compliance, enforcement actions, and environmental incidents;
- Reduce risks to public health, property, and community well-being associated with wastewater system failures;
- Improve preparedness for regulatory inspections through documented procedures and performance monitoring;
- Align wastewater operations with asset management best practices, supporting infrastructure maintenance, rehabilitation, renewal, and lifecycle planning;
- Harmonize wastewater system management practices with those established in the drinking water sector through DWQMS-inspired principles;
- Enhance public confidence in wastewater system governance, transparency, and long-term sustainability;
- Improve resilience to hazardous events, including flooding, spills, service interruptions, and climate change impacts.

These objectives are consistent with the intended outcomes and operating principles of CSA W217 and are designed to support organizations of varying size, capacity, and governance structure.

Scope

The development of the NSC will be managed by CSA Group utilizing a balanced committee of subject matter experts from relevant industry, government, and wastewater interests. The scope of the proposed project reflects and is grounded in the scope established under CSA W217. It is focused on the operation, management, and maintenance of wastewater systems, from initial commissioning through to the cessation of operations.

The scope encompasses the core operational processes of wastewater systems, including:

- Wastewater collection and conveyance;
- Wastewater treatment;
- Biosolids management and other emissions management.

These operational processes consider system inputs – such as sanitary sewer flows, combined sewer flows, inflow and infiltration, rainfall-derived flows, surface spills, and hauled waste – and system outputs, including treated effluent discharged to the environment, treatment residuals, biosolids, odours, and air emissions.

The development of the NSC will be accomplished through CSA Group’s accredited standards development process. The respective content development of the standard will involve convening of the committee from across Canada to set the base requirements. While it will ultimately be the responsibility of the Committee to determine and confirm the scope of the developed standard, in support of these operational processes, the scope could include integrated management system elements grouped into three functional areas:

- **Operational support**, including compliance management, emergency management, monitoring, and performance measurement;
- **Infrastructure renewal**, including asset planning, inspection and maintenance, condition assessment, renewal, replacement, and lifecycle management;
- **Business and governance support**, including risk management, personnel training and competency, internal audit, management review, and continual improvement.

The proposed project will maintain this clear, defensible scope while enabling application by a broad range of wastewater system owners and operating authorities, consistent with legislative and regulatory frameworks.

Relevant Works

As a focused strategic priority, CSA Group’s Natural Resources standards program has been actively working to develop National Standards of Canada (along with other standards products) to support climate adaptation, flood mitigation, natural and nature-based solutions, erosion and sediment control, and natural assets.

The projects listed below were developed with input from a multitude of technical subject matter experts from across Canada, participating in the research and standards development process as CSA Group members. Through our work, CSA Group has

correspondingly built a robust membership of subject matter experts who have served to develop, manage, and pioneer standards solutions on a variety of topics.

Standards

- [CSA W217:25](#) *Ontario wastewater management system*
- [CSA W211:21](#) *Management standard for stormwater systems*
- [CSA S503:20](#) *Community drainage planning, design, and maintenance in northern communities*
- [CSA W200:18 \(R2023\)](#) *Design of bioretention systems*
- [CSA W201:18 \(R2023\)](#) *Construction of bioretention systems*
- [CAN/CSA-W202-18 \(R2023\)](#) *Erosion and sediment control inspection and monitoring*
- [CSA W205:19](#) *Erosion and sedimentation management for northern community infrastructure*
- [CSA W208:20](#) *Erosion and sediment control installation and maintenance*
- [CSA W210:21](#) *Prioritization of flood risk in existing communities*
- [CSA W218:23](#) *Specifications for natural asset inventories*
- [CSA W224:24](#) *Coastal flood risk assessment for building and infrastructure*
- [CSA W231:25](#) *Developing and interpreting intensity-duration-frequency (IDF) under a changing climate*

Research

- [Managing flooding and erosion at the watershed scale: guidance to support governments using nature-based solutions](#)
- [Future innovation for stormwater management](#)
- [Nature-based solutions for coastal and riverine flood and erosion risk management](#)
- [Turbidity monitoring: addressing gaps for erosion and sediment control in Canada](#)

Proposed Methodology and Workplan

Methodology

To develop the proposed National Standard of Canada (NSC) CSA Group will employ its accredited standards development process, establishing a suitable Committee of technical subject matter experts to accommodate the consensus-based process. Utilizing the CSA W217 standard as the base document, the Committee will work to develop a draft

standard which will be edited, translated, and circulated for public review before proceeding to the respective Technical Committee for final review and formal approval. Once approved the draft standard will be published in both English and French as a NSC by CSA Group.

Assumptions

This proposal is based on the following assumptions, inclusions and limitations:

- Signed contract to be in place prior to project commencement
- The decisions of the respective committee(s) on project initiation, content, approval, and related timing are beyond the control of CSA Group and as such are estimates only
- A technical sub-committee (TSC) of 10 to 20 members of subject matter experts is to be established
- The TSC will report to the established CSA Group Technical Committee (TC) on Community water – drinking, storm, & waste, membership of which is to be supplemented with additional subject matter expertise as required
- The target publication date is based on achieving consensus amongst the members of the committee(s)
- The standard is estimated to be 30 to 50 pages in length
- There may be as many as 10 committee meetings, held virtually, for development and approval of content with no in-person meetings
- The standard will be published in English and French with Public Review in English and French as well

Proposed Work Plan

The following work plan outlines the primary tasks to be performed by CSA Group to develop the proposed NSC.

Pre-Committee

Activities:

- **Notice of Intent** – CSA Group will issue a notice of intent to notify the public of the intent to proceed with development of the new NSC via the CSA Group and SCC websites.
- **Establish CSA Group TSC** – CSA will establish a suitable technical subcommittee made up of subject matter experts representing relevant interest groups that is balanced with geographically diverse membership.

- **Member Orientation** – A training session will be organized to educate all members of the roles and responsibilities of committee members, as well as the standard development process.
- **Kick-off meeting** – A project kick-off meeting of the TSC will be held. The meeting will serve to introduce members of the TSC to the project and to discuss and refine the project schedule.
- **Confirmation of project schedule and key milestones** – The project schedule and key milestones will be confirmed with TSC membership.
- **Working draft preparation** – A subject matter expert will be engaged to conduct a literature landscape review to identify suitable reference materials for inclusion and to develop a working draft (seed document), to be provided as a starting point to the TSC to commence NSC development activities.

Stage Deliverables:

- 1) Notice of intent issued
- 2) TSC established
- 3) Project schedule and key milestones confirmed
- 4) Seed document developed

Content development

Activities:

- **Develop draft standard** – Utilizing the seed document, the TSC will develop a draft standard through a series of collaborative meetings, an online workspace shared amongst the TSC and TC members, and additional reference materials and correspondence. CSA Group will facilitate the process to develop the technical content of the draft standard by the TSC.
- **TC review** – Prior to advancing the draft standard to the enquiry and editing stage, the draft standard will be circulated to the TC for review and comment. Comments received will be forwarded to the TSC for review and consideration to make necessary additions and alterations to the draft standard.
- **Translation** – The draft standard will be translated to French in preparation for public review circulation.

Stage Deliverables:

- 1) TC review of working draft completed
- 2) Development of draft standard in preparation for public review circulation completed
- 3) Draft document translation completed

Enquiry and editing

Activities:

- **Public review** – The draft standard will be posted on the CSA Group public review online forum for a period of 60 days, during which time it will be accessible to the public for review and comment. Comments received through the public review will be consolidated into a comprehensive report and provided to the TSC for review and consideration. Once the TSC has reached consensus on the required additions and alterations to the draft standard resulting from the consideration of public review comments, CSA Group will prepare a revised draft for advancement to approval stage.
- **Internal review (quality review and preapproval edit)** – In coordination with the public review process the revised draft shall be prepared internally and submitted to CSA Group editorial staff to conduct both a quality review, to review for clarity of standards language used, as well as a preapproval edit, to review for compliance with CSA Group standard development policies and guidelines, prior to advancing for the preparation of a ballot draft of the standard.

Stage Deliverables:

- 1) 60-day public review process completed
- 2) Disposition of public review comments completed
- 3) CSA Group internal quality review completed
- 4) CSA Group internal preapproval edit completed
- 5) Standard ballot draft preparation completed

Approval

Activities:

- **Technical approval** – The draft standard will be circulated through ballot to the TC voting membership for approval. Comments received through the ballot process will be consolidated into a comprehensive report and provided to the TSC for review and consideration. Once the TSC has reached consensus on the required additions and alterations to the draft standard resulting from the consideration of ballot comments, the amended draft standard will be circulated to the TC for final approval, if necessary.

Note: To meet CSA Group requirements for approval, the affirmative votes must constitute at least fifty percent of the total voting membership and two-thirds of the votes cast. During this process, all negative votes must be tabulated and dispositioned; as well, all comments must be addressed. Further, if significant technical changes are required as a result of comment dispositioning, a second ballot may be required.

Note: Publication of consensus-based documents, such as standards or technical specifications, is dependent upon many factors including but not limited to the TC reaching consensus. In the

event consensus cannot be achieved, CSA Group will enter into collaborative discussion with the Ontario Government to evaluate the appropriate steps and alternative deliverables to satisfy the terms of the project.

- **Second level review** – The second level review, an internal CSA Group procedural approval conducted to confirm due process in accordance with CSA Group’s directives and guidelines has been followed, will be undertaken.

Stage Deliverables:

- 1) Draft standard approval received
- 2) Second level review completed

Publication

Activities:

- **Final edit** – During the publication stage, CSA Group’s Editorial and Production Services team will conduct a final edit to verify conformity with the applicable editorial and procedural requirements.
- **Final translation** – CSA Group will finalize the translation of the document to reflect all additions, alterations, and edits.
- **NSC Publication** – CSA Group, through its ability to self-declare, will publish the standard as a National Standard of Canada in both English and French.
- **Publication Availability** – CSA Group will make the standard available to the public on a CSA Group online platform, in English and French.

Stage Deliverables:

- 1) Publication of NSC in both English and French completed
- 2) Publication made available in both English and French through CSA Group online platform

Maintenance

Ongoing maintenance – During the life of a standard, when necessary, amendments and interpretations may be developed and published. Also, CSA Group directives require that a decision be taken by the TC at least every 5 years to reaffirm the standard in its current form, develop a new edition, or withdraw the standard.

View Access

Supporting the public availability of the developed NSC is critical to facilitating its broad uptake and adoption. To assist with NSC availability, it will be made publicly available on a CSA Group online platform to users in Canada through a no-fee viewable format for the life of the first edition or until reaffirmation, in English and French. View access format requires a simple user registration and will permit users to scroll through the full text of the document. Subject to additional fee, CSA Group reserves the right to:

1. provide any current or future publication(s) in different formats for a fee, including but not limited to, paper, downloadable PDF, HTML, XML or other alternative formats, and/or
2. provide enhanced functionality and/or access methods for a fee such as multi-document and time-limited subscriptions.

Project Budget and Schedule

Project Budget

The proposed cost for the project is \$179,525, excluding applicable taxes. An invoicing schedule will be agreed to as a component of finalizing any subsequent contribution agreement or contract upon acceptance of this proposal.

Project Schedule

CSA Group proposes to commence the project in September 2026 with the work plan advancing as illustrated in Figure 1 being completed over a 20-month duration, with publication for May 2028.

Figure 1: Proposed Project Schedule

Stage	2026					2027					2028												
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
Pre-Committee																							
Content Development																							
Enquiry & Editing																							
Approval																							
Publication																							

Note: The schedule is subject to change based on committee decisions, the ability to meet consensus, or other unforeseen factors.

Offer of Service

Canadian Standards Association, operating as CSA Group (“CSA Group”) is pleased to submit this proposal to the Province of Ontario (“Client”), dated May 2026. CSA Group offers to provide the project deliverables as described herein in consideration for Client paying CSA Group in accordance with the pricing structure set out herein, and subject to negotiation of the terms and conditions of the final agreement in the event CSA Group is awarded the contract.

This proposal is submitted based on the following terms:

CSA Group is an accredited Standards Development Organization (“SDO”) in Canada and the United States of America, providing services in accordance with its Policy governing standardization, and Directives and guidelines governing standardization, where those documents apply to the services being performed, as well as other non-accredited services and products. Decisions of committees or ANSI or the Standards Council of Canada, and related timing, are beyond the control of CSA Group. Dates and deliverables are estimates only.

CSA Group will own the full copyright in any works created in the course of performing the services. CSA Group must own the intellectual property in any document or other product arising from the services in order to maintain its integrity and adherence to the accredited SDO process, as applicable.

CSA Group assumes no liability with respect to the content or subsequent use of any document or other product arising from the services, and the Client hereby releases CSA Group, its divisions or affiliates, their employees, directors and agents from any and all claims for losses and damages relating to or resulting from the performance of the services.

This proposal is valid for a period of ninety (90) days from the date it is issued.

These terms cannot be varied except in a written agreement signed by CSA Group. CSA Group’s acceptance of a purchase order containing different terms or conditions does not modify or supersede these terms.