

818 Commercial Street, Suite 203
Astoria, Oregon 97103

Request for Proposals ***Woodland Island: Year 1 Planting***

Proposals are due April 2nd, 2021 by 4pm

I. INTRODUCTION

The Columbia River Estuary Study Taskforce (CREST) requests contractor services to implement soil amendments and planting on Woodland Island. Woodland Island is situated in the Columbia River off St. Helens, OR but is located in Cowlitz County, Washington. This project is sponsored by Bonneville Power Administration (BPA) and CREST. ***CREST requires a contractor with task-specific knowledge and expertise.*** The planting portion of this project is scheduled to commence in ***November, 2021*** but some tasks may occur before then in coordination with CREST.

II. BACKGROUND

Woodland Island (more properly the Woodland Islands) was largely constructed by the U.S. Army Corps of Engineers (“Corps”) with dredge spoils as part of shipping channel maintenance. They remain undeveloped but for pile dikes. This project takes place on land owned by the Washington Department of Natural Resources but there is a private parcel adjacent to the project area. In fall of 2020, the Corps and its contractor constructed a new peninsula on Woodland Island entirely with dredge spoils from the shipping channel nearby; it totals approximately 7 acres in size. In order to construct the peninsula, the Corps cleared an access road across Woodland Island and an additional landing area. CREST, funded by BPA, will oversee the vegetation of the new peninsula, the access road, and the landing area with native plants. Planting will take place over two successive seasons: fall 2021 and fall 2022; each planting season will be contracted separately through independent RFP processes. Due to the very low content of organic matter in the substrate of the new peninsula, the planting contract for the first planting season will include amending the surface of the new peninsula with compost (or other amendment approved by CREST).

III. OVERALL PROJECT GOAL AND OBJECTIVES

The new peninsula on Woodland Island was designed to provide shallow water habitat for ESA-listed juvenile salmonids and other aquatic life, while also increasing food resources to the Columbia River. It is also the first instance of a new approach to utilizing dredge spoils to provide ecosystem benefits. The challenge of such dredge spoil landforms is that they constitute

difficult growing conditions for plants and are often colonized first by noxious weeds and only develop a native plant community very slowly, if at all. The Corps and CREST hope to prevent colonization of the new Woodland peninsula by weeds while also fast tracking a diverse native plant community.

IV. PROJECT APPROACH

The project site is only accessible by boat. Contractors are responsible for providing their own boat transportation to the island for their workers and all materials and equipment needed for the project.

The work to be performed under this contract consists of the following general tasks:

A. Amend Soil on New Peninsula

- a. Haul compost (or other amendment approved by CREST) to Woodland Island and spread it following the design guidelines. Due to uncertainties in logistics and cost associated with this task, this RFP contains 3 different possible volumes of compost to deliver and utilize at the project area. Contractors are encouraged to bid all three volumes, though only one volume will be included in the contract. See **Project Location and Task Details** section, below, for additional details. If contractors wish to suggest an alternative approach to achieving similar soil improvements, they may propose an alternative approach with an associated cost in their proposal. Soil amendment must be accomplished **before** planting begins and after the peak of the spring freshet but is not otherwise restricted as to when it is performed.

B. Vegetate Designated Planting Areas

- a. CREST is providing the planting plan, which specifies species, stock type, and number for each planting zone (5 zones) (see **Exhibit A** for plant stock and seed by species, stock type, and quantity). The plan also specifies species to be broadcast as seed, and the quantities, for each planting zone. The contractor shall be responsible for securing the plant stock and seed specified, transporting it to the project area, and planting/seeding according to the design. All plant stock and seed shall be sourced from western Oregon or western Washington. The contractor shall make an honest effort to find all listed species but may make substitutions with approval from CREST.

These tasks are further itemized in the attached bid sheet. Contractors shall submit unit prices, extensions, and total budget on the bid sheet. The bid sheet includes three alternative task lists corresponding to the three different possible volumes of compost to be utilized, plus a blank row for use in costing a fourth alternative soil amendment approach to be proposed and described by the contractor (“Option X”). Contractors are **not** required to propose an Option X.

A contractor will be selected on the basis of cost, their past work experiences on similar projects, capacity to meet the project schedule, and the proposal documents as outlined below. Three references must be provided as well as a narrative supporting their firm’s capacity to meet the

proposed schedule. Companies should focus references within the lower Columbia River or North Oregon Coast regions if possible. **Contracts will be negotiated with a “not to exceed” cap.** Progress payments shall be based on completion of the items on the cost sheet at the unit prices submitted. If situations require additional work than originally contracted, CREST approved change orders may be utilized.

A site visit will be held on Tuesday, March 16th (weather dependent). Attendance at the site visit is required in order to submit a proposal. CREST will provide boat transport between St. Helens, OR and the project site at Woodland Island for the visit. You must RSVP by 4pm on March 12th with the Project Manager to attend the site visit. Contact Project Manager at (503) 325-0435 ext. 222 or thruska@columbiaestuary.org.

V. PROJECT SCHEDULE

All planting and seeding shall be performed between November 1st, 2021 and January 31st, 2022, with a preference for the first half of that window. Soil amendment shall occur after the peak of the 2021 spring freshet and before planting begins, at a time to be agreed upon by the selected contractor and CREST.

VI. LOCATION DESCRIPTION

The project site is located on a limited portion of Woodland Island (maps included at the end of this RFP). Woodland Island is located in the Columbia River in Cowlitz County, Washington, between the towns of St. Helens, OR and Woodland, WA. The island is most easily accessed by boat from the St. Helens Marina and secondarily from McCuddy’s Marina in Woodland. The project area is 10.46 acres in total, which includes a landing area on the west side of the island, an access road across the island, and the new peninsula on the east side of the island. The peninsula was created in the fall of 2020 and so does not appear in most satellite imagery (such as Google Earth).

VII. SUBMITTAL REQUIREMENTS

A. Each responsible proponent shall respond to the “Submittal Requirements” and the “Submittal Content Requirements” as presented in Section VII and VIII of this RFP. Proposals received without the required information may be rejected as incomplete.

B. A digital submission of the proposal shall be emailed to thruska@columbiaestuary.org (please make sure it is no larger than 20 mb in size). Proposals will be received until the date and time stated in this RFP. Any proposals received after the scheduled closing time for receipt of proposals shall be deemed ineligible for award consideration.

C. Proposals should provide a straightforward, concise description of proponent’s capabilities to satisfy the requirements of this RFP. Emphasis should be on completeness and clarity of content.

D. CREST Reserves the Right to:

- a. Reject any and all proposals received in response to this RFP, if deemed to be in the best interest of the project and in consideration of the limited grant funds available.
- b. Waive or modify any irregularities in proposals received, after prior notification to the proponent.

- c. Consider proposals or modifications received at any time before the award is made, if such action is in the best interest of CREST.
- d. Seek clarification of each contractor’s proposal.
- e. Negotiate a final contract under which the compensation paid to the contractor is fair and reasonable to CREST as determined solely by CREST and its funder(s).

E. RFP Timeline

EVENT DATES

RFP released	March 2, 2021
Prebid Site Visit	March 16, 2021
Proposals due no later than 4 pm	April 2, 2021
Proponent selection*	April 9, 2021
Execute contract*	April 30, 2021
Mobilize for Construction*	June 15, 2021

*Projected dates

F. Incurring Costs

CREST shall not be liable for any cost incurred by proponents prior to issuance of a contract.

G. Addenda

In the event it becomes necessary to revise any part of this RFP, addenda will be provided to all prospective proponents who have been issued an RFP document.

H. Acceptance of Proposal Content

The contents of the proposal of the successful proponent will provide the basis for a more detailed contractual obligation if the proposal is accepted. Failure of the successful proponent to accept these obligations in a contract may result in cancellation of the award.

I. Liability

If a contract is awarded, the successful proponent must provide a certificate of coverage at the time of contract execution, indicating proof of insurance coverage with limits not less than \$100,000 property damage per claimant, \$200,000 all other claims per claimant, \$1,000,000 all claims. Such insurance shall be evidenced by Certificate of Insurance provided to the CREST, indicating coverage, limits and effective dates, by an insurance company licensed to do business in the State of Oregon. If a contract is awarded, the successful proponent must provide documentation of Errors and Omissions (professional liability) Insurance Coverage and Workers Compensation Coverage.

J. Registration with Federal System for Award Management

CREST requires contractors to be registered and in good standing with the federal SAM (System for Award Management). See <https://www.sam.gov/SAM/> for more details.

K. Contracting Requirements

Selected contractor(s) will be required to comply with all federal, state, and local laws and regulations governing the performance of the business or activity. Contractors will be required to comply with the following as stated specifically in contracts with CREST: Federal Order 12549;

EO 11246 “Equal Employment Opportunity”; 18 U.S.C. 874 “Anti-Kickback Act”; 40 U.S.C. 276a to 276a-7 Davis Bacon Act; 40 U.S.C. 327-330 for Contract Work Hours and Safety Standards.

L. Construction Bonding

A construction performance surety bond will be required for the total amount awarded by the contract.

M. Disqualification

In compliance with Executive Order 12549, CREST will not award a contract to any contractor or subcontractor that has been debarred or suspended or otherwise excluded from participation by Executive Order 12549. Contractors will be asked to state that they have not been debarred, suspended or otherwise excluded. Contractors will also be disqualified due to a Construction Contractors Board listing as described in ORS 279C.375.

VIII. SUBMITTAL CONTENT REQUIREMENTS

- A. Describe the proposed approach to completing the tasks and meeting the goals described in this RFP.
 - a. If submitting a proposed Option X for soil amendment, please provide sufficient information for CREST to evaluate the risks and benefits of this approach.
- B. List available equipment and operators and operating rates (federal prevailing wages).
- C. Provide the completed cost sheet including all costs and taxes.
- D. Provide three client references, preferably references in the lower Columbia River and North Oregon Coast regions or neighboring communities when available.
- E. If contractor has completed similar public street and drainage, tidal wetland, or excavation jobs in the past, indicate this in the response to proposal.
- F. Demonstrate ability to meet the timeline outlined in Section VII of this document.

IX. CONTRACTOR SELECTION PROCESS

- A. A Technical Advisory Committee shall be established, and each member shall review and rank all proposals based on the budget, prior work history, and ability to meet construction schedule. Review criteria will include:
 - a. Budget (as shown on the cost sheet) – 40%
 - b. Ability to meet construction schedule and desired outcomes – 40%
 - c. Past work experiences on similar projects/ References – 20%
- B. The Technical Advisory Committee will share and discuss their scores. Scores will direct the Committee to select a proposal by consensus. While the highest-scoring proposal is typically the one selected, CREST retains the right to select a proposal other than the one with the highest cumulative score.

X. PROCEDURES FOR NEGOTIATING A CONTRACT

- A. Contract negotiations will be directed toward obtaining written agreement on:
 - a. The contractor’s tasks; and

- b. Hourly rates for services which are consistent with the contractor's proposal and fair and reasonable to CREST, taking into account the estimated value, scope, complexity, nature of the contractor's service, and availability of grant funds.

B. Upon completion of successful negotiations, a contract between CREST and the contractor will be mutually executed.

C. Negotiations with a high-ranked proponent may be formally terminated if they fail to result in a contract within a reasonable amount of time. Negotiations will then ensue with the next ranked proponent, and if necessary, the next proponent and so on, until the negotiations result in a contract.

XI. PUBLIC DISCLOSURE

A. Any information provided to CREST in response to this RFP is subject to public disclosure under the Oregon Public Records Law (ORS 192.311 to 192.478). As provided in ORS 279B.060(6), the contents of any proposal will not be disclosed until CREST issues its notice of intent to award. The identity of all proposers will be subject to disclosure following the opening of proposals.

B. After issuance of the notice of intent to award, any information provided to CREST under this RFP is subject to public disclosure under Oregon's Public Records Laws (ORS 192.311 to 192.478), unless it is specifically exempt from disclosure under ORS 192.338 to 192.355.

C. Any proposer that desires CREST to treat certain information as exempt from disclosure must plainly mark each page of such information as confidential and include the citation to the Public Records Law exemption that the proposer believes to apply to the information. Marked pages should be placed in a group separate from the remainder of the proposal. Information that has not been properly marked and segregated will be deemed subject to disclosure by CREST.

D. CREST retains the right to make an independent determination of whether marked information is exempt under the Public Records Law. All proposers understand that any decision by CREST to withhold information is subject to appeal and that CREST will comply with any order to disclose.

XII. CONTRACT ADMINISTRATION

A. Project administration is conducted through CREST, a Council of Governments that includes local counties, cities, and port districts surrounding the Columbia River Estuary in both Oregon and Washington.

The awarded contract will be between the chosen contractor and CREST. CREST's project representative and primary contact is:

Tracy Hruska

Habitat Restoration Project Manager

Phone: 503-325-0435 ext. 222

Email: thruska@columbiaestuary.org

818 Commercial Street, Suite 203

Astoria, OR 97103

Website: www.columbiaestuary.org

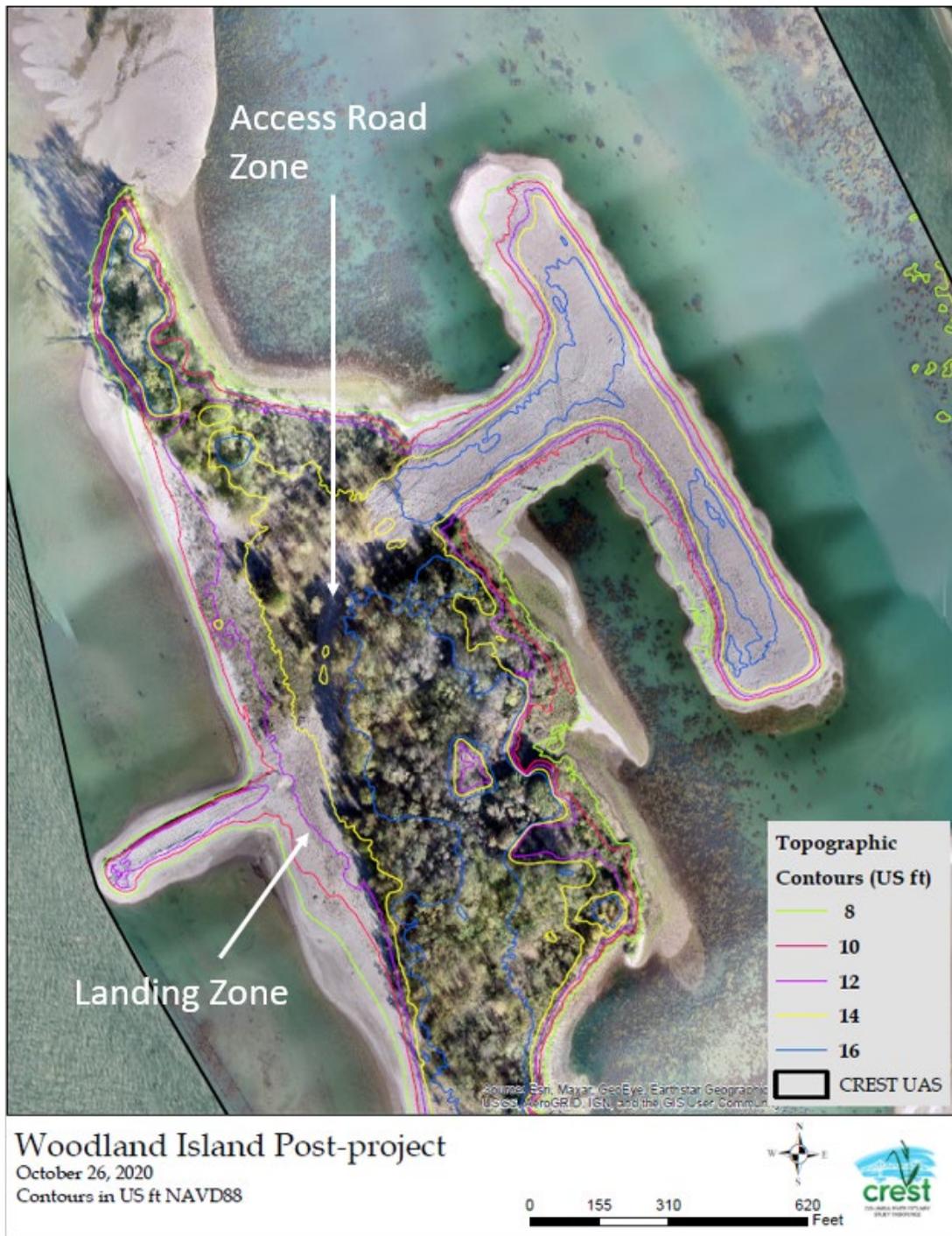
B. A “not to exceed” total contract price with agreed upon unit costs will be negotiated prior to start of work.

C. CREST will disburse all payments after the invoices from the consultant have been reviewed and approved by CREST and project funders. Payments will be distributed within 90 days of receipt by CREST to provide for processing times with CREST and project funders.

XIII. PROJECT LOCATION AND TASK DETAILS

Location of Woodland Island in the Columbia River





CREST drone image of new peninsula (anvil shaped, on right) and attached section of Woodland Island. The peninsula on the left was created as a staging area for the dredge pipe and has since been washed away by the river. The new peninsula contains the Upland, Riparian, and Emergent work zones. Photo taken at low tide.

Zone	Elevation Range	Acres
Emergent	8 – 10 ft	2.25
Riparian	10 – 14 ft	2.0
Upland	14 – 16 ft	4.75
Access Road	14 – 16 ft	1.15
Landing	10 – 14 ft	0.31

List of planting zones with elevation ranges and acreages. The Emergent, Riparian, and Upland zones are all on the new peninsula (the bare, anvil-shaped landform in the upper right of the map above).

Soil Amendment Approach

CREST seeks to amend the soil (i.e. sand) in the Upland zone of the new peninsula on Woodland Island by adding compost. The purpose of the compost amendment is to increase the soil organic and nutrient content, improve the soil microbiotic community, and increase water retention capacity. CREST assumes that the compost will be barged to the project area and offloaded mechanically, though it could also be offloaded by hand with wheelbarrows. Preferably, the barge or other boat will be landed on the new peninsula itself, though the contractor may discuss the option of landing at the Landing zone instead. The compost to be utilized can be a special horticultural variety or municipally produced. It cannot contain synthetic fertilizers. One typical example of an acceptable product is the Garden Mulch available from Beaver Bark LLC (<http://www.beaverbarkllc.com/products-bark-soil>), though CREST is not specifically endorsing this product. For additional details, please see **Exhibit A**.

Due to the uncertainties in logistics and cost, CREST is seeking bids on three different quantities of compost. More compost is better but more compost is also more expensive to purchase, transport, and apply. CREST will contract to apply as much compost as fits within the project budget, given other goals.

CREST will also consider alternative approaches to amending the soil at the new peninsula, and/or consider volumes of compost other than what is specified in this RFP. Contractors wishing to propose an alternative approach or volume of compost should detail the approach in their proposal and list costs in the Bid Sheet under “Option X”. **To comply with environmental regulations, no surface fertilizers or hydroseed can be applied within 50 ft of the water’s edge.**

EXHIBIT A

Woodland Island Restoration Project Planting Plan Cowlitz County, Washington



**Columbia River Estuary Study Taskforce (CREST)
818 Commercial St, Suite 203
Astoria, Oregon 97103**

INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2021 Washington Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction, **specifically Section 8-02.3(8) Planting**

AMENDMENTS TO THE STANDARD SPECIFICATIONS

The following Amendments to the Standard Specifications are made a part of this contract and supersede any conflicting provisions of the Standard Specifications. Each Amendment contains all current revisions to the applicable section of the Standard Specifications and may include references which do not apply to this particular project. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply unless stated as such.

All instances of text within the standard specifications that contain “Agency” or “WSDOT” shall be replaced by, refer to, or imply “Columbia River Estuary Taskforce” or “CREST”. All instances of text within the Amendments, Special Provisions, and Plans that contain Contracting Agency shall also be replaced by, refer to, or imply CREST.

MOBILIZATION AND DAILY TRANSPORTATION

Contractor shall provide their own boat and barge access to the site. This includes daily transportation for staff, plant materials, and compost and other soil amendments

FINAL CLEANUP

All pots, containers, bags, and ties from the planting materials shall be removed from the island and properly recycled or disposed of.

SEED MIXES

The following seed mixes are broken into 3 separate groups: Riparian, Uplands, and Upland Road.

Seed Mix for Riparian and Landing Zones (elevations 10-14)

Common Name	Scientific Name	lbs/acre
spike bentgrass	<i>Agrostis exarata</i>	1
blue wildrye	<i>Elymus glaucus</i>	3
California brome	<i>Bromus carinatus/Bromus sitchensis var. carinatus</i>	3
California oatgrass	<i>Danthonia californica</i>	2
meadow barley	<i>Hordeum brachyantherum</i>	3
Columbia sedge	<i>Carex aperta</i>	0.25
slough sedge	<i>Carex obnupta</i>	0.25
Puget Sound gumweed	<i>Grindelia integrifolia</i>	1
clustered tarweed	<i>Madia glomerata</i>	2
tufted hairgrass	<i>Deschampsia caespitosa</i>	3
hairy panic grass	<i>Dichantelium acuminatum ssp. fasciculatum/Panicum pacificum</i>	1
witchgrass	<i>Panicum capillare</i>	1
slough grass	<i>Beckmannia syzigachne</i>	2
rice cutgrass	<i>Leersia oryzoides</i>	1
northern water-plantain	<i>Alisma triviale</i>	0.5
yarrow	<i>Achillea millefolium</i>	0.25
Oregon sunshine	<i>Eriophyllum lanatum</i>	0.25
riverbank lupine	<i>Lupinus rivularis</i>	3
pine/sickle-keeled lupine	<i>Lupinus albicaulis</i>	1
bigleaf lupine	<i>Lupinus polyphyllus</i>	1
sticky cinquefoil	<i>Potentilla glandulosa/Drymocallis glandulosa</i>	0.5
selfheal/heal all	<i>Prunella vulgaris var. lanceolata</i>	2
meadow checkermallow	<i>Sidalcea campestris</i>	0.25
springbank clover	<i>Trifolium wormskioldii</i>	0.2
red fescue	<i>Festuca rubra</i>	2
corn mint/wild mint	<i>Mentha canadensis/arvensis</i>	0.75
western goldenrod	<i>Euthamia occidentalis</i>	0.5
common cocklebur	<i>Xanthium strumarium</i>	0.75
small/common camas	<i>Camassia quamash</i>	0.25
Total		36.7

Seed Mix for Upland Zone (elevations 14-16)

Common Name	Scientific Name	lbs/acre
American dunegrass	Leymus mollis/Elymus mollis	1
blue wildrye	Elymus glaucus	2
California brome	Bromus carinatus/Bromus sitchensis var. carinatus	1
clustered tarweed	Madia glomerata	1
hairy panic grass	Dichanthelium acuminatum ssp. fasciculatum/Panicum pacificum	1
witchgrass	Panicum capillare	2
yarrow	Achillea millefolium	0.25
Oregon sunshine	Eriophyllum lanatum	0.5
riverbank lupine	Lupinus rivularis	1
bigleaf lupine	Lupinus polyphyllus	2
sickle-keeled lupine/pine lupine	Lupinus albicaulis	3
sticky cinquefoil	Potentilla glandulosa/Drymocallis glandulosa	0.25
bluehead gilia	Gilia capitata	1
meadow checkermallow	Sidalcea campestris	0.25
cows/springbank clover	Trifolium wormskioldii	0.2
silky beachpea	Lathyrus littoralis	0.25
seaside lotus	Hosakia gracilis/Lotus formosissus	0.25
red fescue	Festuca rubra	4
Roemer's fescue	Festuca roemeri/Festuca idahoensis var. roemeri	4
slender wheatgrass	Elymus trachycaulus	3
Indian ricegrass	Eriocoma hymenoides/Achnatherum hymenoides	3
Canby's bluegrass	Poa secunda ssp. secunda	4
seashore bentgrass	Agrostis pallens	1
Powell's amaranth	Amaranthus powellii	2
Total		38.95

Seed Mix for Access Road Zone (elevations 14-16)

Common Name	Scientific Name	lbs/acre
blue wildrye	<i>Elymus glaucus</i>	2
California brome	<i>Bromus carinatus/Bromus sitchensis var. carinatus</i>	1
California oatgrass	<i>Danthonia californica</i>	1
clustered tarweed	<i>Madia glomerata</i>	1
hairy panic grass	<i>Dichantelium acuminatum ssp. fasciculatum/Panicum pacificum</i>	1
witchgrass	<i>Panicum capillare</i>	2
yarrow	<i>Achillea millefolium</i>	0.25
Oregon sunshine	<i>Eriophyllum lanatum</i>	0.5
riverbank lupine	<i>Lupinus rivularis</i>	1
bigleaf lupine	<i>Lupinus polyphyllus</i>	2
sickle-keeled lupine/pine lupine	<i>Lupinus albicaulis</i>	3
bluehead gilia	<i>Gilia capitata</i>	1
selfheal/heal all	<i>Prunella vulgaris var. lanceolata</i>	1
meadow checkermallow	<i>Sidalcea campestris</i>	0.25
cows/springbank clover	<i>Trifolium wormskioldii</i>	0.2
beach pea	<i>Lathyris japonicus/L. maritimus</i>	0.25
red fescue	<i>Festuca rubra</i>	4
Roemer's fescue	<i>Festuca roemeri/Festuca idahoensis var. roemeri</i>	4
slender wheatgrass	<i>Elymus trachycaulus</i>	3
Indian ricegrass	<i>Eriocoma hymenoides/Achnatherum hymenoides</i>	3
Canby's bluegrass	<i>Poa secunda spp. secunda</i>	4
seashore bentgrass	<i>Agrostis pallens</i>	1
Powell's amaranth	<i>Amaranthus powellii</i>	1
western goldenrod	<i>Ethamia occidentalis</i>	0.5
Total		37.95

PLANT LIST FOR ACQUISITION AND PLANTING (ALL ZONES)

The lists below include all required plant stock for the Access Road, Riparian, and Emergent zones. For the Upland zone, the species and number of containerized stock will vary depending on the selected soil amendment approach. As such, three different lists are provided, each corresponding to a different volume of compost. *For contractors submitting an Option X proposal, please include a proposed list of containerized stock along with the appropriate bid cost in your proposal.*

Plugs			
<u>Common Name</u>	<u>Scientific Name</u>	<u>Type</u>	<u>Quantity</u>
Northern water-plantain	Alisma triviale	plug	100
giant bur-reed	Sparganium eurycarpum	plug	100
softstem bulrush	Schoenoplectus tabernaemontani	plug	100
creeping spikerush	Eleocharis palustris	plug	100
swamp smartweed	Polygonum/Persicaria hydropiperoides	plug	100
straw-colored flatsedge	Cyperus stigosus	plug	100
western grasswort	Lilaeopsis occidentalis	plug	100
broad-leaf cattail	Typha latifolia	plug	150
river bulrush	Bolboschoenus fluviatilis	plug	100
awned flatsedge	Cyperus squarrosus	plug	100
leafy beggars-ticks	Biden frondosa	plug	200
three-lobed beggars-ticks	Bidens tripartita	plug	150
pasture rush	Juncus effusus ssp. pacificus	plug	100
grey rush	Juncus patens	plug	100
pointed rush	Juncus oxymerus	plug	100
wapato/broadleaf arrowhead	Sagittaria latifolia	plug	100
rice cutgrass	Leersia oryzoides	plug	200
needle spikerush	Eleocharis acicularis	plug	100
thick-head sedge	Carex pachystachya	9" plug	100
Columbia sedge	Carex aperta	9" plug	150
dense sedge	Carex densa	9" plug	100
American dunegrass	Lymus mollis/Elymus mollis	plug/4" plug	100
		Total Plugs	2,550

Live Stakes			
<u>Common Name</u>	<u>Scientific Name</u>	<u>Type</u>	<u>Quantity</u>
northwest sandbar/soft-leaved willow	Salix sessilifolia	3'-4' live stake	300
Columbia River/river willow	Salix fluviatilis/exigua var. columbiana	3'-4' live stake	1,300
sandbar/narrow-leaved/coyote willow	Salix exigua var. exigua	3'-4' live stake	400
Pacific/shining willow	Salix lasiandra	3'-4' live stake	700
Sitka willow	Salix sitchensis	3'-4' live stake	700
Hooker's/Piper's willow	Salix hookeriana	3'-4' live stake	700
red-osier dogwood	Cornus sericea	3'-4' live stake	800
Scouler willow	Salix scouleriana	3'-4' live stake	600
twinberry/bearberry honeysuckle	Lonicera involucrata	3'-4' live stake	500
black cottonwood	Populus trichocarpa	live stake (min 4')	250
black cottonwood	Populus trichocarpa	live stake (6')	100
		Total Live Stakes	6,350

Bands			
<u>Common Name</u>	<u>Scientific Name</u>	<u>Type</u>	<u>Quantity</u>
white alder	Alnus rhombifolia	tree band/bag	200
red elderberry	Sambucus racemosa	tree band/bag	40
blue elderberry	Samubus caerulea/S. mexicana	tree band/bag	40
red alder	Alnus rubra	tree band/bag	200
pondarosa pine	Pinus ponderosa	tree band/bag	15
western hemlock	Tsuga heterophylla	tree band/bag	40
swamp/clustered rose	Rosa pisocarpa	4" band	120
Nutka rose	Rosa nutkana	4" band	300
western/Douglas spirea	Spiraea douglasii	4" band	450
birchleaf spirea/white spirea	Spiraea betulifolia	4" band	200
common sneezeweed	Helenium autumnale	4" band	300
riverbank lupine	Lupinus rivularis	4" band	200
bigleaf lupine	Lupinus polyphyllus	4" band	400
tall Oregon-grape	Mahonia/Berberis aquifolium	4" band	30
lance-leaved/Cascade Oregon grape	Mahonia/Berberis nervosa	4" band	30
kinnikinnick	Arctostaphylos uva-ursi	4" band	90
California blackberry	Rubus ursinus	4" band	20
Oregon tea tree/redstem ceanothus	Ceanothus sanguineus	3" x 9" band	140
		Total Bands	2,815

Potted Stock			
<u>Common Name</u>	<u>Scientific Name</u>	<u>Type</u>	<u>Quantity</u>
Douglas/black hawthorne	Crataegus douglasii	1 gal pot	65
Oregon ash	Fraxinus latifolia	1 gal pot	75
vine maple	Acer circinatum	1 gal pot	70
red flowering currant	Ribes sanguineum	1 gal pot	40
Pacific serviceberry	Amelanchier alnifolia var. semiintegrifolia	1 gal pot	55
snowberry	Symphoricarpos albus	1 gal pot	125
Pacific ninebark	Physocarpus capitatus	1 gal pot	50
osoberry/Indian-plum	Oemleria cerasiformis	1 gal pot	15
blue elderberry	Sambucus caerulea/S. mexicana var. cerulea	1 gal pot	15
oceanspray	Holodiscus discolor	1 gal pot	15
mockorange	Philadelphus lewisii	1 gal pot	15
Oregon white oak	Quercus garriana	2 gal pot	20
western hackberry	Celtis reticulata	1 gal pot	10
black cottonwood	Populus trichocarpa	1 gal pot	25
white alder	Alnus rhombifolia	1 gal pot	20
bigleaf maple	Acer macrophyllum	1 gal pot	15
western hemlock	Tsuga heterophylla	1 gal pot	15
shinyleaf spirea/white spirea	Spiraea lucida/Spiraea betulifolia ssp. lucida	1 gal pot	25
salmonberry	Rubus spectabilis	1 gal pot	70
		Total Pots	740

Upland Zone - Variable by Option						
Common Name	Scientific Name	Type	Option A - 40 yds	Option B - 100 yds	Option C - 200 yds	Option X
osoberry/Indian-plum	Oemleria cerasiformis	1 gal pot	10	20	35	
tall Oregon-grape	Mahonia/Berberis aquifolium	4" band	10	25	50	
lance-leaved/Cascade Oregon grape	Mahonia/Berberis nervosa	4" band	10	25	50	
blue elderberry	Sambucus caerulea/S. mexicana var. cerulea	1 gal pot	15	20	40	
oceanspray	Holodiscus discolor	1 gal pot	10	20	35	
Pacific serviceberry	Amelanchier alnifolia var. semiintegrifolia	1 gal pot	10	25	40	
Douglas/black hawthorn	Crataegus douglasii	1 gal pot	10	25	50	
cascara	Rhamnus purshiana	1 gal pot		10	20	
mockorange	Philadelphus lewisii	1 gal pot	10	15	20	
Nutka rose	Rosa nutkiana	4" band	20	50	75	
Oregon white oak	Quercus garriana	2 gal pot		15	30	
ponderosa pine	Pinus ponderosa	tree band		20	40	
western hemlock	Tsuga heterophylla	1 gal pot		20	35	
coyote bush	Baccharis pilularis	1 gal pot	20	50	70	
western hackberry	Celtis reticulata	1 gal pot		10	20	
California wax myrtle	Morella californica	1 gal pot	10	25	45	
Oregon tea tree/redstem ceanothus	Ceanothus sanguineus	3" x 9" band	20	35	60	
black cottonwood	Populus trichocarpa	1 gal pot		20	40	
white alder	Alnus rhombifolia	1 gal pot		20	40	
bigleaf maple	Acer macrophyllum	1 gal pot	10	25	40	
vine maple	Acer circinatum	1 gal pot	10	20	35	
shinyleaf spirea/white spirea	Spiraea lucida/Spiraea betulifolia ssp. lucida	1 gal pot	10	25	40	
salmonberry	Rubus spectabilis	1 gal pot	10	25	40	
California blackberry	Rubus ursinus	4" band		20	40	
kinnikinnick	Arctostaphylos uva-ursi	4" band	10	20	35	
broad petal strawberry	Fragaria virginiana	plug/band	20	40	70	
coastal wormwood/ coastal mugwort	Artemisia suksdorfii	plug/band	20	40	70	
		Total	245	665	1165	

If submitting an Option X proposal, please include a proposed list of potted stock species, types, and quantities.

PLANTING DENSITIES

Planting densities vary by zone. It shall be the contractor's duty to calculate appropriate spacing for each zone given the specified planting stock, with approval from CREST.

PLANTING SEASON

Planting and seeding shall be conducted between Nov. 1, 2021 and Jan. 31, 2022, with a preference for the first half of that planting window. The purpose of the early planting time is to allow plants as much time as possible to establish root systems before the dry season.

POTTED STOCK

The contractor shall endeavor to avoid planting root-bound containerized stock. It is preferable to plant slightly undersized stock, and thereby provide additional high-quality soil for root expansion, than to plant root-bound stock where expansion into the sandy substrate present in the project area will be immediate.

SOIL AMENDMENTS

Contractor shall provide bids for 3 different volumes of compost to be placed at the site

- 40 cubic yards (0.3 acres at 1" depth)
- 100 cubic yards (0.74 acres at 1" depth)
- 200 cubic yards (1.49 acres at 1" depth)

For the two larger volumes, compost will be applied in strips (10' x 25' for 100 cu. yds. or 20' x 50' for 200 cu. yds.), to a depth of approximately 1 inch. Those strips will then be rototilled, either with a hand-push rototiller or with a tractor-mounted version. Strips will be distributed throughout the Upland zone, primarily along its edges, so that nutrients percolating down from the strips in rainwater will benefit plants in the Riparian zone.

SOIL AMENDMENTS (CONTRACTOR PROPOSAL)

Alternative soil amendment approaches will be considered by CREST. Provide details on materials, approach, and cost in project proposals. Enter costs on the attached Bid Sheet in the "Option X" column. Note that, for regulator compliance, surface fertilizers including hydroseed applications may not be utilized within 50 feet of the water's edge.

STATE OF WASHINGTON SALES TAX

Contractor is responsible for payment of all relevant sales taxes to the State of Washington.