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ROAD SALT IMPACTED SOIL MANAGEMENT REVIEW SUMMARY OF FINDINGS

OCTOBER 2026

PREPARED FOR:

CONTAMINATED SITES APPROVED PROFESSIONALS OF BRITISH COLUMBIA

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NOTE TO READER

This document was prepared for the Society of Contaminated Sites Approved Professionals of BC (CSAP Society) for use by Approved Professionals in their work. The BC Ministry of Environment and Parks has not endorsed this document and the information in this document in no way limits the director's exercise of discretion under the *Environmental Management Act*.

CSAP Society has recommended that Approved Professionals use their professional judgement¹ in applying any guidance, including this document. As the science upon which contaminated sites remediation is based is relatively young and because no two sites that involve the natural environment are the same, the need to exercise professional judgement within the regulatory process is recognized.

Ultimately, submissions for *Environmental Management Act* certification documents need to meet regulatory requirements. The onus is on qualified professionals and Approved Professionals to document the evidence upon which their recommendations depend.

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The conclusions and recommendations of this document are based upon applicable legislation and policy existing at the time the document was prepared. Changes to legislation and policy may alter conclusions and recommendations.

¹ https://csapsociety.bc.ca/wp-content/uploads/ATT-3_-CSAP-Professional-Judgement-May2nd.pdf

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1 INTRODUCTION

Active Earth Engineering Ltd. (“Active Earth”) was retained by the BC Contaminated Sites Approved Professionals (CSAP) Society to review how soil impacted by winter road salt application is managed in British Columbia and in other northern-climate jurisdictions, and to recommend potential regulatory improvements for BC.

This document provides our summary of the work conducted, the key findings, and potential recommendations for consideration by the CSAP Society and BC Ministry of Environment and Parks (ENV).

2 SCOPE OF WORK

The assignment comprised five tasks:

- **Task 1 – Jurisdictional Literature Review:** a desktop review of federal, provincial/territorial, select northern U.S. state, and select northern European regulations, policies, technical guidance, and best-practice documents addressing road-salt-impacted soil, supplemented by interviews with practitioners in jurisdictions of particular interest.
- **Task 2 – Review of BC-Specific Regulatory Requirements:** a comprehensive desktop review of the BC Environmental Management Act (EMA), Contaminated Sites Regulation (CSR) and associated Protocols and Technical Guidance, etc., supplemented by interviews with at least eight BC practitioners.
- **Task 3 – Presenting Preliminary Results to CSAP Society and ENV:** presentation of Task 1 and 2 findings with the CSAP Society’s Technical Review Committee (TRC) and ENV.
- **Task 4 – Draft and Final Deliverable:** a final technical summary report and accompanying bibliography.
- **Task 5 – Presentation of Findings:** presentation at the Fall 2026 CSAP Professional Development workshop.

Consistent with the scope of this assignment, Active Earth’s role was to gather information, opinions, and ideas for potential improvement from desktop sources and interviews. Our role was not to independently verify or adjudicate the accuracy of individual views, nor to render a legal opinion on any regulatory frameworks. This memo represents the Task 4 Final Deliverable.

While *naturally occurring* salt issues are discussed or alluded to briefly in this document, our scope of work was limited to assessing the management of soil with *anthropogenic* impacts from road salt application. We recognize that further work is likely warranted to consider the differing regulatory / technical challenges and opportunities for improving the management of soils that are impacted by natural salt sources vs anthropogenic salt sources.

3 METHODOLOGY

3.1 Desktop Review

Active Earth's project team compiled a jurisdictional literature review covering select sources from:

- Canadian federal legislation;
- All Canadian provinces and territories;
- Six northern U.S. states;
- Six northern European countries; and,
- The European Union.

The review included relevant peer-reviewed literature (Task 1), together with a focused review of BC's Environmental Management Act (EMA), Contaminated Sites Regulation (CSR), associated Protocols and Technical Guidance, municipal and provincial construction specifications, and road-salt lifecycle guidance (Task 2). Findings were logged in a structured, sortable spreadsheet addressing the following for each jurisdiction:

- whether salt in soil is explicitly regulated;
- whether on-site and off-site reuse/relocation of salt-impacted soil is achievable;
- whether numerical standards exist for sodium and/or chloride;
- whether exemptions exist for off-site relocation;
- whether salt is routinely tested on linear infrastructure projects; and,
- whether site-specific standards can be readily developed.

This desktop review was supplemented by targeted research where warranted. We note that the depth of the desktop reviews was limited in part by the project budget.

3.2 Interviews

Active Earth conducted 13 practitioner interviews between June 24 and August 11, 2026. This comprised:

- Five interviews with practitioners in other jurisdictions (Ontario, Quebec, Alberta, Nova Scotia, and the UK)
- Eight interviews with BC practitioners spanning provincial government, municipal government, industry, and environmental consulting.
- Four of the thirteen interviews (Quebec, Nova Scotia, City of Vancouver, and the UK) were conducted as written correspondence rather than live discussion, at the interviewee's request.

Interviewees are identified by title and employer in the accompanying Bibliography. For confidentiality reasons, no statements are directly attributed to individuals in this report. Findings are instead grouped by jurisdiction and by practitioner type (government, industry, or consultant).

One interviewee, a BC-based environmental consultant who is also affiliated with the CSAP Society in a governance capacity, noted that his input was provided solely in his capacity as a private consultant, and not as a representative of CSAP Society. In general, all practitioner opinions are understood to reflect their personal professional opinions, not those of their employers or organizations.

4 FINDINGS

4.1 Relevancy

Active Earth's assignment was to gather information, opinions, and ideas for potential improvement, not to serve as an arbiter of fact. Accordingly, findings are presented either as (a) Active Earth's understanding of publicly available regulatory text and guidance, or (b) the reported views and opinions of interviewees, which have not been independently verified by Active Earth and do not necessarily reflect settled fact, consensus, or the official position of any organization.

4.2 Regulatory Comparison Summary

The table below summarizes, for each jurisdiction reviewed:

- whether enforced numerical environmental quality standards exist for salt in soil;
- whether on-site reuse (e.g., placement elsewhere on the same site, including back into an original excavation area) is "easily achievable"; and,
- whether off-site reuse or relocation (for purposes other than disposal to a permitted contaminated soil receiving facility) is "easily achievable".

This information reflects our interpretation of the desktop review, refined in some instances by practitioner input gathered through interviews.

TABLE 1: COMPARISON OF SALT-IMPACTED SOIL REGULATION AND REUSE BY JURISDICTION

Jurisdiction	Enforced salt-in-soil standard?	On-site reuse easily achievable?	Off-site reuse/relocation easily achievable?
British Columbia	Yes – CSR numerical soil standards for sodium and chloride (Schedule 3.1, Part 1, Matrix Numerical Soil Standards)	No – soil exceeding standards generally cannot be returned to the same excavation without a Waste Discharge Authorization (WDA) (~18 months+ per interviews), risk-based Approval-in-Principal (AiP), etc. Protocol 13 provides a narrow exemption for beneficial use within 3 m of a paved surface.	No – relocation of soil above standards is generally treated as waste requiring disposal to a permitted facility or other permit (WDA, AiP, etc.). Road salt (winter road sand) may be (re)used on roadways, and a narrow near-shore (marine) exemption exists.
Canada (Federal)	No	Not applicable (no soil standard)	Not applicable – Code of Practice addresses operational salt management, not soil reuse

Jurisdiction	Enforced salt-in-soil standard?	On-site reuse easily achievable?	Off-site reuse/relocation easily achievable?
Alberta	Partial – salinity (electrical conductivity [EC], sodium adsorption ratio [SAR]) guideline, no direct Na/Cl soil standards	Unclear	No specific exemption identified; no provincial soil reuse framework exists
Saskatchewan	Partial – indirect (EC/SAR-type) measures, no direct Na/Cl soil standards	No	No exemption identified
Manitoba	No discrete standards. Relies on Canadian Council of Ministers of the Environment (CCME) / surrogate parameters)	Possible for road authorities/fee-simple sites meeting conditions, but not formalized	No exemption identified
Ontario	Yes – chloride only (no sodium standard)	Yes	Yes – conditional “exempt contaminant” provision for soil impacted by salt from winter safety application (not salt storage), confirmed by interview
Quebec	No enforceable standard – non-binding salinity guideline only	Yes, not specifically restricted	Yes, not specifically restricted (confirmed by interview)
Nova Scotia	Yes – Nova Scotia Contaminated Sites Regulation (Environmental Quality Standards for Soil Table 1)	Yes, but only with site specific risk management. Complexity / difficulty of risk management process not confirmed.	No exemption identified
New Brunswick	Yes– Refers to Atlantic RBCA Tier II standards	Yes, if no unacceptable risk (Protocol 500)	No specific exemption; site-specific criteria possible via risk assessment
Prince Edward Island	Indirect. Defers to Canadian Environmental Quality Guidelines (CEQG) / Atlantic Risk-Based Corrective Action (Atlantic RBCA)	No	Possible with risk-management approval; no blanket exemption
Newfoundland & Labrador	Yes– Refers to Atlantic RBCA Tier II standards	Yes, if standards met or risk assessed	Only with approval; no blanket exemption
Nunavut	Indirect (CCME reliance)	Possible if risk assessed/treated	Possible if risk assessed/treated; no blanket exemption
Northwest Territories	Indirect (CCME reliance)	Unclear	No exemption identified

Jurisdiction	Enforced salt-in-soil standard?	On-site reuse easily achievable?	Off-site reuse/relocation easily achievable?
Yukon	No	No	Requires a relocation permit; no exemption
Washington State	No	Unclear / not typically tested	Unclear / not typically tested
Alaska	No	Yes (unrestricted; salt not typically tested)	Yes (unrestricted)
New York State	No	Yes (unrestricted; salt not typically tested)	Yes (unrestricted)
Vermont	No	Yes (unrestricted; salt not typically tested)	Yes (unrestricted)
North Dakota	Yes	No – becomes regulated solid waste once excavated	No; requires a permitted facility or state approval
Minnesota	No	Yes (unrestricted; salt not typically tested)	Yes (unrestricted)
Sweden	No discrete salt standard, but excavated soil is broadly treated as waste once removed	Yes for salt specifically	Effectively restricted – excavated soil requires notification/permit as waste regardless of contaminant
Denmark	Yes (indirect, EC-type measures)	No	No exemption identified
Germany	No	Yes (unrestricted; salt not typically tested)	Yes (unrestricted)
Poland	No (soil); groundwater/surface water only	Unclear – limited data	Unclear – limited data
France	No	Yes (per desktop review reasoning; risk-assessment-based system generally)	Yes (per desktop review reasoning)
Switzerland	No	Yes (unrestricted; salt not typically tested)	Yes (unrestricted); cantons may set case-specific values
United Kingdom	No	Yes (unrestricted; salt not typically tested)	Potentially yes if no site-specific risk was identified.

4.3 Other Jurisdictions – Key Findings

Government (Municipal) – Alberta. A City of Calgary contaminated sites representative reported that Alberta has no chloride-specific soil guideline and no provincial soil reuse framework, which in their view leaves reuse practice inconsistent and largely untracked. Rather, if salt contamination is suspected in soil, it is analysed for sodium adsorption ratio (SAR) and electrical conductivity (EC). They also raised, as a question worth further consideration, whether chloride-related infrastructure corrosion (prompted by a recent watermain failure) should be treated as a receptor in soil management decisions – a factor Active Earth found is not typically addressed in

the frameworks reviewed for this assignment. They characterized the City's use of informal, risk/exposure-based professional judgment, rather than rigid exceedance-triggered disposal, as a practical strength, while noting this flexibility is informal and, in their opinion, would benefit from clearer provincial structure.

Government (Municipal) – Quebec. A City of Montreal representative indicated that Quebec has no enforceable soil standard for salt, only a non-binding salinity guideline in a ministry Intervention Guide, and stated that the term “salt-contaminated soil” is not commonly used in Quebec practice. According to this interviewee, salt is rarely tested for and, in their experience, has not been a barrier to soil relocation absent other contamination. We understand that soil salinity (SAR/EC) is also sometimes tested in Quebec to assess corrosion risks to subsurface utilities.

Consultant – Ontario. An environmental consultant described Ontario's Excess Soil Regulation as including a conditional “exempt contaminant” provision for salt impacts to soil caused by safety-related winter application (though not, in their understanding, salt storage or industrial handling), which they said enables qualified-person-directed reuse without case-by-case ministry pre-approval. In their experience, this flexibility still comes with friction: they noted receiving sites often charge a premium for accepting salt-impacted material, and considered geotechnical suitability to be the dominant practical barrier to reuse, rather than the regulation itself. They also observed that Ontario's regulation has drawn ongoing municipal criticism for cost and complexity since 2019 and has required near-annual amendment. They suggested that BC should expect a similarly iterative process rather than a single fix.

Consultant – Nova Scotia. An environmental consultant described Nova Scotia's risk evaluation and management of sodium and/or chloride as follows: if sodium and chloride concentrations exceed the contamination threshold, then consideration pursuant to the applicable contaminated sites regulations would come into play. The relocation of soil containing chloride or sodium exceeding the applicable land use criteria to an unimpacted off-site receiving location constitutes the relocation of contaminated soil under the Nova Scotia Contaminated Sites Regulations. Doing so without site-specific risk management or approval violates the Nova Scotia Environment Act. Salt-impacted soil can remain on the origin site if managed through a Tier 2 Pathway-Specific Approach or Tier 3 Risk Assessment under the Ministerial Protocols (e.g., demonstrating that leaching to groundwater or adverse effects on local vegetation will not occur), or if relocated to an approved soil management facility. Similar to BC, Nova Scotia provides criteria for sodium and chloride in groundwater, where drinking water use exists.

4.4 British Columbia – Key Findings

Regulatory framework. Based on Active Earth's review of the EMA, CSR, and associated Protocols, the EMA provides BC's overarching framework for environmental protection and contaminated site management, and the CSR (enabled under the EMA) sets legally enforceable numerical standards for sodium and chloride in soil.

Generally speaking, soil exceeding applicable CSR standards is generally considered “contaminated” with respect to salt, regardless of source (i.e., road salting, salt storage, or natural marine influence), unless alternative standards, background concentrations, or risk-based approaches are appropriately established. CSR Protocol 4 allows local background concentrations to be established, and Protocol 13 provides a narrow beneficial use exemption from delineation for soil within roughly 3 m of a paved surface affected by road salting. Protocols 2 and 27 allow for derivation of Site-Specific Standards (SSS) for Sodium and Chloride in soil, based on an interpretation of leachate quality, which may provide relief for relocation in some limited cases. Active Earth did not identify any other broad exemption for reuse or relocation of salt-impacted soil.

Desktop review of Ministry of Transportation and Transit (MOTT) specifications, municipal construction standards (e.g., MMCD), and road-salt lifecycle guidance found that these documents govern the safe procurement, storage, and application of road salt but generally defer to the CSR for soil management decisions.

Government (Provincial). Representative from ENV and MOTT were interviewed. Both interviewees indicated they consider the current numerical standards (for Sodium Ion and Chloride Ion) to have been derived through a scientifically grounded approach. Both identified, in their view, a gap in the availability of practical and tailored exemptions, conditional pathways, and coordination specific to salt. (Note - none of the BC interviewees advocated for the Sodium Ion or Chloride Ion standards to be fully repealed or arbitrarily “weakened”).

The ENV representative suggested that road-salt and marine/naturally saline soils are related but distinct problems of different scales (i.e. characterizing marine salinity as the larger issue province-wide, though this was outside the scope of this study and is not something Active Earth independently assessed) and expressed the opinion that meaningful regulatory change would most likely require CSR amendment (potentially with EMA enabling changes) rather than a Technical Guidance update. This interviewee also noted that, in their assessment, ENV’s capacity to advance new policy on this issue has been limited for a number of years.

The MOTT representative reported that it is cost-prohibitive for them to adopt a policy of fully pre-characterizing all soil that will be disturbed during a planned highway construction project. The representative described receiving-site practices and expectations as varying significantly by region, and noted that MOTT considers itself to carry an ongoing, decades-long liability question given the long tenure life and reclamation of its gravel pits.

Government (Municipal). Representatives from the City of Victoria and City of Vancouver both reported that, in their experience, Chloride exceedances are common and are often unrelated to any specific identifiable road-salting source, and described a disproportionate cost impact on both minor maintenance work and capital projects. Specifically, City of Victoria staff cited cost increases in the tens of thousands of dollars for individual utility connections as an example. Both municipalities indicated they see limited practical ability to reuse soil within roadways because

of space and geotechnical constraints, and both identified improved coordination with other excavating agencies (BC Hydro, FortisBC, other municipalities) as, in their view, an unrealized opportunity to reduce redundant testing and excavation. The City of Vancouver representative noted that access to the Vancouver Landfill has provided an internal no/low-cost disposal option to date, but suggested this may be capacity-limited over the longer term.

Environmental Consultants. BC-based consultants who were interviewed consistently pointed to the CSR Chloride standard's basis as fundamentally aesthetic (taste-related), rather than health-based, drinking water objective as their central concern. They reported that soil with elevated salt concentrations often cannot typically be legally returned to its original excavation once removed without obtaining a WDA. They noted these authorizations can take on the order of 18 months or more to obtain, which they characterized as impractical for typical project schedules. One consultant estimated, based on their own project experience, that Chloride is encountered on roughly half of roadway/parking lot investigations. One case study was noted where a six-month construction delay resulted from Chloride issues discovered mid-project. Consultants also noted that naturally occurring background salinity, particularly in coastal and historically marine-influenced soils, is in their experience difficult to distinguish from road-salt contamination under the current framework. They note that this complicates site delineation and increases costs without a clear corresponding decrease in environmental risk or improved outcomes.

Industry. A representative of a Vancouver Island soil-recycling facility reported that salt, in their experience, is the single largest contaminant-of-concern in any clay material they are requested to process. It was noted to occur roughly ten times more often than their next most common contaminant of concern. As an option for consideration, they proposed comparing porewater results (i.e., saturated paste) directly to drinking water standards rather than converting to a solid-phase soil concentration, suggesting this would better reflect a soil's actual leaching risk without altering the underlying regulatory framework (we note that this approach is contemplated in Protocols 2 and 27 for the derivation of SSS).

A representative of a major BC utility estimated that approximately 80% of the utility's soil testing programs show some degree of salt impact. They indicated that off-site relocation (rather than on-site reuse) is their more pressing cost and logistical concern, as geotechnical requirements and site constraints often preclude reuse. They suggested that the drinking-water pathway be reconsidered or excluded for relocation to soil receiver sites with no current or future drinking water use (e.g. revisions to Protocol 21), while stating they were not suggesting any change to the standards protecting aquatic life.

5 RECOMMENDATIONS FOR CSAP SOCIETY AND ENV CONSIDERATION

The items below are offered for the consideration by CSAP Society and ENV, based on our findings. Each item attempts to reflect a balance between practical industry considerations (cost, schedule, logistics) raised in interviews, and the need to protect human health and the environment.

It was beyond our scope of work to evaluate the relative effort, regulatory complexity, or regulatory steps required to implement any of the identified recommendations. That said, it is recognized that any changes to the CSR standards for Chloride Ion and/or Sodium Ion would be a significant and lengthy technical and regulatory undertaking, and that other adjustments/recommendations such as refinements to select Protocols would likely be quicker and may be comparably effective.

None of the recommendations below should be read as “endorsed” by ENV, CSAP Society, or any of the interviewee employers. The recommendations below are provided in no particular order of importance.

The following recommendations would have direct regulatory implications:

1. **Consider expanding the existing beneficial use exemption for salt impacts from winter road maintenance.** Protocol 13’s current exemption is narrow (limited to soil within roughly 3 m of a paved surface, within a screening-level risk assessment, and with no explicit allowance for “reuse” of excavated material). Based on interview input, CSAP Society and ENV may wish to consider a broader, conditions-based exemption, informed by Ontario’s “exempt contaminant” model as described by one interviewee. This could be achieved by adjusting the existing Protocol 13 beneficial use exemption to allow for reuse, such as on-site relocation if a new placement location still complies with spatial requirements. Such an adjustment would allow qualified-professional-directed reuse of soil impacted solely by safety-related salt application (likely excluding salt storage/handling sources) without a full risk assessment or case-by-case ministry pre-approval. We assume much of the flexibility provided in Ontario’s approach could be achieved through new or revised BC Protocols. However, further review is recommended to consider the potential regulatory implications in BC (e.g. revisions to EMA and/or CSR), to assess the implementation effort, and to consider unintended consequences. We note that a detailed “regulatory implementation” assessment was outside of our scope. *Possible mechanism: revised CSR Protocol 13.*
2. **Explore an expedited pathway for same-site reuse of geotechnically suitable, salt-only impacted soil.** Several interviewees described the current requirement for a Waste Discharge Authorization as impractical for construction schedules, resulting in excessive off-Site soil relocation/disposal and import of replacement fill that is likely to become salt-impacted again. A narrow exemption for the backfilling/reuse of excavated salt-only impacted soil could reduce costs and other impacts (GHG emissions, road wear, etc.) without materially increasing risks. *Possible mechanism: Waste Discharge Regulation or CSR amendment, or new/revised CSR Protocols.*
3. **Consider ways to better differentiate naturally occurring background salinity from anthropogenic road-salt contamination.** Several interviewees identified natural marine-influenced salinity (particularly on Vancouver Island and other coastal areas) as a factor that, in their view, increases costs without a corresponding reduction in risk. CSAP Society and ENV may wish to consider development of regional background datasets for sodium and chloride.

It would need to be determined whether background concentrations would apply only for soil with natural salt impacts, and how exactly that should be evaluated / demonstrated. *Possible mechanism: Protocol 4 guidance refinement / regional background dataset development.*

4. **Consider a refined analytical approach that accounts for soil type.** One industry interviewee suggested that comparing porewater (saturated paste) results directly to drinking water standards, rather than converting to a fixed solid-phase soil concentration, would in their view better reflect the different leaching behaviour of clay versus sandy soils, without changing the underlying protective standard. This could potentially be coupled with adjustments to the Chloride DW soil matrix factor and/or the default dilution factor provided in the Groundwater Protection Model (GPM). *Possible mechanism: Technical Guidance update (e.g., TG13/TG24) or Protocol 2/27 revisions.*
5. **Consider formalizing defined coastal/near-shore relocation criteria.** Interviewees described a desire for increased relief for placement of salt-impacted soils on near-shore lands. This could better support beneficial uses such as shoreline protection, beach nourishment, or land-raising for sea-level-rise adaptation. *Possible mechanism: Protocol or policy guidance.*
6. **Consider relief for temporary receiver sites to import and export salt-impacted soils.** Interviewees suggested that temporary soil receiver sites such as soil washing facilities, soil transfer sites and/or aggregate producers could be allowed to accept road salt-impacted soils for processing and temporary storage (absent a WDA), so long as the final material is then used for road/highway projects where future road salt application is anticipated. The objective would be to reduce project costs and landfilling, with minimal additional risk. It is recognized that some controls may be required to mitigate salt impacts at the temporary receiver sites themselves. *Possible mechanism: New or revised Protocol, and/or EMA/CSR amendment.*
7. **Revisit the basis of the chloride drinking-water soil standard.** Multiple interviewees across government, consulting, and industry independently raised the fact that the most conservative chloride standard is tied to what is perceived to be an aesthetic drinking water (DW) objective (i.e., taste) rather than a true health-based threshold¹. Potential considerations:
 - a. Revise or remove the Chloride soil DW matrix factor if the aesthetic concerns are considered non-critical, so long as human health and environmental risks are adequately controlled through other standards (e.g. Sodium DW matrix factor for soil, Chloride Aquatic Life matrix factor for soil, etc.).
 - b. Review whether Chloride & Sodium Ions are the most useful parameters to control risks (compared to SAR as used in some other jurisdictions).
 - c. Consider excluding the application of the Chloride soil DW matrix factor for soil receiver sites that meet certain conditions (e.g. no current or foreseeable future drinking water

¹ We understand that this is fundamentally correct. While the CSR soil standard was derived using a calculation model that relies on a toxicity baseline in order to generate a numeric standard, that toxicity baseline was based on the risk of elevated *Sodium* to blood pressure. A detailed assessment of this question was outside of our scope.

use). This is discussed further for near-shore sites in item #5 above. *Possible mechanism: revised CSR Protocol 21.*

- d. Consider a Director's Interim Standard as an interim step to provide more immediate regulatory relief while these questions are assessed further.

The following recommendations would not have direct regulatory implications:

8. **Consider improving inter-agency and inter-utility coordination on soil data-sharing.** Municipal and utility interviewees consistently identified a lack of coordination between agencies excavating in the same rights-of-way (BC Hydro, FortisBC, municipalities, MOTT) as a source of redundant testing and cost. This could be considered as a lower-cost, non-regulatory initiative that ENV or CSAP Society could help facilitate. *Possible mechanism: non-regulatory coordination initiative / guidance document.*
9. **Consider increasing ENV outreach, training, and technical forums for municipalities and practitioners.** Several interviewees described limited ongoing engagement since the initial rollout of current soil relocation requirements. Regular technical forums are suggested as one possible way to address inconsistent interpretation (e.g., backfilling of salt-contaminated soils, and Notification of Independent Remediation requirements for routine road excavation work). *Possible mechanism: non-regulatory outreach initiative.*
10. **Consider resourcing a dedicated, ENV-led salt-impacted soil policy initiative.** Both provincial interviewees identified capacity constraints as the primary obstacle to prior attempts at reform, and not lack of willingness or appreciation for the importance of this issue. Continued funded support for dedicated technical and policy resourcing could improve the likelihood that any of the above items are carried through to actual Protocol or Regulation amendments. *Possible mechanism: non-regulatory – funding/resourcing program.*

6 LIMITATIONS

The use of this report by anyone is subject to the following conditions and limitations:

1. This report has been prepared at the request of the client and for the specific use referred to herein. The CSAP Society and ENV may rely on this report. It is not reasonable for any other party to rely on the contents of this report without first obtaining written authorization from the client and Active Earth Engineering Ltd.
2. Liability is expressly denied to any person other than the parties indicated above and those who obtain written consent. Accordingly, Active Earth Engineering Ltd. does not accept responsibility for any damage suffered by any such person as a result of decisions made or actions based on this report. Diligence by all intended users is assumed.
3. This report is believed to provide a reasonable representation of our review findings as of the date of this report. The conclusions made in this report reflect Active Earth Engineering Ltd.'s best judgment in light of the information collected and reviewed at the time of reporting. Should additional information become available, the conclusions and recommendations of this report may be subject to change. For any party to rely on this report in the future, supplemental assessment may be necessary.
4. Active Earth Engineering Ltd. has agreed to conduct an assessment and prepare this report as requested by the client named in the report for the use specified by the client, which is stated in the report. The client has agreed that the performance of this work and the report format are appropriate for the intended use.
5. Written consent from Active Earth Engineering Ltd. must be obtained before any part of the report can be used for any purpose by anyone other than the client and other intended users identified in the report. Liability to any other party or for any other use is expressly denied regardless of who pays Active Earth's fee.

7 CLOSURE

We trust this provides the information required at this time. If you have any questions, or require additional clarification, please contact the undersigned.

Yours truly,

ACTIVE EARTH ENGINEERING LTD.

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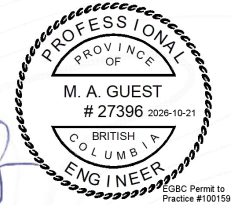


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INTERVIEW SOURCES

British Columbia

- Senior Engineer / Partner, Core6 Environmental Ltd. (environmental consultant). British Columbia. Videoconference interview, June 24, 2026.
- Manager, Contaminated Sites, BC Ministry of Environment and Parks (provincial government). British Columbia. Videoconference interview, June 26, 2026.
- Senior Representative, GRT (soil treatment, recycling and receiving facility operator; industry). British Columbia. Videoconference interview, July 6, 2026.

Environmental Specialist, Public Works – Underground Utilities, City of Victoria; and Manager, Underground Utilities Operations, City of Victoria (municipal government). British Columbia. Joint videoconference interview, July 10, 2026.

Senior Geoscientist, BC Ministry of Transportation and Transit (provincial government). British Columbia. Videoconference interview, July 13, 2026.

Senior Environmental Scientist and Team Lead, Thurber Engineering Ltd. (environmental consultant). British Columbia. Videoconference interview, July 14, 2026. Input was provided solely in the interviewee's capacity as a Thurber employee and does not represent the views of the CSAP Society or its Technical Review Committee.

Environmental Program Lead, FortisBC Energy Inc.; and Environmental Representative, FortisBC (utility; industry). British Columbia. Joint videoconference interview, July 15, 2026.

Assistant Manager, Environmental Services, Real Estate, Environment and Facilities Management, City of Vancouver (municipal government). British Columbia. Written correspondence (email), July 17, 2026.

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Team Leader, Contaminated Sites, City of Calgary (municipal government). Alberta. Videoconference interview, July 8, 2026.

Senior Environmental Consultant, Geosyntec Consultants (environmental consultant). Ontario. Videoconference interview, July 22, 2026.

Senior Engineer (Ingénieure principale), Section soutien technique pour les sols contaminés, Service de l'environnement et de la transition écologique, Ville de Montréal (municipal government). Quebec. Written correspondence (email), July 2, 2026.

Partner, Dillon Consulting Limited (environmental consultant). Nova Scotia. Written correspondence (email), August 11, 2026.

Technical Director, CL:AIRE (Contaminated Land: Applications in Real Environments; UK charity focused on sustainable land reuse and soil health). United Kingdom. Written correspondence (email), August 11, 2026.