TABLE 1
SOIL AND GROUNDWATER CLEANUP LEVELS FOR INDICATOR HAZARDOUS SUBSTANCES
FORMER SCOTT PAPER COMPANY MILL SITE

Constituent	Site-Specific MTCA Method B Soil Cleanup Level (mg/kg)	Site-Specific MTCA Method B Groundwater Cleanup Level (µg/L)
METALS		
Antimony	32	640
Arsenic	20	8
Chromium (total)	117	50
Copper	100 to 366	20
Lead	220	8.1
Mercury	9	0.04
Nickel	100 to 977	22
Thallium	5.6	--
Zinc	270 to 662	160
TOTAL PETROLEUM HYDROCARBONS		
Diesel-Range	2,000 (a)	500 (a)
Motor Oil-Range	2,000 (a)	500 (a)
PAHs		
Total cPAHs - TEQ	0.14	0.10
PCBs		
Total PCBs	1.0	1.8
DIOXINS AND FURANS		
Total dioxins/furans - human health TEQ	0.000011	0.000034
Total dioxins - ecological TEQ	0.000005	0.000034
Total furans - ecological TEQ	0.000003	0.000034

Notes:
(j) Further sediment elutriate Microtox bioassay testing will be perfomed during RD to verify the prote
cPAHs = Carcinogenic polycyclic aromatic hydrocarbons
PCBs = Polychlorinated biphenyls
TEQ = Toxicity Equivalent Quotient
-- = Not applicable

TABLE 2
SEDIMENT CLEANUP LEVELS AND NEARSHORE SOIL REMEDIATION LEVELS
FOR SEDIMENT CHEMICALS OF POTENTIAL CONCERN
FORMER SCOTT PAPER COMPANY MILL SITE

Chemicals	Site-Specific Sediment Cleanup Level (1)	Site-Specific Nearshore Soil Remediation Level (2)
Conventionals (%)		
Wood debris (by volume)	25 (3)	--
Total volatile solids (%)	12.2 (3)	--
Metals (mg/kg)		
Copper	390	390 (4)
Lead	450	530 (4)
Mercury	0.41	0.59 (4)
PCBs (mg/kg)		
Total PCBs	12 mg/kg OC	1.3 (5)
Total Petroleum Hydrocarbons (mg/kg)		
Diesel-Range	2,000 (6)	2,000 (6)
Motor Oil-Range	2,000 (6)	2,000 (6)

Notes:

(1) Proposed cleanup levels are based on the SQS (Sediment Quality Standards - WAC 173-204-320).

(2) Nearshore soil excavation criteria (0 to 10 ft BGS) located within the 75-ft shoreline buffer zone. Nearshore soil excavation criteria within the 0 to 6 ft BGS interval also include site-specific soil cleanup levels listed in Table 1. See Section 3.4.

(3) Wood debris and total volatile solids criteria based on site-specific bioassays.

(4) Based on sediment CSL chemical criteria.

(5) Based on sediment CSL chemical criteria, normalized to the average Site sediment TOC level of 2%.

(6) Further sediment elutriate Microtox bioassay testing will be perfomed during RD to verify the protectiveness of cleanup and remediation levels for these substances.

-- = Not applicable

mg/kg = milligrams per kilogram

TABLE 3
DESCRIPTION OF CLEANUP ACTION ALTERNATIVES: PORT UPLANDS AREA
FORMER SCOTT PAPER COMPANY MILL SITE

Site Subunit	Matrix	Contaminants Exceeding Proposed Cleanup Levels	Objective	CLEANUP ACTION ALTERNATIVE COMPONENTS Alternative PUA-1	Alternative PUA-2	Alternative PUA-3	Alternative PUA-4
Shoreline Buffer Zone (1)	Soil Exceeding Human Health and Terrestrial Ecological Cleanup Levels and Sediment Quality Standards for Mercury, Lead, and Copper	TPH, PAHs, Metals	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels based on risk to respective receptors. Remove source material with potential to cause contamination of adjacent Marine Area sediments. Restore shoreline habitat.	- Excavate to the extent feasible, soil between 0 and 15 ft BGS exceeding human health and terrestrial ecological cleanup levels in a shoreline buffer zone between the MHHW line and 100 ft inland from the MHHW line. Within the shoreline buffer zone, excavation would also achieve the sediment quality standard for mercury, lead, and copper. - Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore original land topography, restore site features and surfaces. - Restore shoreline habitat.	- Excavate to the extent feasible, soil between 0 and 15 ft BGS exceeding human health and terrestrial ecological cleanup levels in a shoreline buffer zone between the MHHW line and 100 ft inland from the MHHW line. Within the shoreline buffer zone, excavation would also achieve the sediment quality standard for mercury, lead, and copper. - Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore original land topography, restore site features and surfaces. - Restore shoreline habitat.	- Excavate to the extent feasible, soil between 0 and 6 ft BGS exceeding human health and terrestrial ecological cleanup levels in a shoreline buffer zone between the MHHW line and 100 ft inland from the MHHW line. Within the shoreline buffer zone, excavation would also achieve the sediment quality standard for mercury, lead, and copper. - Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore original land topography, restore site features and surfaces. - Restore shoreline habitat. - Develop institutional controls in the form of restrictive covenants to ensure current and future property owners are aware of remaining contaminated soil and the requirements for protection of future site workers and terrestrial ecological receptors.	- Excavate to the extent feasible, soil between 0 and 10 ft BGS exceeding human health and terrestrial ecological cleanup levels in a shoreline buffer zone between the MHHW line and 75 ft inland from the MHHW line. Within the shoreline buffer zone, excavation would also achieve the sediment quality standard for mercury, lead, and copper. - Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore original land topography, restore site features and surfaces. - Restore shoreline habitat. - Develop institutional controls in the form of restrictive covenants to ensure current and future property owners are aware of remaining contaminated soil and the requirements for protection of future site workers and terrestrial ecological receptors.
Remaining Upland Areas	Soil - 0 to 6 ft BGS Exceeding Human Health and Terrestrial Ecological Cleanup Levels	TPH, PAHs, Metals	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels based on risk to respective receptors.	- Excavate to the extent feasible, soil exceeding human health and terrestrial ecological cleanup levels. - Disposal and site restoration as per shoreline buffer zone description. - Additional soil bioassay testing to be performed may show that terrestrial ecological risks are not present in certain areas of the Site.	- Excavate to the extent feasible, soil exceeding human health and terrestrial ecological cleanup levels. - Disposal and site restoration as per shoreline buffer zone description. - Additional soil bioassay testing to be performed may show that terrestrial ecological risks are not present in certain areas of the Site.	- Excavate to the extent feasible, soil exceeding human health and terrestrial ecological cleanup levels. - Disposal and site restoration as per shoreline buffer zone description. - Additional soil bioassay testing to be performed may show that terrestrial ecological risks are not present in certain areas of the Site.	- Excavate to the extent feasible, soil exceeding human health and terrestrial ecological cleanup levels. - Disposal and site restoration as per shoreline buffer zone description. - Additional soil bioassay testing to be performed may show that terrestrial ecological risks are not present in certain areas of the Site.
	Soil - 6 to 15 ft BGS Exceeding Human Health and Terrestrial Ecological Cleanup Levels	TPH, PAHs, Metals	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels based on risk to respective receptors.	- Excavate to the extent feasible, soil exceeding human health and terrestrial ecological cleanup levels. - Disposal and site restoration as per shoreline buffer zone description.	- Excavate soil at sample location ET-TP03 on Parcel 1 that exceeds human health cleanup level for arsenic (approximately 10 ft BGS). - Disposal and site restoration as per shoreline buffer zone description. - Develop institutional controls in the form of restrictive covenants to ensure current and future property owners (Parcels 2 and 3) are aware of remaining contaminated soil and the requirements for protection of future site workers and terrestrial ecological receptors.	- Excavate soil at sample location ET-TP03 on Parcel 1 that exceeds human health cleanup level for arsenic (approximately 10 ft BGS). - Disposal and site restoration as per shoreline buffer zone description. - Develop institutional controls in the form of restrictive covenants to ensure current and future property owners are aware of remaining contaminated soil and the requirements for protection of future site workers and terrestrial ecological receptors.	- Excavate soil at sample location ET-TP03 on Parcel 1 that exceeds human health cleanup level for arsenic (approximately 10 ft BGS). - Disposal and site restoration as per shoreline buffer zone description. - Develop institutional controls in the form of restrictive covenants to ensure current and future property owners (Parcels 2 and 3) are aware of remaining contaminated soil and the requirements for protection of future site workers and terrestrial ecological receptors.
			Remove source of free-phase petroleum product in MW-110. Prevent contamination of groundwater and surface water through potential transfer of TPH from soil to groundwater.	-Excavate to the extent feasible, soil containing TPH and free product exceeding human health cleanup levels in the vicinity of monitoring well MW-110. - Disposal and site restoration as per shoreline buffer zone description.	-Excavate to the extent feasible, soil containing TPH and free product exceeding human health cleanup levels in the vicinity of monitoring well MW-110. - Disposal and site restoration as per shoreline buffer zone description.	-Excavate to the extent feasible, soil containing TPH and free product exceeding human health cleanup levels in the vicinity of monitoring well MW-110. - Disposal and site restoration as per shoreline buffer zone description.	-Excavate to the extent feasible, soil containing TPH and free product exceeding human health cleanup levels in the vicinity of monitoring well MW-110. - Disposal and site restoration as per shoreline buffer zone description.
	Groundwater Exceeding Cleanup Levels Protective of Marine Surface Water	TPH, Arsenic	Confirm no migration of contaminated groundwater to adjacent soil and sediment or future impacts to surface water.	Install new monitoring well network and monitor a minimum of quarterly for one year.	Install new monitoring well network and monitor a minimum of quarterly for one year; perform long-term monitoring as required by Ecology.	Install new monitoring well network and monitor a minimum of quarterly for one year; perform long-term monitoring as required by Ecology.	Install new monitoring well network and monitor a minimum of quarterly for one year; perform long-term monitoring as required by Ecology.
			Estimated Alternative Cost (+50%/-30%, rounded)	$18,300,000	$11,500,000	$4,800,000	$9,100,000
			Estimated Volume of Contaminated Soil Removed	53,000 cubic yards	31,000 cubic yards	15,500 cubic yards	23,500 cubic yards
			Estimated Timeframe to Closure (2)	Two to three years	Two to three years	Two to three years	Two to three years

Notes:
(1) 100-ft zone inland from MHHW for Alternatives PUA-1, PUA-2, and PUA-3; 75-ft zone inland from MHHW for Alternative PUA-4. Buffer zones established by Ecology.
(2) From initiation of remedial design through construction completion.

TABLE 4
EVALUATION OF CLEANUP ACTION ALTERNATIVES: PORT UPLANDS AREA
FORMER SCOTT PAPER COMPANY MILL SITE

	Alternative PUA-1	Alternative PUA-2	Alternative PUA-3	Alternative PUA-4
	- Excavate to the extent feasible, soil between 0 and 15 ft BGS in the shoreline buffer zone exceeding human health and terrestrial ecological cleanup levels. - Excavate to the extent feasible, soil between 0 and 15 ft BGS in the remaining upland areas exceeding human health and terrestrial ecological cleanup levels. - Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations.	- Excavate to the extent feasible, soil between 0 and 15 ft BGS in the shoreline buffer zone exceeding human health and terrestrial ecological cleanup levels. - Excavate soil at sample location ET-TP03 on Parcel 1 that exceeds human health cleanup level for arsenic (approximately 10 ft BGS). - Remove TPH-contaminated soil to a depth of up to 15 ft BGS in vicinity of monitoring well MW-110. - Excavate to the extent feasible, soil between 0 and 6 ft BGS in the remaining upland areas exceeding human health and terrestrial ecological cleanup levels to establish a conditional point of compliance.	- Excavate to the extent feasible, soil between 0 and 6 ft BGS throught site exceeding human health and terrestrial ecological cleanup levels. - Remove TPH-contaminated soil to a depth of up to 15 ft BGS in vicinity of monitoring well MW-110. - Excavate soil at sample location ET-TP03 on Parcel 1 that exceeds human health cleanup level for arsenic (approximately 10 ft BGS). - Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore original land topography, restore site features and surfaces.	- Excavate to the extent feasible, soil between 0 and 10 ft BGS in a 75-foot shoreline buffer zone exceeding human health and terrestrial ecological cleanup levels. Within the shoreline buffer zone, excavation would also achieve the sediment quality standard for mercury, lead, and copper. - Excavate soil at sample location ET-TP03 on Parcel 1 that exceeds human health cleanup level for arsenic (approximately 10 ft BGS). - Remove TPH-contaminated soil to a depth of up to 15 ft BGS in vicinity of monitoring well MW-110. - Excavate to the extent feasible, soil between 0 and 6 ft BGS in the remaining upland areas exceeding human health and terrestrial ecological cleanup levels to establish a conditional point of compliance.
	- Backfill to restore original land topography, restore site features and surfaces. - Install new monitoring well network and monitor a minimum of quarterly for one year. - Restore shoreline habitat.	- Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore to original land topography, restore site features and surfaces. - Install new monitoring well network and monitor a minimum of quarterly for one year; perform long-term groundwater monitoring as required by Ecology. - Administer institutional controls (restrictive covenants) to prevent future human (site worker) and terrestrial ecological exposure to, and ensure proper disposal of, soil left in place below 6 ft BGS containing contaminants above proposed cleanup levels. - Restore shoreline habitat.	- Install new monitoring well network and monitor a minimum of quarterly for one year; perform long-term groundwater monitoring as required by Ecology. - Administer institutional controls (restrictive covenants) to prevent future human (site worker) and terrestrial ecological exposure to, and ensure proper disposal of, soil left in place below 6 ft BGS containing contaminants above proposed cleanup levels. - Restore shoreline habitat.	- Dispose of contaminated soil at approved off-site disposal facility based on contaminant concentrations. - Backfill to restore original land topography, restore site features and surfaces. - Install new monitoring well network and monitor a minimum of quarterly for one year; perform long-term groundwater monitoring as required by Ecology. - Administer institutional controls (restrictive covenants) to prevent future human (site worker) and terrestrial ecological exposure to, and ensure proper disposal of, soil left in place below 6 ft BGS containing contaminants above proposed cleanup levels. - Restore shoreline habitat.
Alternative Ranking Under MTCA				
1. Compliance with MTCA Threshold Criteria				
Protection of Human Health and the Environment	Yes - Alternative would protect human health and the environment.	Yes - Alternative would protect human health and the environment through a combination of removal and institutional controls.	No - Ecology has determined that this alternative would not be protective of human health and the environment because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	Yes - Alternative would protect human health and the environment through a combination of removal and institutional controls.
Compliance With Cleanup Standards	Yes - Alternative is expected to comply with cleanup standards as negotiated with Ecology.	Yes - Alternative is expected to comply with cleanup standards as negotiated with Ecology. This alternative utilizes institutional controls to prevent exposure to soil left in place below 6 ft BGS containing contaminants exceeding human health and terrestrial ecological cleanup levels. Compliance would rely on long-term monitoring and maintenance of intitutional controls. Future development of property could potentially require additional environmental cleanup or special provisions.	No - Ecology has determined that this alternative would not comply with cleanup standards because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	Yes - Alternative is expected to comply with cleanup standards as negotiated with Ecology. This alternative utilizes institutional controls to prevent exposure to soil left in place below 6 ft and/or 10 ft BGS containing contaminants exceeding human health and terrestrial ecological cleanup levels. Marine wave attenuation would be necessary to prevent potential erosion of contaminated soil left in place in the shoreline buffer zone. Compliance would rely on long-term monitoring and maintenance of intitutional controls. Future development of property could potentially require additional environmental cleanup or special provisions.
Compliance With Applicable State and Federal Regulations	Yes - Alternative complies with applicable state and federal regulations.	Yes - Alternative complies with applicable state and federal regulations. Future development of property could potentially require additional environmental cleanup or special provisions.	No - Ecology has determined that this alternative would not comply with applicable state and federal regulations because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	Yes - Alternative complies with applicable state and federal regulations. Future development of property could potentially require additional environmental cleanup or special provisions.
Provision for Compliance Monitoring	Yes - Alternative includes provisions for compliance monitoring.	Yes - Alternative includes provisions for compliance monitoring.	Yes - Alternative includes provisions for compliance monitoring.	Yes - Alternative includes provisions for compliance monitoring.
2. Restoration Time Frame				
	Restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction and would result in no need for additional remedial action.	Initial restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction. The time frame for long-term monitoring is unknown. Potential future maintenance of institutional controls and coordination of proper handling and disposal of contaminated soil during future site development may extend the restoration time frame of this alternative.	Initial restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction. The time frame for long-term monitoring is unknown. Potential future maintenance of institutional controls and coordination of proper handling and disposal of contaminated soil during future site development may extend the restoration time frame of this alternative.	Initial restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction. The time frame for long-term monitoring is unknown. Potential future maintenance of institutional controls and coordination of proper handling and disposal of contaminated soil during future site development may extend the restoration time frame of this alternative.

TABLE 4
EVALUATION OF CLEANUP ACTION ALTERNATIVES: PORT UPLANDS AREA
FORMER SCOTT PAPER COMPANY MILL SITE

	Alternative PUA-1	Alternative PUA-2	Alternative PUA-3	Alternative PUA-4
3. Disproportionate Cost Analysis Relative Benefits Ranking (Scored from 1-lowest to 5-highest)				
Protectiveness	Score = 5 Achieves a high level of overall protectiveness as a result of removal of the soil that poses risk to human and ecological receptors at the Site.	Score = 4 Achieves a medium-high level of overall protectiveness as a result of removal of the near-surface soil that poses risk to human and ecological receptors at the Site. However, this alternative would leave in place deeper contaminated soil, and protectiveness would rely on maintenance of institutional controls to prevent exposure.	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 4 Achieves a medium-high level of overall protectiveness as a result of removal of the near-surface soil that poses risk to human and ecological receptors at the Site. However, this alternative would leave in place deeper contaminated soil, including along the shoreline, and protectiveness would rely on maintenance of institutional controls to prevent exposure and implementation of appropriate marine remedy to prevent erosion.
Permanence	Score = 5 Achieves a high level of permanent reduction of mass, toxicity, and mobility of hazardous substances at the Site through direct removal and disposal of the excavated material at appropriate off-site facilities. However, the elemental nature of some contaminants (i.e., metals) precludes the MTCA preference for destruction of contaminants. This alternative would reduce to the extent feasible the need to perform additional actions as the result of future development.	Score = 4 Achieves permanent reduction of mass, toxicity, and mobility of hazardous substances at the Site, but to a lower degree than Alternative PUA-1. The quantity of impacted soil allowed to remain on site is greater than with Alternative PUA-1. Future development may require modification of the remedy.	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 4 Achieves permanent reduction of mass, toxicity, and mobility of hazardous substances at the Site, but to a lower degree than Alternative PUA-1. Would rely on wave attenuation to prevent erosion of shoreline contaminants. The quantity of impacted soil left in place would be greater than with Alternatives PUA-1 and PUA-2. Future development may require modification of the remedy.
Long-Term Effectiveness	Score = 5 Removes hazardous substances from the Site to the greatest degree feasible and utilizes approved off-site disposal facilities for final disposition.	Score = 4 Removes the majority of hazardous substances from the Site and utilizes approved off-site disposal facilities for final disposition. Achieves complete removal of impacted soil along shoreline, to the extent feasible, but leaves deeper soil in place in areas across the remainder of the site that exceeds cleanup levels. The use of institutional controls reduces the risk to human health and the environment from the residual contamination left in place. Future development may require modification of the remedy.	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 3 Removes the majority of hazardous substances from the Site and utilizes approved off-site disposal facilities for final disposition, but leaves soil on site that exceeds cleanup levels. The use of institutional controls reduces the risk to human health and the environment from the residual contamination left in place. This alternative also relies on implementation of appropriate wave energy attenuation to prevent erosion of deeper impacted soil remaining at the shoreline. Future development may require modification of the remedy.
Management of Short-Term Risks	Score = 2 Involves extensive soil removal across the Site, including excavation near occupied buildings and across areas of park land currently used by the public. However, the excavation methods required to achieve the level of removal under this alternative are well established and capable of reducing short-term risks.	Score = 3 Involves extensive soil removal across the Site, including excavation near occupied buildings and across areas of park land currently used by the public. However, the excavation methods required to achieve the level of removal under this alternative are well established and capable of minimizing short-term risks.	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 3 Involves extensive soil removal across the Site, including excavation near occupied buildings and across areas of park land currently used by the public. However, the excavation methods required to achieve the level of removal under this alternative are well established and capable of minimizing short-term risks.
Technical and Admin. Implementability	Score = 2 Involves extensive soil removal across the Site, including the need for significant shoring and dewatering to achieve removal of deeper soil and soil adjacent to or under buildings. However, while complex, the excavation activities required for this alternative are common and feasible. Temporary site closure to public would allow facilitation of project.	Score = 3 Utilizes the same general construction methods as Alternative PUA-1, but on a smaller scale. Temporary site closure to public would allow facilitation of project.	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 3 Utilizes the same general construction methods as Alternatives PUA-1 and PUA-2, with less need for shoring and dewatering to achieve removal. However, the shoring required for the deeper shoreline excavation is greater than required with Alternative PUA-3. Temporary site closure to public would allow facilitation of project.
Consideration of Public Concerns	Score = 5 Provides for complete removal of contaminated soil from the Site, addressing public concerns associated with exposure to contaminants and restriction on future use and development of Site.	Score = 4 Addresses the most accessible soil that poses the greatest risk to human health and the environment. The remaining contaminated soil left in place would require maintenance of institutional controls and impose limitations on future use and development of the Port public property.	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 5 Addresses the most accessible soil that poses the greatest risk to human health and the environment. The remaining contaminated soil left in place would require maintenance of institutional controls and impose limitations on future use and development of the Port public property.

TABLE 5
SUMMARY OF MTCA EVALUATION AND RANKING OF CLEANUP ACTION ALTERNATIVES:
PORT UPLANDS AREA
FORMER SCOTT PAPER COMPANY MILL SITE

Alternative Number	PUA-1	PUA-2	PUA-3	PUA-4
Alternative Ranking Under MTCA				
1. Compliance with MTCA Threshold Criteria (1)	YES	YES	NO	YES
2. Restoration Time Frame	Two to three years	Two to three years	Two to three years	Two to three years
3. DCA Relative Benefits Ranking	1st	2nd	--	3rd
Protectiveness (weighted as 30%)	1.5	1.2	--	1.20
Permanence (weighted as 20%)	1.00	0.80	--	0.80
Long-Term Effectiveness (weighted as 20%)	1.00	0.80	--	0.60
Management of Short-Term Risks (weighted as 10%)	0.20	0.30	--	0.30
Technical and Administrative Implementability (weighted as 10%)	0.20	0.30	--	0.30
Consideration of Public Concerns (weighted as 10%)	0.50	0.40	--	o.50
Total of Scores	**4.4**	**3.8**	--	**3.7**
4. Disproportionate Cost Analysis (DCA)				
Probable Remedy Cost (+50%/-30%, rounded)	$18,300,000	$11,500,000	--	$9,100,000
Costs Disproportionate to Incremental Benefits	YES	YES	--	NA (2)
Practicability of Remedy	Practicable	Practicable	--	Practicable
Remedy Permanent to Maximum Extent Practicable	Yes	Yes (3)	--	Yes (3)
Overall Alternative Ranking	**3rd**	**2nd**	--	**1st**

Notes

1 Non-compliant alternatives were not considered in the DCA (items 3 and 4 in this table).

2 Not applicable since this is the lowest cost alternative.

3 May require modification due to future land use or development.

TABLE 6
DESCRIPTION OF CLEANUP ACTION ALTERNATIVES: MJB NORTH UPLAND AREA
FORMER SCOTT PAPER COMPANY MILL SITE

Site Subunit	Matrix	Contaminants Exceeding Proposed Cleanup Levels	Objective	CLEANUP ACTION ALTERNATIVE COMPONENTS			
				Alternative MJB-1	**Alternative MJB-2**	**Alternative MJB-3**	**Alternative MJB-4**
Shoreline Buffer Zone (1)	Soil - 0' to 6' BGS Exceeding Proposed Human Health or Terrestrial Ecological Cleanup Levels	Metals, PAHs	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels. Prevent contamination of adjacent Marine Area sediments due to releases from contaminated soil. Remove soil exceeding SQS criteria that co-exists with affected soil exceeding proposed cleanup levels.	- Excavate, to the extent practicable, soil exceeding proposed human health and/or terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil to restore to original land topography and site drainage. - Construct walkway and riparian habitat.	- Excavate, to the extent practicable, soil exceeding proposed human health and/or terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil to restore to original land topography and site drainage. - Construct walkway and riparian habitat.	- Excavate, to the extent practicable, soil exceeding proposed human health and/or terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil to restore to original land topography and site drainage. - Construct walkway and riparian habitat.	- Excavate, to the extent practicable, soil exceeding proposed human health and/or terrestrial ecological cleanup levels to a maximum depth of 10' BGS. - Characterize and dispose of contaminated soil at an approved, off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil to restore to original land topography and site drainage. - Construct walkway and riparian habitat.
	Soil 6' - 15' BGS Exceeding Proposed Human Health or Terrestrial Ecological Cleanup Levels	Metals, PAHs	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels. Prevent contamination of adjacent Marine Area sediments due to releases from contaminated soil.	- Excavate, to the extent practicable, soil exceeding human health and/or terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil	- Affected soils at depths greater than 6' BGS will remain in place. - Ensure the sediment remedy adequately caps affected soils remaining in place. - Establish environmental covenants noting the location and depth of affected soil exceeding proposed cleanup levels and establishing safeguards to protect human health.	- Affected soils at depths greater than 6' BGS will remain in place. - Ensure the sediment remedy adequately caps affected soils remaining in place. - Establish environmental covenants noting the location and depth of affected soil exceeding proposed cleanup levels and establishing safeguards to protect human health.	- Affected soils at depths greater than 10' BGS will remain in place. - Ensure the sediment remedy adequately caps affected soils remaining in place. - Establish environmental covenants noting the location and depth of affected soil exceeding proposed cleanup levels and establishing safeguards to protect human health.
Remaining Upland Areas	Soil - 0' to 6' BGS Exceeding Proposed Human Health or Terrestrial Ecological Cleanup Levels	Metals, PAHs	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels.	- Excavate, to the extent practicable, soil exceeding proposed human health or terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil and restore the site surface consistent with planned site use.	- Excavate, to the extent practicable, soil exceeding proposed human health cleanup levels. - Homogenize contaminated soil with clean soil to reduce soil contaminant levels to terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill excavated areas with clean soil. - Restore the site surface consistent with planned site use.	- Excavate, to the extent practicable, soil exceeding proposed human health cleanup levels. - Provide cover (asphalt or concrete pavement) over soil with contaminant levels exceeding terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill excavated areas with clean soil. - Restore the site surface consistent with planned site use.	- Excavate, to the extent practicable, soil exceeding proposed human health and terrestrial ecological cleanup levels to a maximum depth of 6' BGS. - Characterize and dispose of excavated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill excavated areas with clean soil. - Restore the site surface consistent with planned site use.
	Soil - 6' to 15' BGS Exceeding Proposed Human Health or Terrestrial Ecological Cleanup Levels	Metals, PAHs	Prevent terrestrial ecological and human contact with soil containing contaminants above proposed cleanup levels.	- Excavate, to the extent practicable, soil exceeding proposed human health or terrestrial ecological cleanup levels. - Characterize and dispose of contaminated soil at an approved off-site disposal facility in accordance with applicable regulations. - Backfill with clean soil and restore the site surface consistent with planned site use.	- Affected soils at depths greater than 6' BGS will remain in place. - Establish environmental covenants noting the location and depth of affected soil exceeding proposed cleanup levels and establishing safeguards to protect human health.	- Affected soils at depths greater than 6' BGS will remain in place. - Establish environmental covenants noting the location and depth of affected soil exceeding proposed cleanup levels and establishing safeguards to protect human health.	- Affected soils at depths greater than 6' BGS will remain in place. - Establish environmental covenants noting the location and depth of affected soil exceeding proposed cleanup levels and establishing safeguards to protect human health.
Estimated Alternative Cost (+50%/-30%, rounded)				$7,000,000	$3,700,000	$3,600,000	$4,800,000
Estimated Implementation Timeframe (2)				Two to three years	Two to three years	Two to three years	Two to three years

Notes:
1. Buffer zone established for MJB alternatives in January 23, 2008 and subsequent meetings. The buffer zone for Alternatives MJB-1, -2, and -3 extends 100 ft inland from MHHW. The buffer zone for Alternative MJB-4 extends 75 feet inland from MHHW.
2. From initiation of construction.

TABLE 7
EVALUATION OF CLEANUP ACTION ALTERNATIVES: MJB NORTH UPLAND AREA
FORMER SCOTT PAPER COMPANY MILL SITE

	Alternative MJB-1	Alternative MJB-2	Alternative MJB-3	Alternative MJB-4
Alternative Description	- Excavate to the extent practicable, soil exceeding proposed human health and terrestrial ecological cleanup levels in the Shoreline Buffer Zone. - Excavate to the extent practicable, soil exceeding human health and terrestrial ecological cleanup levels in the Remaining Upland Area. - Characterize and dispose of contaminated soil at approved, permitted, off-site disposal facility in accordance with applicable regulations. - Backfill and restore excavated areas to support planned use of the property. - Construct a pedestrian path and improve riparian habitat.	- Excavate to the extent practicable, soil exceeding proposed human health and terrestrial ecological cleanup levels in the Shoreline Buffer Zone to a depth of 6 feet bgs. - Excavate to the extent practicable, soil exceeding human health and terrestrial ecological cleanup levels in the Remaining Upland Area (assumed to be within 2 feet of ground surface). - Homogenize, to the extent practicable, soil exceeding terrestrial ecological cleanup levels in the Remaining Upland Area. - Backfill excavations and/or replace homogenized soil to support planned use of the property. - Install new monitoring wells as necessary to establish four monitoring wells along the shoreline to support monitoring of groundwater downgradient of impacted soils remaining onsite. - Environmental covenants to prevent future site worker and terrestrial ecological exposure to impacted soils and to ensure proper disposal of, impacted soil that may be excavated in the future. - Construct a pedestrian path and improve riparian habitat.	- Excavate to the extent practicable, soil exceeding proposed human health and terrestrial ecological cleanup levels in the Shoreline Buffer Zone to a depth of 6 feet bgs. - Excavate to the extent practicable, soil exceeding human health and terrestrial ecological cleanup levels in the Remaining Upland Area (assumed to be within 2 feet of ground surface). - Place an asphalt cover over soil exceeding terrestrial ecological cleanup levels in the Remaining Upland Area. - Backfill excavated areas to support planned use of the property. - Install new monitoring wells as necessary to establish four monitoring wells along the shoreline to support monitoring of groundwater downgradient of impacted soils remaining onsite. - Environmental covenants to prevent future site worker and terrestrial ecological exposure to impacted soils and to ensure proper disposal of, impacted soil that may be excavated in the future. - Construct a pedestrian path and improve riparian habitat.	- Excavate to the extent practicable, soil exceeding proposed human health and terrestrial ecological cleanup levels in the 75-Ft Shoreline Buffer Zone to a maximum depth of 10 feet BGS. - Excavate to the extent practicable, soil exceeding human health and terrestrial ecological cleanup levels in the Remaining Upland Area (assumed to generally be limited to within 2 feet of ground surface) to a maximum depth of 6 ft BGS. - Backfill excavations and/or compact and grade homogenized soil to support planned use of the property. - Install new monitoring wells as necessary to establish four monitoring wells along the shoreline to support monitoring of groundwater downgradient of impacted soils remaining onsite. - Environmental covenants to prevent future site worker and terrestrial ecological exposure to impacted soils and to ensure proper disposal of, impacted soil that may be excavated in the future. - Construct a pedestrian path and improve riparian habitat.
Alternative Ranking Under MTCA				
1. Compliance with MTCA Threshold Criteria				
Protection of Human Health and the Environment	Yes - Alternative would protect human health and the environment. Relies on long-term landfill containment to limit exposure to Site contaminants.	No - Ecology has determined that this alternative would not be protective of human health and the environment because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	No - Ecology has determined that this alternative would not be protective of human health and the environment because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	Yes - Alternative would protect human health and the environment. Relies on Site environmental covenants and long-term landfill containment to limit exposure to Site contaminants.
Compliance With Cleanup Standards	Yes - Alternative is expected to comply with MTCA cleanup standards. If practicable, this alternative may attain the standard point of compliance.	No - Ecology has determined that this alternative would not comply with cleanup standards because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	No - Ecology has determined that this alternative would not comply with cleanup standards because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	Yes - Alternative is expected to comply with MTCA cleanup standards. Alternative relies on environmental covenants and a conditional point of compliance. Future development of property may require actions specified under environmental covenants to manage impacted soils remaining onsite.
Compliance With Applicable State and Federal Regulations	Yes - Alternative can be designed and implemented in compliance with applicable state and federal regulations.	No - Ecology has determined that this alternative would not comply with applicable state and federal regulations because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	No - Ecology has determined that this alternative would not comply with applicable state and federal regulations because it would leave a significant amount of contaminated soil in place below 6 ft BGS along the shoreline.	Yes - Alternative complies with applicable state and federal regulations. Future development of property may require additional environmental cleanup or special provisions.
Provision for Compliance Monitoring	No. Monitoring is not required, as contaminated media would be removed from site.	Yes - Alternative includes provisions for compliance monitoring.	Yes - Alternative includes provisions for compliance monitoring.	Yes - Alternative includes provisions for compliance monitoring.
2. Restoration Time Frame				
	Restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction and would likely result in no need for environmental covenants or long-term monitoring and maintenance.	Initial restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction. Post-remediation monitoring would be necessary to confirm effectiveness of remedy. Relies on environmental covenants for long-term protectiveness.	Initial restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction. Post-remediation monitoring and cover maintenance would be necessary to confirm and maintain effectiveness of remedy. Relies on engineering and environmental covenants for long-term protectiveness.	Initial restoration time frame is relatively short. This alternative is expected to require two to three years for design and construction. Post-remediation monitoring would be necessary to confirm effectiveness of remedy. Relies on environmental covenants for long-term protectiveness.
3. Disproportionate Cost Analysis Relative Benefits Ranking (Scored from 1-lowest to 5-highest)				
Protectiveness	Score = 5 Achieves a high level of overall protectiveness as a result of removal of the soil that poses risk to human and ecological receptors at the Site. Under this alternative, only impacted soils that are not directly accessible for removal using standard methods (i.e., under buildings or other structures) would be left in place. Some residual risk would remain due to long-term containment of Site contaminants in an engineered offsite landfill.	Not Applicable - Alternative does not meet MTCA threshold criteria	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 4 Achieves a medium level of overall protectiveness as a result of removal of the near-surface soil that poses risk to human and ecological receptors at the Site. However, this alternative leaves in place deeper contaminated soil, and protectiveness would rely on maintenance of environmental covenants to prevent exposure.

TABLE 7
EVALUATION OF CLEANUP ACTION ALTERNATIVES: MJB NORTH UPLAND AREA
FORMER SCOTT PAPER COMPANY MILL SITE

	Alternative MJB-1	Alternative MJB-2	Alternative MJB-3	Alternative MJB-4
Permanence	Score = 5 Achieves nearly complete reduction of mass and toxicity for hazardous substances remaining at the Site through direct removal of affected soil. Does not permanently destroy Site COCs; relies on long-term containment of persistent COCs in an engineered, offsite landfill. As monitoring data shows Site COCs are not mobile, this alternative does not affect contaminant mobility. This alternative reduces to the extent practicable the potential for future corrective actions at the MJB North Area.	Not Applicable - Alternative does not meet MTCA threshold criteria	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 4 Achieves partial, but significant reduction (more than MJB-2 in Shoreline Buffer Zone) of mass and toxicity for hazardous substances remaining at the Site through direct removal of affected soil. Does not permanently destroy Site COCs, but permanently reduces terrestrial ecological risks over much of the Remaining Upland Area. Relies on long-term containment of persistent COCs in an engineered, offsite landfill. As monitoring data shows Site COCs are not mobile, this alternative does not affect contaminant mobility. Since affected soils exceeding proposed cleanup levels remain under this alternative, there would be some potential for future corrective actions at the MJB North Area.
Long-Term Effectiveness	Score = 5 Removes hazardous substances from the Site to the greatest degree practicable and utilizes engineered, offsite landfill containment for long-term risk management. If hazardous substances remain at the Site (such as below buildings) they would pose minimal risk to human health and the environment.	Not Applicable - Alternative does not meet MTCA threshold criteria	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 4 Removes affected soil causing the greatest risks from the MJB North Area and utilizes engineered, offsite landfill containment for long-term risk management of excavated soil. Utilizes onsite management of deep contaminated soil that exceeds proposed cleanup levels; The demonstrated low mobility of Site COCs and the environmental covenants would minimize residual risks to human health and the environment under this alternative. Alternatives MJB-2 and MJB-4 permanently reduce toxicity over much of the property via soil homogenization; thiese are alternatives considered with any permanent risk reduction, and both alternatives provide the same level of permanence in the Remaining Upland Area.
Management of Short-Term Risks	Score = 2 Substantial short term risks would be created by the extensive soil removal across the MJB North Area and transportation of a large volume contaminated soil through the City of Anacortes and on public roadways. These risks can be mitigated, however, using proven earthwork and transportation methods capable of minimizing short-term risks.	Not Applicable - Alternative does not meet MTCA threshold criteria	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 3 Involves extensive soil removal and soil handling across the MJB North Area. Requires less shipment of contaminated soil through the City of Anacortes and on public roadways than Alternative MJB-1. These risks can be mitigated, however, using proven earthwork and transportation methods capable of minimizing short-term risks.
Technical and Admin. Implementability	Score = 3 Requires extensive soil removal across the MJB North Area. The excavation activities required for this alternative are common and practicable, but there may be technical difficulty in accessing deeper soil, especially along the shoreline. No administrative implementability issues are anticipated.	Not Applicable - Alternative does not meet MTCA threshold criteria	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 3 Requires substantial soil removal from the MJB North Area at shallower depths than Alternative MJB-1. Soil homogenization work would be similar to the excavation included in Alternative MJB-1. The excavation activities required for this alternative are common and implementable. No administrative implementability issues are anticipated, although regulatory acceptance would require negotiation.
Consideration of Public Concerns	Score = 5 Provides the maximum removal of contaminated soil from the MJB North Area, which may address some public concerns associated with Site contamination. Since a significant volume of contaminated soil must be transported by truck through the City of Anacortes and on public roadways, some public concern for wear and tear of roadways and congestion may accrue. Public concerns can be mitigated through an effective communications program.	Not Applicable - Alternative does not meet MTCA threshold criteria	Not Applicable - Alternative does not meet MTCA threshold criteria	Score = 4 Although contaminated soil that poses the greatest risk to human health and the environment would be removed under this alternative, some public concern may result due to the deep soil left in place at the MJB North Area. Since substantially less soil would require truck transport from the Site, public concerns related to transportation of contaminated soil are expected to be lower than for Alternative MJB-1. Public concerns can be mitigated through an effective communications program.

TABLE 8
SUMMARY OF MTCA EVALUATION AND RANKING OF CLEANUP ACTION ALTERNATIVES:
MJB NORTH UPLAND AREA
FORMER SCOTT PAPER COMPANY MILL SITE

Alternative Number	MJB-1	MJB-2	MJB-3	MJB-4
Alternative Ranking Under MTCA				
1. Compliance with MTCA Threshold Criteria (1)	YES	NO	NO	YES
2. Restoration Time Frame	Two to three years	Two to three years	Two to three years	Two to three years
3. DCA Relative Benefits Ranking	1st	--	--	2nd
Protectiveness (weighted as 30%)	1.5	--	--	1.2
Permanence (weighted as 20%)	1	--	--	0.8
Long-Term Effectiveness (weighted as 20%)	1	--	--	0.8
Management of Short-Term Risks (weighted as 10%)	0.2	--	--	0.3
Technical and Administrative Implementability (weighted as 10%)	0.3	--	--	0.3
Consideration of Public Concerns (weighted as 10%)	0.5	--	--	0.4
Total of Scores	**4.5**	**--**	**--**	**3.8**
4. Disproportionate Cost Analysis (DCA)				
Probable Remedy Cost (+50%/-30%, rounded)	$7,000,000	--	--	$4,800,000
Costs Disproportionate to Incremental Benefits	YES	--	--	NA (2)
Practicability of Remedy	Practicable	--	--	Practicable
Remedy Permanent to Maximum Extent Practicable	Yes	--	--	Yes (3)
Overall Alternative Ranking	**2nd**	--	--	**1st**

Notes

1 Non-compliant alternatives were not considered in the DCA (items 3 and 4 in this table).

2 Not applicable since this is the lowest cost alternative.

3 May require modification due to future land use or development.

TABLE 9
DESCRIPTION OF CLEANUP ACTION ALTERNATIVES: MARINE AREA
FORMER SCOTT PAPER COMPANY MILL SITE

Site Subunit	Matrix	Contaminants Exceeding Proposed Cleanup Levels	Objective	CLEANUP ACTION ALTERNATIVE COMPONENTS	
				Alternative M-1	Alternative M-2
Intertidal Area	Sediment	PCBs, Metals, Wood Debris	Prevent aquatic ecological exposure to sediment containing contaminants above proposed cleanup levels based on risks to benthic and food web (bioaccumulation) receptors.	-Remove surficial debris and piling along shoreline -Excavate buried wood debris to the extent necessary to facilitate placement of 2-ft thick cap -Dispose of excavated debris at upland landfill and suitable dredge material at open-water disposal site -Place clean cap material within excavation -Protect shoreline from erosion using two methods: (a) Adjacent to MJB property install armored cap (b) Adjacent to Port property create offshore wave attenuation structure on Port property to dissipate the wave energy before it reaches the Port property shoreline	-Remove surficial debris and piling along shoreline -Excavate buried wood debris to the extent necessary to facilitate placement of 2-ft thick cap -Dispose of excavated debris at upland landfill, and suitable dredge material at open-water disposal site -Place clean cap material within excavation -Protect shoreline from future erosion using two methods: (a) Adjacent to MJB property install armored cap (b) Adjacent to Port property create offshore wave attenuation structure on Port property to obstruct and dissipate the wave energy before it reaches the Port property shoreline
Subtidal Area	Sediment	Wood Debris	Prevent aquatic ecological exposure to sediment containing contaminants above proposed cleanup levels based on risks to benthic receptors.	-Excavate surface and subsurface wood debris and sediments exceeding SQS criteria -Dispose of excavated debris at upland landfill, and suitable dredge material at open-water disposal site -Backfill excavation with clean sand and gravel -Place post-dredge residuals cover to 100 ft beyond the water-side edge of the dredge footprint	-Excavate surface and subsurface wood debris and sediments exceeding CSL criteria -Dispose of excavated debris at upland landfill, and suitable dredge material at open-water disposal site -Backfill excavation with clean sand and gravel -Place post-dredge residuals cover over areas exceeding SQS criteria or to a minimum of 100 ft beyond the edge of the dredge footprint, whichever is further
			Estimated Alternative Cost (+50%/-30%, rounded)	$7,100,000	$5,800,000
			Estimated Volume of Contaminated Sediment Removed	31,900 cubic yards	19,900 cubic yards
			Estimated Timeframe to Closure (1)	Two to three years	Two to three years

TABLE 10
EVALUATION OF CLEANUP ACTION ALTERNATIVES: MARINE AREA
FORMER SCOTT PAPER COMPANY MILL SITE

	Alternative M-1	Alternative M-2
Alternative Description	- Remove subtidal sediment and debris exceeding SQS chemical criteria in the marine areas below MHHW. Excavate surface and subsurface wood debris exceeding SQS criteria. - Dispose excavated debris at upland landfill and suitable dredge material at open-water disposal site. - Backfill subtidal excavations and dredged areas with clean sand and gravel to restore to original grade. - Place post-dredge residuals cover to 100 feet beyond the water-side edge of the dredge footprint. - Protect shoreline on Port property with habitat reefs; protect MJB property with armored cap. - Dredge shoreline transitional slope to facilitate cap placement while maintaining the approximate existing grades; place a minimum of 2 ft of cap material along the Port shoreline and 2 ft of cap material along the MJB property shoreline. - Restore eelgrass. - Monitor cap.	- Remove subtidal sediment and debris exceeding CSL chemical criteria in the marine areas below MHHW. Excavate surface and subsurface wood debris exceeding CSL criteria. - Dispose excavated debris at upland landfill and suitable dredge material at open-water disposal site. - Backfill subtidal excavations and dredged areas with clean sand and gravel to restore to original grade. - Place post-dredge residuals cover to 100 feet beyond the water-side edge of the dredge footprint, or over the SQS footprint, whichever is greater. - Protect shoreline on Port property with habitat reefs; protect MJB property with armored cap. - Dredge shoreline transitional slope to facilitate cap placement while maintaining the approximate existing grades; place a minimum of 2 ft of cap material along the Port shoreline and 2 ft of cap material between the drift sills along the MJB property shoreline. - Restore eelgrass. - Monitor cap.
Alternative Ranking Under MTCA		
1. Compliance with MTCA Threshold Criteria		
Protection of Human Health and the Environment	Yes - Alternative will protect human health and the environment without site use restrictions	Yes - Alternative will protect human health and the environment without site use restrictions
Compliance With Cleanup Standards	Yes - Alternative is expected to comply with marine (SQS) cleanup standards to be selected by Ecology.	Yes - Alternative is expected to comply with marine (CSL) cleanup standards to be selected by Ecology.
Compliance With Applicable State and Federal Regulations	Yes - Alternative complies with applicable state and federal regulations.	Yes - Alternative complies with applicable state and federal regulations.
Provision for Compliance Monitoring	Yes - Alternative includes provisions for compliance monitoring.	Yes - Alternative includes provisions for compliance monitoring.
2. Restoration Time Frame		
	This alternative is expected to require two to three years for design, permitting and construction	This alternative is expected to require two to three years for design, permitting and construction
3. Disproportionate Cost Analysis Relative Benefits Ranking (Scored from 1-lowest to 5-highest)		
Protectiveness	Score = 5 Achieves a high level of overall protectiveness as a result of removal sediment that poses risk to human and ecological receptors by addressing sediments exceeding SQS criteria.	Score = 4 Achieves a medium level of overall protectiveness as a result of removal of sediments that pose risk to human and ecological receptors by addressing sediments exceeding CSL criteria.

TABLE 10
EVALUATION OF CLEANUP ACTION ALTERNATIVES: MARINE AREA
FORMER SCOTT PAPER COMPANY MILL SITE

	Alternative M-1	**Alternative M-2**
Permanence	Score = 5 Achieves risk reduction in the marine area through direct removal and disposal of the excavated material at appropriate off-site facilities. However, landfill disposal precludes the MTCA preference for destruction of contaminants.	Score = 4 Achieves risk reduction in the marine area through direct removal and disposal of the excavated material at appropriate off-site facilities. However, landfill disposal precludes the MTCA preference for destruction of contaminants. The quantity of impacted sediment allowed to remain on site is greater than with Alternative M-1 and will require periodic monitoring.
Long-Term Effectiveness	Score = 5 Residual contaminant concentrations and associated risks are anticipated to be low. This alternative removes hazardous substances from the marine area to the greatest degree possible and utilizes approved off-site disposal facilities for final disposition. If hazardous substances remain at the Site (such as deeply buried wood debris) they will pose little risk to human health and the environment. Wave attenuation structures and armored caps will reduce the potential for contaminant exposure associated with cap erosion along the transitional slope.	Score = 4 Removes the majority of hazardous substances from the marine area and utilizes approved off-site disposal facilities for final disposition, but leaves some sediment in the marine area that exceeds Sediment Quality standards. Wave attenuation structures and armored caps will reduce the potential for contaminant exposure associated with cap erosion along the transitional slope.
Management of Short-Term Risks	Score = 3 Involves extensive sediment removal with a potential for generating dredge residuals. However, the excavation methods required to achieve the level of removal under this alternative are well established and capable of minimizing short-term risks.	Score = 3 Involves sediment removal with a potential for generating dredge residuals. However, the excavation methods required to achieve the level of removal under this alternative are well established and capable of minimizing short-term risks.
Technical and Admin. Implementability	Score = 5 Involves extensive sediment removal at the Site, with a potential for dredge residuals. Dredge residuals would be managed using a post-dredge cover of clean material. The excavation activities required for this alternative are common and feasible but would need to use equipment, staging, and phasing that is compatible with working in a shallow, tidally-influenced environment. Temporary site closure to public will allow facilitation of project.	Score = 5 Involves less sediment removal at the Site, with a potential for dredge residuals. Dredge resduals would be managed using a post-dredge cover of clean material. The excavation activities required for this alternative are common and feasible but would need to use equipment, staging, and phasing that is compatible with working in a shallow, tidally-influenced environment. Temporary site closure to public will allow facilitation of project.
Consideration of Public Concerns	Score = 4 Provides for complete removal of contaminated sediment from the subtidal portion of the marine area, addressing public concerns associated with exposure to contaminants and restriction on future use and development of Site. However, the excavation volume is greater than Alternative M-2, so local traffic impacts from upland disposal activities would be greater.	Score = 3 Addresses the highest level sediment that poses the greatest risk to human health and the environment. However, sediments below the CSL would remain on site.
Restoration Time Frame and Additional SMS Evaluation Criteria	See Sections 7.3.4 and 7.3.5	See Sections 7.3.4 and 7.3.5

TABLE 11
SUMMARY OF MTCA EVALUATION AND RANKING OF CLEANUP ACTION ALTERNATIVES: MARINE AREA
FORMER SCOTT PAPER COMPANY MILL SITE

Alternative Number	**M-1**	**M-2**
Alternative Ranking Under MTCA		
1. Compliance with MTCA Threshold Criteria (1)	YES	YES
2. Restoration Time Frame	Two to three years	Two to three years
3. DCA Relative Benefits Ranking	1st	2nd
Protectiveness (weighted as 30%)	1.5	1.2
Permanence (weighted as 20%)	1	0.8
Long-Term Effectiveness (weighted as 20%)	1	0.8
Management of Short-Term Risks (weighted as 10%)	0.3	0.3
Technical and Administrative Implementability (weighted as 10%)	0.5	0.5
Consideration of Public Concerns (weighted as 10%)	0.4	0.3
Total of Scores	**4.7**	**3.9**
4. Disproportionate Cost Analysis		
Probable Remedy Cost (+50%/-30%, rounded)	$7,100,000	$5,800,000
Costs Disproportionate to Incremental Benefits	No	NA (2)
Practicability of Remedy	Practicable	Practicable
Remedy Permanent to Maximum Extent Practicable	Yes	Yes
Overall Alternative Ranking	1st	2nd

Notes

1 Non-compliant alternatives were not considered in this evaluation.

2 Not applicable since this is the lowest cost alternative.