

Applicability of Sodium and Chloride Ion Soil Relocation Standards to Dredged Marine and Estuarine Materials

Introduction

This document provides guidance on sodium (Na⁺) and chloride (Cl⁻) ion soil standards which trigger Contaminated Soil Relocation Agreements (CSRAs) and their applicability to dredged material of marine and estuarine origin when applied to land.

This guidance is in effect until June 2011. However, the Director retains the right to review, revise, extend or cancel this guidance at any time.

Regulatory requirements

Sediment deposited to land constitutes “soil”, as defined in section 1 of the Contaminated Sites Regulation (the Regulation). Dredged material deposited on land must comply with the provisions of the *Environmental Management Act* (the Act) and its regulations, including the Contaminated Sites and Hazardous Waste Regulations. If contamination of sediment is a reasonable possibility due to current or historical activities at or adjacent to a dredging area, assessment of sediment quality is required to ensure proper offsite management of dredged material.

For all substances in sediment to be relocated to land under Provincial jurisdiction, the requirements of Section 55 of the Act and Part

8 of the Regulation apply in determining if a CSRA is required. [Fact Sheet 41, “Relocation of Soils from Contaminated Sites”](#) provides an overview of the soil relocation requirements while [Schedule 9](#) of the Regulation is used to assess the in situ quality of sediment.

Assessment and characterization requirements

An environmental professional experienced in contaminated site remediation should review relevant information related to commercial and industrial activities which may have contaminated sediment to be dredged and deposited on land. The results of that review should then be used to generate a list of potential contaminants of concern (PCOCs) for the sediment. If there is a reasonable possibility that PCOCs present in the sediment could exceed Schedule 9 sediment criteria or Schedule 7 soil standards triggering soil relocation agreements, sediment samples should be collected and analyzed for the list of PCOCs. PCOC sediment sample results should then be compared to the sediment criteria (in situ aquatic life concerns) and if the sediment is to be relocated to land, to the soil standards (receiving site concerns).

Note

Sodium and chloride ions may be potential contaminants of concern for all marine and estuarine sediments to be relocated to land.

Sediment samples should be collected from locations most likely to have been contaminated and in sufficient number to adequately characterize any significant sediment contamination.

Marine and estuarine dredged materials

The Schedule 7 standards for salt are sufficiently stringent that application of the standards to dredged materials of marine or estuarine origin would typically trigger the need to obtain a CSRA to relocate the materials.

However, this requirement may not be warranted in many cases where marine and estuarine dredged material containing only salt is to be relocated to land. Salt as a contaminant of dredged material is highly water soluble and therefore is subject to rapid and progressive leaching by rainwater. Depending on the environmental sensitivity of the receiving site to salt “washed out” from relocated sediment, the deposit of saline marine and estuarine dredge material may occur without any significant deleterious environmental effect.

Most dredged materials produced in the Province result from the need to maintain navigation channels within water bodies subject to natural siltation such as the mouth of the Fraser River. Due to the large annual volumes of dredged material produced, it is usually not economically or technically feasible to wash or “rainwater leach” salt from bulk materials before they are deposited.

In British Columbia, dredged material of marine or estuarine origin may be deposited on land at both near shore and upland sites. In contrast with upland sites, at near shore areas hydraulically connected to marine or estuarine water bodies, the deposition or relocation of

marine or estuarine dredged material is unlikely to result in significant environmental degradation

In consideration of the above, the ministry has prepared this guidance to explain when Schedule 7 soil standards triggering CSRAs are, or are not, applicable to dredged material solely contaminated with salt to be relocated to near shore or upland sites.

Checklist 1

To determine if the Schedule 7 soil standards triggering CSRAs apply in the case of the relocation of marine and estuarine dredged sediment, complete Checklist 1.

Any completed Checklist 1 is a required component of the environmental documentation related to the relocation. The completed checklist must be retained by the responsible person relocating the dredged material and must be provided if requested by the Director.

Note

Appendix 1 provides a summary of controlling conditions which would require a CSRA, under Checklist 1, to relocate salty soil of dredged marine or estuarine origin. If Checklist 1 indicates that a CSRA is required to deposit dredged material at a receiving site, the CSRA must be obtained before the relocation of the dredged material occurs.

Responsibilities related to possible offsite contamination

A responsible person for a site who authorizes the deposit of dredged material on the site is responsible for any contamination that migrates offsite to other properties from the dredged material.

Site profile submission not required

Submission of a site profile under section 40 of the Act is not required to remove or deposit dredged sediment.

Status as a contaminated site of an estuarine river system

The Fraser River, for example, is an estuarine river system and is subject to tidal sea water infiltration. This tidal infiltration takes the form of a deep lying salt water wedge which progresses inland from the mouth of the river to a variable extent dependant largely on seasonal variation in the rate of flow of freshwater exiting the river system and the rate and extent of tidal mixing of sea water and freshwater within the system. Thus, dredged material taken from locations along the river subject to the sea water wedge can contain variable concentrations of salt water and variable concentrations of salt within the dredged material.

Section 11 (1) of the Regulation defines a contaminated site as a site at which “(c) the concentration of any substance in sediment at the site is greater than the applicable generic numerical sediment criterion”.

Schedule 9 does not list sediment criteria for salt, chloride or sodium ions. Further, if no substance other than salt is present in the sediment of an estuarine river that exceeds the criteria in Schedule 9, the river is not considered a contaminated site under the Act.

Requirements for a CSRA for dredged estuarine sediments

A CSRA must be only obtained if a person relocates contaminated soil from a contaminated site as provided in Section 55 of the Act and Part 8 of the Regulation. Since an estuarine river is not a contaminated site with respect to salt, it follows that no CSRA would be required to initially relocate dredged sediment contaminated only with salt, from a river to land.

However, once deposited on land, the dredged material is defined as “soil” under the Regulation. If the concentration of salt in the dredged material deposited to land exceeds the soil quality standards of the Regulation for the specified land use applicable at the deposit or any subsequent relocation site, the deposit of the dredged material may create new contaminated sites.

Dredged sand such as that from the Fraser River is a valuable resource and has been successfully used for a wide variety of purposes at commercial, industrial, residential and even agricultural sites for many years. Most Fraser River sand (and in particular the sand extracted from upstream of the river’s salt wedge) is not expected to be contaminated with salt or any other substance listed in Schedule 7 of the Regulation.

This guidance, by specifying when a CSRA is required to deposit or relocate marine or estuarine dredged material contaminated solely with salt, is designed to preclude the possibility of creating a new contaminated site as a result of such deposit or relocation.

For more information contact the Environmental Management Branch at site@gov.bc.ca.

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Checklist 1

Purpose

This checklist is to be used to determine if Schedule 7 soil standards triggering Soil Relocation Agreements for salt apply to the relocation of dredged materials of marine or estuarine origin on near shore or upland sites.

Limitations

This checklist is specific, and solely limited, to the applicability of Schedule 7 standards for sodium (Na^+) and chloride (Cl^-) ions in marine or estuarine dredged material to be relocated on land.

Definitions

The following words and expressions used in this guidance are defined in the ministry procedure "Definitions and Acronyms for Contaminated Sites".

- freshwater
- high density residential
- marine or estuarine dredged material
- near shore
- single family residential
- undeveloped land
- upland

Documentation

This checklist if completed to support the relocation of dredged materials of marine or estuarine origin is a requisite component of environmental documentation related to the relocation. The completed checklist must be retained by the responsible person relocating the soil and must be provided if requested by the Director.

Instructions

Answer the questions in Parts A through Q as directed, either “Yes” or “No”.

PART A – Contaminated Sites Regulation exemptions – all receiving sites			
Question Number	Question	Yes	No
A-1 ¹	If the concentration of chloride and sodium in the marine/estuarine dredged materials to be relocated is known, are the concentrations of chloride (Cl ⁻) ≤ 35 ug/g and sodium (Na ⁺) ≤ 200 ug/g?		
A-2	Is the dredged material to be deposited for disposal at an authorized treatment or disposal facility (e.g. permitted landfill or treatment facility)?		
A-3	Is the dredged material to be deposited on the same site from which it originated?		
A-4	Is the volume of the dredged material to be deposited ≤ 5 m ³ ?		
A-5	Is the receiving site located in an area designated as a “Wide Area Site” under the Contaminated Sites Regulation?		
A-6	Is the receiving site a federal property or located outside of British Columbia?		
A-7	Are chloride and sodium concentrations in the dredged materials known to be less than or equal to background soil chloride and sodium concentrations determined for the geographic area of the receiving site?		
A-8	Will the dredged marine or estuarine material be relocated to land other than undeveloped land?		

¹ If the concentrations of chloride and sodium in the marine/estuarine dredged materials to be deposited are unknown, answer “No” to question A-1.

If you answered “Yes” to any of the questions comprising Part A, the relocation of the dredged marine or estuarine materials is exempt from the need to obtain a Contaminated Soil Relocation Agreement under the provisions of the Contaminated Sites Regulation.

If you answered “No” to all of the questions comprising Part A, proceed to Part B.

Note: Only complete Part B below, if you answered “No” to all of the questions comprising Part A above.

PART B – Other regulatory considerations – all receiving sites			
Question Number	Question	Yes	No
B-1	Does the dredged material constitute hazardous waste under the Hazardous Waste Regulation?		
B-2	Is the receiving site subject to regulation under an <i>Environmental Management Act</i> authorization?		
B-3	Is the receiving site subject to regulation under any other Provincial regulatory authorization (e.g. <i>Mines Act</i> permit)?		
B-4	Is the dredged marine or estuarine material to be relocated contaminated with substances other than chloride or sodium?		

If you answered “Yes” to question B-1, the relocation of the dredged materials is prohibited unless authorized under the provisions of the Hazardous Waste Regulation.

If you answered “Yes” to question B-2 or B-3 and the authorization does not authorize the deposit of dredged materials, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “Yes” to question B-4, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part B, proceed to Part C.

Note: Only complete Part C below, if you answered “No” to all of the questions comprising Part B above.

PART C – General environmental considerations – all receiving sites			
Question Number	Question	Yes	No
C-1	Will the dredged materials be deposited in a “riparian assessment area” or freshwater “stream” as defined in the Riparian Area Regulation?		
C-2	Will the dredged materials be deposited in a “sensitive stream” designated under the Sensitive Streams Designation and Licensing Regulation?		
C-3	Will dredged materials be deposited at a receiving site which has engineered works to collect and return effluent and leachate arising from the dredged materials to a sewer, or directly to a marine or estuarine water body?		

If you answered “Yes” to question C-1 or C-2, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “Yes” to question C-3, proceed to Part D

If you answered “No” to question C-3, proceed to Part I

Note: *Only complete Part D below, if you answered “Yes” to question C-3 in Part C above. Part D identifies the location of the receiving site with engineered works to which the dredged materials will be deposited.*

PART D – Receiving site with engineered works – location			
Question Number	Question	Yes	No
D-1	Will dredged marine or estuarine materials be deposited at a near shore site?		
D-2	Will dredged marine or estuarine materials be deposited at an upland site?		

If you answered “Yes” to question D-1 proceed to Part E.

If you answered “Yes” to question D-2 proceed to Part G.

Note: *Only complete Part E below, if you answered “Yes” to question D-1 in Part D above.*

PART E – Near shore receiving site with engineered works – land use			
Question Number	Question	Yes	No
E-1	Will the dredged materials be deposited on, “agricultural land” as defined in the CSR?		

If you answered “Yes” to question E-1 proceed to Part F.

If you answered “No” to question E-1, the standards of Schedule 7 do not apply. The relocation of the dredged materials to a near shore receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: *Only complete Part F below, if you answered “Yes” to question E-1 in Part E above.*

PART F – Near shore agricultural land receiving site with engineered works – environmental considerations			
Question Number	Question	Yes	No
F-1	Is the concentration of chloride (Cl ⁻) in the dredged material to be deposited at the near shore agricultural receiving site > 350 ug/g?		
F-2	Is the concentration of sodium (Na ⁺) in the dredged material to be deposited at the near shore agricultural receiving site > 200 ug/g?		

If you answered “Yes” to either question comprising Part F, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to both of the questions comprising Part F, the standards of Schedule 7 do not apply. The relocation of the dredged materials to a near shore agricultural land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part G below, if you answered “Yes” to question D-2 in Part D above. Part G identifies the CSR land use of the upland receiving site with engineered works to which the dredged materials will be deposited.

PART G – Upland receiving site with engineered works – land use			
Question Number	Question	Yes	No
G-1	Will the dredged materials be deposited on, “agricultural land” as defined in the CSR?		
G-2	Will the dredged materials be deposited on “wildlands” as defined in the CSR?		
G-3	Will the dredged materials be deposited on “urban parkland” as defined in the CSR?		
G-4	Will the dredged materials be deposited on “residential land” as defined in the CSR?		
G-4a	If the receiving site is residential land, is the site primarily comprised of “single family residential” dwellings?		

If you answered “Yes” to any question comprising Part G proceed to Part H.

If you answered “No” to all questions comprising Part G, the standards of Schedule 7 do not apply. The relocation of the dredged materials to a near shore receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all

other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part H below, if you answered “Yes” to any question comprising Part G above.

PART H – Upland agricultural, wildlands, urban parkland or single-family residential land receiving site with engineered works – environmental considerations			
Question Number	Question	Yes	No
H-1	Is the concentration of chloride (Cl ⁻) in the dredged material to be deposited at the upland agricultural, wildlands, urban parkland or single family residential receiving site > 350 ug/g?		
H-2	Is the concentration of sodium (Na ⁺) in the dredged material to be deposited at the near shore agricultural, wildlands, urban parkland or single family residential receiving site > 200 ug/g?		

If you answered “Yes” to any question comprising Part H, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part H, the standards of Schedule 7 do not apply. The relocation of the dredged materials to an upland agricultural, wildlands, urban parkland or single family residential land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part I below, if you answered “No” to question C-3 in Part C above. Part I identifies the location of the receiving site without engineered works to which the dredged materials will be deposited.

PART I – Receiving site without engineered works – location			
Question Number	Question	Yes	No
I-1	Will dredged marine or estuarine materials be deposited at a near shore site?		
I-2	Will dredged marine or estuarine materials be deposited at an upland site?		

If you answered “Yes” to question I-1 proceed to Part J.

If you answered “Yes” to question I-2 proceed to Part N.

Note: Only complete Part J below, if you answered “Yes” to question I-1 in Part I above. Part J identifies the CSR land use of the near shore receiving site without engineered works to which the dredged materials will be deposited.

PART J – Near shore receiving site without engineered works – land use			
Question Number	Question	Yes	No
J-1	Will the dredged materials be deposited on, “agricultural land” as defined in the CSR?		
J-2	Will the dredged materials be deposited on “wildlands” as defined in the CSR?		
J-3	Will the dredged materials be deposited on “urban parkland” as defined in the CSR?		
J-4	Will the dredged materials be deposited on “residential land” as defined in the CSR?		
J-4a	If the receiving site is residential land, is the site primarily comprised of “single family residential” dwellings?		
J-4b	If the receiving site is residential land, is the site primarily comprised of “high density residential” dwellings?		
J-5	Will the dredged materials be deposited on “commercial land” as defined in the CSR?		
J-6	Will the dredged materials be deposited on “industrial lands” as defined in the CSR?		

If you answered “Yes” to question J-1 proceed to Part K.

If you answered “Yes” to question J-2, J-3, or J-4 and J-4a proceed to Part L.

If you answered “Yes” to question J-4 and J-4b, J-5 or J-6 proceed to Part M.

Note: Only complete Part K below, if you answered “Yes” to question J-1 in Part J above.

PART K – Near shore agricultural receiving site without engineered works – environmental considerations			
Question Number	Question	Yes	No
K-1	Is the near shore agricultural receiving site: 1. located 300 m or less upgradient from a drinking water well, and 2. are the concentrations of chloride (Cl ⁻) > 90 ug/g and of sodium (Na ⁺) > 15 000 ug/g in the dredged materials to be deposited?		
K-2	Is the near shore agricultural receiving site: 1. located 300 m or less upgradient from a livestock watering well, and 2. is the concentration of chloride (Cl ⁻) in the dredged materials to be deposited > 200 ug/g?		

K-3	Is the near shore agricultural receiving site located: 1. 300 m or less upgradient from an irrigation well, and 2. is the concentration of chloride (Cl ⁻) in the dredged materials to be deposited > 35 ug/g?		
K-4	Is the concentration of chloride (Cl ⁻) in the dredged material to be deposited at the near shore agricultural receiving site > 350 ug/g?		
K-5	Is the concentration of sodium (Na ⁺) in the dredged material to be deposited at the near shore agricultural receiving site > 200 ug/g?		

If you answered “Yes” to any question comprising Part K, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part K, the standards of Schedule 7 do not apply. The relocation of the dredged materials to a near shore agricultural land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part L below, if you answered “Yes” to question J-2, J-3 or J-4 and J-4a in Part J above.

PART L – Near shore wildlands, urban parkland or single-family residential receiving site without engineered works – environmental considerations			
Question Number	Question	Yes	No
L-1	Is the near shore wildlands, urban parkland or single family residential receiving site: 1. located 300 m or less upgradient from a drinking water well, and 2. are the concentrations of chloride (Cl ⁻) > 90 ug/g and of sodium (Na ⁺) > 15 000 ug/g in the dredged materials to be deposited?		
L-2	Is the near shore wildlands, urban parkland or single family residential receiving site located: 1. 300 m or less upgradient from an irrigation well, and 2. is the concentration of chloride (Cl ⁻) in the dredged materials to be deposited > 35 ug/g?		
L-3	Is the concentration of chloride (Cl ⁻) in the dredged material to be deposited at the near shore wildlands, urban parkland or single family residential receiving site > 350 ug/g?		
L-4	Is the concentration of sodium (Na ⁺) in the dredged material to be deposited at the near shore wildlands, urban parkland or single family residential receiving site > 200 ug/g?		

If you answered “Yes” to any question comprising Part L, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part L, the standards of Schedule 7 do not apply. The relocation of the dredged materials to a near shore wildlands, urban parkland or single family residential land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part M below, if you answered “Yes” to question J-4 and J-4b, J-5 or J-6 in Part J above.

PART M – Near shore high density residential, commercial or industrial receiving site without engineered works – environmental considerations			
Question Number	Question	Yes	No
M-1	Is the near shore high density residential, commercial or industrial receiving site: <ol style="list-style-type: none"> 1. located 300 m or less upgradient from a drinking water well, and 2. are the concentrations of chloride (Cl⁻) > 90 ug/g and of sodium (Na⁺) > 15 000 ug/g in the dredged materials to be deposited? 		

If you answered “Yes” to question M-1, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to question M-1, the standards of Schedule 7 do not apply. The relocation of the dredged materials to a near shore high density residential, commercial or industrial land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part N below, if you answered “Yes” to question I-2 in Part I above. Part N identifies the CSR land use of the upland receiving site without engineered works to which the dredged materials will be deposited.

PART N – Upland receiving site without engineered works – land use			
Question Number	Question	Yes	No
N-1	Will the dredged materials be deposited on, “agricultural land” as defined in the CSR?		
N-2	Will the dredged materials be deposited on “wildlands” as defined in the CSR?		
N-3	Will the dredged materials be deposited on “urban parkland” as defined in the CSR?		
N-4	Will the dredged materials be deposited on “residential land” as defined in the CSR?		
N-4a	If the receiving site is residential land, is the site primarily comprised of “single family residential” dwellings?		
N-4b	If the receiving site is residential land, is the site primarily comprised of “high density residential” dwellings?		
N-5	Will the dredged materials be deposited on “commercial land” as defined in the CSR?		
N-6	Will the dredged materials be deposited on “industrial lands” as defined in the CSR?		

If you answered “Yes” to question N-1 proceed to Part O.

If you answered “Yes” to question N-2, N-3, or N-4 and N-4a proceed to Part P.

If you answered “Yes” to question N-4 and N-4b, N-5 or N-6 proceed to Part Q.

Note: Only complete Part O below, if you answered “Yes” to question N-1 in Part N above.

PART O – Upland agricultural receiving site without engineered works – environmental considerations			
Question Number	Question	Yes	No
O-1	Is the upland agricultural receiving site: 1. located 300 m or less upgradient from freshwater aquatic life, and 2. is the concentration of chloride in the dredged material to be deposited > 550 ug/g)?		
O-2	Is the upland agricultural receiving site: 1. located 300 m or less upgradient from a drinking water well, and 2. are the concentrations of chloride (Cl ⁻) > 90 ug/g and of sodium (Na ⁺) > 15 000 ug/g in the dredged materials to be deposited?		
O-3	Is the upland agricultural receiving site: 1. located 300 m or less upgradient from a livestock watering well, and 2. is the concentration of chloride (Cl ⁻) in the dredged materials to be deposited > 200 ug/g)?		

O-4	Is the upland agricultural receiving site: 1. located 300 m or less upgradient from an irrigation well, and 2. is the concentration of chloride (Cl ⁻) in the dredged materials to be deposited > 35 ug/g?		
O-5	Is the concentration of chloride (Cl ⁻) in the dredged material to be deposited at the upland agricultural receiving site > 350 ug/g?		
O-6	Is the concentration of sodium (Na ⁺) in the dredged material to be deposited at the upland agricultural receiving site > 200 ug/g?		

If you answered “Yes” to any question comprising Part O, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part O, the standards of CSR Schedule 7 do not apply. The relocation of the dredged materials to an upland agricultural land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part P below, if you answered “Yes” to question N-2, N-3 or N-4 and N-4a in Part N above.

PART P – Upland wildlands, urban parkland or single family residential receiving site without engineered works – environmental considerations			
Question Number	Question	Yes	No
P-1	Is the upland wildlands, urban parkland or single family residential receiving site: 1. located 300 m or less upgradient from freshwater aquatic life, and 2. is the concentration of chloride (Cl ⁻) in the dredged material to be deposited > 550 ug/g?		
P-2	Is the upland wildlands, urban parkland or single family residential receiving site: 1. located 300 m or less upgradient from a drinking water well, and 2. are the concentrations of chloride (Cl ⁻) > 90 ug/g and of sodium (Na ⁺) > 15 000 ug/g in the dredged materials to be deposited?		
P-3	Is the upland wildlands, urban parkland or single family residential receiving site located: 1. 300 m or less upgradient from an irrigation well, and 2. is the concentration of chloride (Cl ⁻) in the dredged materials to be deposited > 35 ug/g?		

P-4	Is the concentration of chloride (Cl ⁻) in the dredged material to be deposited at the upland wildlands, urban parkland or single family residential receiving site > 350 ug/g?		
P-5	Is the concentration of sodium (Na ⁺) in the dredged material to be deposited at the upland wildlands, urban parkland or single family residential receiving site > 200 ug/g?		

If you answered “Yes” to any question comprising Part P, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part P, the standards of Schedule 7 do not apply. The relocation of the dredged materials to an upland wildlands, urban parkland or single family residential land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Note: Only complete Part Q below, if you answered “Yes” to question N-4 and N-4b, N-5 or N-6 in Part N above.

PART Q – Upland high density residential, commercial or industrial receiving site without engineered works – environmental considerations			
Question Number	Question	Yes	No
Q-1	Is the upland high density residential, commercial or industrial receiving site: <ol style="list-style-type: none"> 1. located 300 m or less upgradient from freshwater aquatic life, and 2. is the concentration of chloride (Cl⁻) in the dredged material to be deposited > 550 ug/g? 		
Q-2	Is the upland high density residential, commercial or industrial land receiving site: <ol style="list-style-type: none"> 1. located 300 m or less upgradient from a drinking water well, and 2. are the concentrations of chloride (Cl⁻) > 90 ug/g and of sodium (Na⁺) > 15 000 ug/g in the dredged materials to be deposited? 		

If you answered “Yes” to any question comprising Part Q, the standards of Schedule 7 apply. Obtain the required Contaminated Soil Relocation Agreement prior to depositing the dredged material.

If you answered “No” to all of the questions comprising Part Q, the standards of Schedule 7 do not apply. The relocation of the dredged materials to an upland high density residential, commercial or industrial land receiving site does not require a Contaminated Soil Relocation Agreement to proceed. However, in all other respects, it remains the responsibility of the party depositing the dredged materials to ensure that all Federal, Provincial and Local government requirements are met prior to depositing the dredged material.

Appendix 1

Summary of Controlling Conditions Which Would Require a CSRA Under Checklist 1 to Relocate Salty Soil of Dredged Marine or Estuarine Origin

Receiving Site Location & Engineered Works Status	Receiving Site Land Use Status		
	AL	UP/WL/SFR	CL/IL/HDR
NS + works	SIP (no well check)	none	none
NS - no works	SIP, well check [DW, LW, IW]	SIP, well check [DW & IW]	well check [DW] (no SIP)
UP +works	SIP (no well check)	SIP (no well check)	none
UP - no works	SIP, well check [DW, LW, IW] & Aq	SIP, well check [DW & IW] & Aq	well check [DW] & Aq (no SIP)

Note: Technical Guidance 33 includes an exemption from the requirement to obtain a CSRA if the deposit will be to land other than undeveloped land.

Key

CSRA	Contaminated Soil Relocation Agreement	+ works	Engineered works to collect water present at site
AL	Agricultural land	SIP	Schedule 5 soil invertebrate and plants standard
UP	Urban parkland	well check	Site is within 300m of specified type of well
WL	Wildlands	- no works	No engineered works to collect water present at site
SFR	Single family residential land	DW	Drinking water
CL	Commercial land	LW	Livestock water
IL	Industrial land	IW	Irrigation water
HDR	High density residential land	UP	Upland receiving site
NS	Near shore receiving site	Aq	Site is within 300 m of aquatic life