RESOLUTION 2023-X

A RESOLUTION OF THE TOWN OF EATONVILLE, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE AN AMENDMENT TO THE INTERAGENCY AGREEMENT WITH THE STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

WHEREAS, between 1950 and 1980, the Town of Eatonville ("Town") leased property from Weyerhaeuser Company ("Weyerhaeuser") for the purposes of operating a municipal landfill; and

WHEREAS, upon closure of the landfill, proper mitigation measures were not taken to clean up the municipal waste; and

WHEREAS, on August 9, 2021, the Town and Weyerhaeuser entered into Agreed Order DE 20072 with the Washington State Department of Ecology ("Ecology") to provide remedial action at the site; and

WHEREAS, on August 23, 2021, the Town Council approved an Interagency Agreement ("IAA") with Ecology for the purpose of funding and satisfying the requirements of the approved Agreed Order; and

WHEREAS, on November 14, 2022, the Town Council approved amendment #3 to the IAA, which added funding in the amount of $35,000 and modified Appendix A of the IAA; and

WHEREAS, the Town and Ecology are requesting amendment #4 to the IAA, to include adding $249,215 in funding and modifying the Scope of Work; now, therefore,

THE TOWN COUNCIL OF THE TOWN OF EATONVILLE, WASHINGTON, HEREBY RESOLVES AS FOLLOWS:

THAT: The Town Council approves, and the Mayor is authorized to execute, the Amended Interagency Agreement with the State of Washington, Department of Ecology, hereto attached as Exhibit A.

PASSED by the Town Council of Town of Eatonville and attested by the Town Clerk in authentication of such passage this 22nd day of May 2023.

_____
David Baublits, Mayor

ATTEST:

_____
Miranda Doll, Town Clerk

DEPARTMENT OF
ECOLOGY
State of Washington

AMENDMENT NO. 4

TO

Contract NO. C2200079

BETWEEN THE

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

AND

TOWN OF EATONVILLE

PROJECT TITLE: EATONVILLE LANDFILL

PURPOSE: To amend the Agreement between the state of Washington, Department of Ecology, hereinafter referred to as "ECOLOGY," and Town of Eatonville, hereinafter referred to as "TOWN" or "CONTRACTOR."

WHEREAS, TOWN and ECOLOGY request an amendment to the agreement, including adding funding in the amount of $249,215.00, and modifying the scope of work in Appendix A (Statement of Work and Budget).

IT IS MUTUALLY AGREED the Agreement is amended as follows:

1) The Period of Performance is amended to read as follows:

   The period of performance is extended from June 30, 2023, to June 30, 2024.

2) The Scope of Work is amended to read as follows:

   a. Task 3 – Remedial Investigation is being modified as written below,
   b. A new sub-task (3.10) shall be added to Task 3 – Remedial Investigation as written below,
   c. Task 4 is being modified as written below, and
   d. Two (2) new tasks are being added to the scope of work as written below, including:
      i. Task 7 – Surveys, Evaluations, Permitting, and Infrastructure, and
      ii. Task 8 – Wetland Consultation and Permitting.

Deleted text is indicated with strike thru (~~sample~~) and new text is indicated with underlined (<u>sample</u>).

Task 3 – Remedial Investigation

Overall Task 3 Note:
The archaeologist who previously provided the review of this project, hired by Weyerhaeuser, will continue their role in this project to review field work plans and monitor on the ground as the TOWN and Weyerhaeuser deem necessary. An Inadvertent Discovery Plan (IDP) will be used on Site and all field staff that are conducting work on the Site will be trained on how to use the IDP. If archaeological deposits are inadvertently discovered during any ground-disturbing activities, all said activities should be halted immediately in an area large enough to maintain integrity of the deposits as described in the IDP.

The following sub-tasks will be performed under this task:

Sub-Task 3.1: Soil Borings, ~~Test Pitting~~, Geophysical, and Landfill Gas ~~and Invasive Plants~~ Evaluations
In the vehicle accessible area of the upper landfill up to fifteen (15) vertical soil borings using a direct-push drilling technology drill rig are planned. The object is to find the edges of the waste and when waste is encountered drill though it into native soil/bedrock. Drilling will continue five (5) feet into the native material. If no waste is encountered drilling will terminate at 10 feet below ground surface. Due to the possibility of borehole collapse or sloughing within the waste prism, a dual-tube drill rod system will be used to avoid uncertainty on characterizing waste extents and characteristics at varying depths.

Continuous soil sampling will be conducted during the drilling activities. Impacted soil material will be scanned using a photoionization detector (PID). The observations and readings will be recorded on field log forms. These borings are used to identify the depth and extent of waste material and help locate soil borings using hollow stem auger drilling.

The direct-push technology drilling is used to detect any liquid and visually assess impacted soil by various field screening techniques, including:

- Olfactory indications,
- Discolorations,
- Leaching, and
- Sheen and other similar factors.

If any considerable amounts of impacted soil and/or leachate are present (enough to fill sample bottles for multiple analysis) within the waste prism borings, up to fifteen (15) samples may be collected. These will be selectively analyzed using the appropriate soil or groundwater analytical suites.

At select locations, if direct-push drilling technology sampling indicates locations where successful drilling maybe possible, up to three (3) additional hollow stem auger borings may be drilled to allow for geotechnical assessment (see Sub-Task 3.2). Auger drilling was not chosen as the primary drilling approach as augers have the potential to become entangled in waste.

All soil and/or liquid samples will be submitted to a certified and ECOLOGY approved laboratory for following analysis:

- Semi-volatile organic compounds,
- Volatile organic compounds,
- Polychlorinated biphenyls,
- Polycyclic aromatic hydrocarbons,
- Total petroleum hydrocarbons NWTPH-Gx/Dx, depending on these results samples may also be run for:

  - Extractable petroleum hydrocarbon,
  - Volatile petroleum hydrocarbons.
- Total organic carbon, and
- Metals (totals for soil, totals and dissolved for liquid):
  - Arsenic,
  - Barium,
  - Beryllium,
  - Cadmium,
  - Chromium (III and VI),
  - Cobalt,
  - Copper,
  - Lead,
  - Nickel,
  - Selenium,
  - Silver,
  - Thallium,
  - Vanadium, and
  - Zinc.

During drilling activities, landfill gas will be measured from open direct push technology borings using a direct read flammable gas meter that indicates gas levels relative to the lower explosive limit for methane. Anaerobic degradation of organic waste at landfills produces methane gas which poses a potential risk because methane is a flammable gas. Because the landfill has been undisturbed for forty (40) years and cover soil has not been effectively maintained, methane concentrations are anticipated to be low. Landfill gas odor can be an indicator methane is being produced.

The presence of landfill gas will be evaluated during the upper landfill direct push technology drilling and below the upper landfill portion by monitoring soil gas probes. Landfill gas will be monitored from borings and probes in refuse during dry conditions (no measurable precipitation for at least 48 hours) above perched water or the water table. Flammable gas readings will be taken using a flammable gas meter from open push borings after the drill pipe has been removed. Should gas monitoring not be possible from open push borings, screened probes will be installed using the drill rig and gas measurements taken through those. Soil gas levels will be recorded in percent of the lower explosive limit and recorded on daily the field log forms.

Landfill gas readings for mid and lower landfill portions will be obtained from hand driven soil gas probes constructed from 1-inch diameter black iron pipe, three (3) feet long, with slots cut into the pipe every six (6) inches. The probes will be hand driven through the landfill cover material into refuse and readings taken from the pipe top immediately after placement.

Areas where waste is not found during direct-push drilling, under this sub-task, will be candidates for hollow stem auger boring locations for geotechnical sampling and well installation. This information will be relayed via email from field contractor staff to TOWN, ECOLOGY and Weyerhaeuser as soon as known so the hollow stem auger boring locations can be selected.

Drilling may be found to be of limited use for delineating waste thickness, characteristics and horizontal extent since drill rig access is limited to the upper portion of the landfill. If this is the case then further investigation approaches will be evaluated, including geophysical surveying techniques ~~and/or test pitting~~ along the steeper slope portions of the former landfill in 2022.

Geophysical methods would include the use of seismic refraction but may not be limited to that method alone. Geophysical readings will be taken at up to four (4) transects across the waste (across the slope or from bottom to top of the slope). Limited brush clearing using hand techniques may be needed to accommodate geophysical surveys.

~~Should geophysical survey techniques be found to be infeasible for delineating waste thickness, characteristics of waste extents, test pitting may be employed if safe methods can be identified that also prevent impacts to wetland areas. Standard or specialized construction excavating would be utilized where test pitting is performed. Infrastructure improvements may be conducted for existing and potential access roads or work area pads needed in support of test pitting or other remedial investigation activities, as necessary. This may include placing gravel on existing roads and pads and limited earth moving to improve existing roads and construct new access roads to or near the landfill.~~

The elevation and horizontal locations of borings~~, test pits or~~ and geophysical transects will be surveyed, where practical using Real Time Kinematic-Global Positioning System entries for elevations and horizontal locations of soil or water sample sites, hand auger and geotechnical borings and well locations discussed in Sub-Tasks discussed below.

~~Invasive plant species such as Japanese Knotweed and Poison Hemlock are present at the property and the number and extent of these, and other invasive species will be inventoried and addressed during the project cleanup phase.~~

Sub-Task 3.1 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms to record:
    a. Soil characteristics,
    b. Standard penetration testing, and
    c. Hand sample depth interval information.
2. Boring logs.
3. Laboratory analytical reports.
4. Geotechnical modeling:
    a. Results text,
    b. Tables, and
    c. Figures.
5. Archeologic field log(s) if applicable.
~~6. Test pit logs if applicable.~~
~~7. Invasive plants inventory.~~
8. Geophysical report.
9. Elevation and horizontal location survey data tabulated in RI report.
~~10. Infrastructure improvements documentation, if applicable.~~

Sub-Task 3.2: Geotechnical Site Assessment – Drilling and Hand Augering Methods

The landfill is assumed to be structurally stable in its present state, as its configuration has not been modified for several decades and no large-scale landslides have occurred. However, to date, no geotechnical evaluations have been conducted to understand the degree of stability or subsurface geological conditions underlying landfill material. Due to the potential for remedial action involving removal of waste, which may modify drainage and disturb underlying soils, a comprehensive geotechnical analysis will be conducted prior to any waste removal or sampling activities. A certified geotechnical drilling contractor will be retained to assess geotechnical conditions and address potential stability concerns that may arise during remedial action.

Sampling to characterize geotechnical properties will be collected using an engine powered drill rig on the upper landfill portion and by hand using a hand auger in the wetland area. A hollow stem auger drill rig will be used drill two soil borings that will be used for well installation (discussed in Section 4.4 below). Soil sampling will be conducted during the drilling of these borings. Samples will be collected at least every 5 feet the auger is advanced using a split-spoon barrel sampler (1.4-inch inner diameter and 2-inch outer diameter) following standard penetration testing methodology according to American Society for Testing Material D 1586. This allows collection of disturbed soil samples to determine soil geotechnical properties. The sampler will be advanced a depth interval of 18 inches using a 140-pound steel hammer falling 30 inches and operated by a semi-automatic trip-hammer. Blow counts will be recorded as the number of blows required for each successive 6-inch penetration interval (N-values), and the penetration resistance (blows/feet) will be recorded as the number of blows required to drive the final twelve (12) inches of depth. These values and associated characteristics (hardness, stability, and lithological profiles) will be notated on a field log form. Field information will be used to construct boring logs.

The geotechnical engineer will define split-spoon sampling intervals in the field. Samples will be logged for physical properties in accordance with the Unified Soil Classification System. Sample containers will be labeled, sealed, and transported to a laboratory for geotechnical testing. If multiple sample types are visually identified within a single standard penetration testing drive sample, the samples will be split, labeled, and analyzed independently. If possible, up to three additional hollow stem auger drilled soil borings will be advanced through the landfill.

Geotechnical soil samples will also be collected by hand augering at the toe of the landfill and the adjacent wetland area. Sample locations and depths will be identified by the geotechnical engineer in the field after evaluation of the soil lithology defined during environmental soil sampling and well installation. The geology and sample depths and characteristics will be logged for physical properties using a field log form in accordance with the Unified Soil Classification System, and be the sample containers will be labeled, sealed, and transported to a laboratory for geotechnical testing.

Field testing using a hand-held vane shear probe will be used by the geotechnical engineer to determine the value of undrained soil shear strength. This test is expected to be performed in moist soil, at a depth of one (1) to three (3) feet below ground surface. A hand auger may be used to advance the hole to a depth of approximately six (6) inches below ground surface prior to use of the probe. The vane shear (attached to a metal rod) will be pushed to the testing depth by hand, and the mechanism will be rotated at a slow, constant rate (6 to 12 degrees of rotation per minute) using a torque wrench. Once maximum torque has been reached, the shear vane will be rotated quickly to calculate remolded shear strength.

A soil properties and geotechnical analysis will be conducted for both drilled and hand augered areas of the landfill and documented on field log forms for later boring log preparation, including:

- Field work includes logging:
  - Soil type,
  - Color,
  - Moisture content,
  - Presence of contamination,
  - Presence of waste, and
  - Grain size distribution.
- Sample depths and interval and depth to water will also be entered in field log forms for later boring log preparation.
- Soil samples from drilled borings are collected using standard penetration testing methodology, this technique also used to measure soil density.

- Soil samples from hand auger borings will undergo hand-held vane shear probe to evaluate soil shear strength.
- Soil samples collected from drilled and hand auger borings will be submitted for laboratory analysis:
  - Moisture content,
  - Grain size,
  - In-situ dry density,
  - Fines content,
  - Atterberg limits,
  - Triaxial compressive strength, and
  - One-dimension consolidation and direct shear.
- Field and laboratory data will be used to conduct an engineering analysis and modeling to assess the ground structural stability (landslide potential) to support the feasibility study evaluations and a future remedial action.

Sub-Task 3.2 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms,
2. Boring and gas probe locations figure,
3. Email updates to ECOLOGY Site Manager, TOWN and Weyerhaeuser on the following:
   a. Borings completed,
   b. Landfill gas readings,
   c. Potential areas for hollow stem auger boring locations, and
   d. Potential or confirmed archaeologic discoveries.
4. Boring logs,
5. Laboratory analytical reports, and
6. Archeologic field log(s) if applicable.

Sub-Task 3.3: Source and Contaminant Characterization – Hand Augered Soil/Sediment Borings and Wetland Delineation

To assess the contaminants of potential concern in the wetland area, shallow soil/wetland sediment samples will be collected along three (3) parallel transects. Each transect spans the landfill width perpendicular to the landfill axis and are approximately fifty (50) feet apart. The first transect starts at the landfill base and the next transects are farther out from that. Five (5) soil subsamples will be collected at an equal spacing along each transect (pre-located on Real Time Kinematic-Global Positioning System) and be composited into one (1) sample from each transect. The target subsample depth intervals are every 0.5 foot for the first foot, then 1.0-foot interval from 1.0 to 2.0 foot below ground surface, Sample intervals may be adjusted based on field conditions. The five (5) subsamples will be collected and homogenized in a decontaminated stainless-steel bowl to form one (1) primary sample from each transect.

If initial sampling along the three (3) parallel transects (1-3) indicates a need to perform further characterization additional transects and/or deeper sampling at current transects will be performed. Two (2) step-out transects (4 -5) will be approximately fifty (50) feet apart. Transect 4 starts 50 feet beyond transect 3. If additional step-down or step-out sampling is required, five (5) soil subsamples will be collected at an equal spacing along each transect (pre-located on Real Time Kinematic-Global Positioning System) and split. Half will go into individual jars and half will be composited into one (1) sample from each transect. The target subsample depth will be dependent on the need to step-down further. The five (5) subsample composite will be collected from the same depth interval and be homogenized in a decontaminated stainless-steel bowl to form one (1) primary sample from each transect. All individual

subsample jars will be archived until composite results indicate a need to characterize the subsamples due to exceedance of MTCA appropriate screening levels.

The surface soil subsamples will be manually collected using a 3 to 4-inch diameter hand auger as motorized drilling equipment is unable to access the base of the landfill. Each hand auger subsample location will be logged in accordance with the Unified Soil Classification System and recorded on field log form. Ground conditions along each transect will be logged including areas with considerable vegetation. If obstructions are encountered during sampling, new sample locations will be selected as close to those proposed on the Real Time Kinematic-Global Positioning System to ensure representative soil samples are collected. Excess soil from the soil core will be placed back into the ground at the point of collection.

All digging and sample collection equipment, including the auger and stainless-steel spoons, will be decontaminated between each sub-sample collection location. Additional and alternative hand sampling tools will be available during sampling, as backup alternatives if needed.
Samples will be analyzed for the following:

- Semi-volatile organic compounds,
- Volatile organic compounds,
- Polychlorinated biphenyls,
- Polycyclic aromatic hydrocarbons,
- Total petroleum hydrocarbons NWTPH-Gx/Dx, depending on these results samples may also be run for:
  - Extractable petroleum hydrocarbon,
  - Volatile petroleum hydrocarbons.
- Total organic carbon, and
- Metals (totals for soil and totals and dissolved for liquid):
  - Arsenic,
  - Barium,
  - Beryllium,
  - Cadmium,
  - Chromium (III and VI),
  - Cobalt,
  - Copper,
  - Lead,
  - Nickel,
  - Selenium,
  - Silver,
  - Thallium,
  - Vanadium, and
  - Zinc.

Additional step-out/step-down soil sampling, where necessary to delineate contaminant extents, may allow for limiting the above sampling suite to only the contaminant categories that require further characterization.

Sub-Task 3.3 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms,
2. Boring locations figure,
3. Email updates on borings completed,
4. Boring logs,
5. Archeologic field log(s) if applicable, and
6. Laboratory analytical reports.
7. ~~Wetland delineation survey report.~~

Sub-Task 3.4: Source and Contaminant Characterization – Landfill Cover Soils

The cover soil over the landfill prism will be characterized for contaminants of potential concern. Sample locations are not pre-selected using the Real Time Kinematic-Global Positioning System as cover material is not uniform and each sample location needs to be determined in the field. Actual sample locations will be recorded by the Real Time Kinematic-Global Positioning System.

Cover sampling involves Incremental Sampling Methodology, a structured composite sampling protocol that provides the following:

- Reduction in data variability,
- Increases sample representativeness, and
- Reduces the chance of missing significant contamination in a volume of soil targeted for sampling (ITRC, 2020).

Incremental Sampling Methodology characterizes the average contaminants of potential concern concentrations within a predefined area called a decision unit. The decision unit defines the area and depth of sampling upon which risk decisions can be based. A second decision unit for the cover material will be the soil from the borrow pit located north and across the access road from the landfill where soil was initially excavated to use for landfill cover.

To conduct Incremental Sampling Methodology sampling, numerous samples of soil (each called an increment) are collected and combined, homogenized in a laboratory, and the homogenized sample is then subsampled according to specific protocols. The decision unit for this event will be planned for a minimum of fifty (50) increments but actual increments will be based on access. At least thirty (30) increments must be collected. The target depth for each subsample is 0 to 6 inches below ground surface. The incremental soil samples will be collected using a small-diameter (1- to 2-inch diameter) stainless steel push tube shaped sampling device, a decontaminated stainless-steel trowel or small shovel, or decontaminated 3- to 4-inch hand auger.

At each incremental location, after removal of surface vegetation, soil from the top six (6) inches measured using a scale to achieve a target mass of approximately one hundred (100) grams per subsample. The material will then be placed into a large labeled, laboratory pre-cleaned 1-gallon glass sample container. Significant root vegetation mass, and most gravel, will be removed from the subsample. However, degraded or fine organic materials are acceptable for collection. All increments from each decision unit will be placed into a single sample container provided by the laboratory and will be homogenized and processed at the laboratory. When processing the Incremental Sampling Methodology samples, the laboratory will use the entire sample volume from each decision unit (i.e., 30 or more incremental subsamples) to create a composited, homogenized sample. The Incremental Sampling Methodology sample for each decision unit will be processed following the procedures of using standardized 2-dimensional Japanese Slab-Cake procedures.

Fifty (50) increments will be attempted to be collected, however a minimum of thirty (30) are required. Three (3) Incremental Sampling Methodology samples will be collected during each sampling event and be analyzed for the following:

- Semi-volatile organic compounds,
- Volatile organic compounds,
- Polychlorinated biphenyls,
- Polycyclic aromatic hydrocarbons,
- Total petroleum hydrocarbons.
  - Extractable petroleum hydrocarbon, and
  - Volatile petroleum hydrocarbons.
- Total organic carbon, and
- Metals (totals for soil and totals and dissolved in liquid):
  - Arsenic,
  - Barium,
  - Beryllium,
  - Cadmium,
  - Chromium (III and VI),
  - Cobalt,
  - Copper,
  - Lead,
  - Nickel,
  - Selenium,
  - Silver,
  - Thallium,
  - Vanadium, and
  - Zinc.

Sub-Task 3.4 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms,
2. Boring locations figure,
3. Email updates on borings completed,
4. Boring logs,
5. Laboratory analytical reports, and
6. Archeologic field log(s) if applicable.

Sub-Task 3.5: Source and Contaminant Characterization – Drilled Groundwater Monitoring Well(s) Installation/Gradient/Sampling

At a minimum, four (4) groundwater monitoring wells (two upgradient and two downgradient of the landfill prism) will be installed. Wells will be installed for evaluating groundwater gradient and groundwater quality. All groundwater monitoring wells will be installed such that they can maintain and kept in place for a minimum of two (2) sampling events (one dry season sampling event and one wet season sampling event).

The two (2) upgradient (upper landfill) groundwater monitoring wells will be located along the landfill access road adjacent to the top of the landfill. They will be installed in locations where refuse is not encountered to characterize incoming groundwater near the landfill. These wells will be drilled and completed using a hollow stem auger drill rig to a depth of five (5) feet beyond competent groundwater. If completing boring is not possible based on field conditions using a hollow stem auger rig, a sonic or rotary

drill rig will be used instead. If possible, based on drilling conditions, at least one (1) borehole will be drilled eighty (80) to one hundred (100) feet below ground surface regardless of initial depth to competent water, or until meeting refusal, to characterize the lithological extent at the top of the slope. Split-spoon sampling will be performed following ASTM D 1586 (ASTM International, 2018) standards to determine soil geotechnical properties and collect disturbed soil samples using the standard penetration testing split-spoon barrel sampler (1.4-inch inner diameter and 2-inch outer diameter).

The sampler will be advanced to a depth of eighteen (18) inches using a 140-pound steel hammer falling thirty (30) inches and operated by a semi-automatic trip-hammer, as defined in the ASTM International guidance. Blow counts will be recorded as the number of blows required for each successive 6-inch penetration interval, and the penetration resistance (blows/feet) will be recorded as the number of blows required to drive the final twelve (12) inches of depth. Standard penetration testing N-values will also be obtained. These values and associated characteristics (hardness, stability, and lithological profiles) will be notated on a field log form.

Split-spoon sampling intervals will be defined in the field by the geotechnical engineer, but sampling will be performed at no less than every five (5) feet. Samples will be logged for physical properties using a field form in accordance with the Unified Soil Classification System, labeled, sealed, and transported to a laboratory for geotechnical testing. If multiple sample types are visually identified within a single standard penetration testing drive sample, the samples will be split, labeled, and analyzed independently. If possible, up to three additional hollow stem auger drilled soil borings will be advanced through the landfill.

The landfill groundwater gradient will be determined from depth to groundwater measurements taken from the newly installed groundwater monitoring wells at the upper portion of the landfill and those installed in the wetland area. Water level depths will be measured from surveyed marked point at the well casing top. Groundwater elevation levels and well pore volumes will be calculated from those depths to water measurements. If possible, a licensed surveying company will tie well casing top elevations to the 1988 North American Vertical Datum. Otherwise, ground surface elevations will be estimated from LiDAR surveys. The height of the each well pipe will be measured from the ground surface to the nearest hundredth of a foot and recorded on field log form. Depth to groundwater measurements will be taken from each well before sampling and on the same day within a short time period and recorded on field log forms.

Groundwater will be sampled approximately one day (24 hours) after well installation to allow solids to settle to achieve low turbidity in samples. Well purging will be done before sampling by inserting dedicated tubing into the well screen center. Water will be withdrawn using a peristaltic pump at a flow rate of approximately two-hundred and fifty (250) milliliters per minute and depth to water will continually be monitored to not draw down the water level in the well.

Field parameters will be collected using a YSI multi-parameter direct reading field instrument connected via purge tubing to a flow-through cell. Parameters collected in the field will be entered on a field log form. These values will be monitored at approximately 5-minute intervals and recorded on the field form.

The YSI direct reading instrument will be calibrated at the beginning of each field day when samples are collected. Calibration specifications will be recorded in the field log forms. For each sample location, field parameters will be collected by either submerging the decontaminated YSI direct reading instrument directly into water at the sample location or by using the peristaltic pump and a flow-through cell for parameter collection.

A YSI direct read instrument will be used to collect field parameters readings, including:

- pH,
- Dissolved oxygen,
- Temperature,
- Conductivity, and
- Oxygen-reduction potential.

Purging is considered complete when field parameters have stabilized, and water level drawdown is controlled in accordance with U.S. Environmental Protection Agency low flow purging and sampling procedures (EPA, 2017). If these conditions are not met, purging is considered complete when the following sequencing takes place:

1. A minimum of three (3) well volumes has been removed and successive field parameter measurements agree with the stability criteria based on three consecutive measurements taken five (5) minutes apart.
2. At least five well volumes have been removed (even if field parameter stabilization criteria cannot be attained.
3. The well has been pumped dry and allowed to recover sufficiently such that adequate sample volumes can be collected within twenty-four (24) hours of the initial well purging.

Final field parameters will be collected, and purge tubing removed from the flow-through the cell prior to collecting groundwater sample directly from purge tubing. Purge water will be drummed, and a representative sample(s) collected to determine if disposal off-site is required. If determined to be non-hazardous, water will be left on-site; if determined to be hazardous, purge water will be disposed of at the nearest publicly owned water treatment facility.

Two (2) groundwater samples will be collected during each sampling event and be analyzed for the following:

- Semi-volatile organic compounds,
- Volatile organic compounds,
- Polybrominated diphenyl ethers by gas chromatography/mass spectrometry select ion method
- Polychlorinated biphenyls,
- Polycyclic aromatic hydrocarbons,
- Total petroleum hydrocarbons NWTPH-Gx/Dx, depending on these results samples may also be run for:
  - Extractable petroleum hydrocarbon,
  - Volatile petroleum hydrocarbons.
- Total organic carbon, and
- Metals (totals and dissolved):
  - Arsenic,
  - Barium,
  - Beryllium,
  - Cadmium,
  - Chromium (III and VI),
  - Cobalt,
  - Copper,
  - Lead,
  - Nickel,
  - Selenium,
  - Silver,

  - Thallium,
  - Vanadium,
  - Zinc, and
- Cations and anions:
  - Ferric iron
  - Ferrous iron
  - Manganese
  - Alkalinity
  - Sulfate
  - Sulfite
  - Nitrate
  - Nitrite
  - Ammonia, and
  - Methane.

Sub-Task 3.5 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms,
2. Boring locations figure,
3. Email updates on borings completed,
4. Boring logs,
5. Laboratory analytical reports, and
6. Archeologic field log(s) if applicable.

Sub-Task 3.6: Source and Contaminant Characterization – Hand Augered Groundwater Monitoring Well(s) Installation/Sampling

Two downgradient wells (wetland area) will be drilled by hand auger and set in place by hand. A temporary well borehole will be created using a decontaminated post hole digger and/or shovel and hand auger. Then, a decontaminated temporary pre-packed push-in well screen (1.25-inch x 14-inch stainless steel piezometer) and pipe will be placed in the borehole. Clean sand will be used as backfill in the boring and will be placed to a minimum of one (1) foot above the screened zone and the remainder of the annular space shall be filled with a bentonite grout or hydrated chips to the ground surface. Soil cuttings will be placed on the ground. Flush mount or above ground security casings will not be installed over the wetland area wells as these are not anticipated to be in place for an extended period and in a remote area.

The landfill groundwater gradient will be determined from depth to groundwater measurements taken from the newly installed groundwater monitoring wells at the upper portion of the landfill and these wells. Water level depths will be measured from surveyed marked point at the well casing top. Groundwater elevation levels and well volumes will be calculated from depth to water measurement. If possible, a licensed surveying company will tie well casing top elevations to the 1988 North American Vertical Datum. Otherwise, ground surface elevations will be estimated from LiDAR surveys. The height of the each well pipe will be measured from the ground surface to the nearest hundredth of a foot and recorded on the field log form. Depth to groundwater measurements will be taken from the hand augered wells before sampling and on the same day within a short time period and recorded on field log forms.

Groundwater will be sampled approximately one day (24 hours) after well installation to allow solids to settle to achieve low turbidity in samples. Well purging will be done before sampling by inserting dedicated tubing into the well screen center. Water will be withdrawn using a peristaltic pump at a flow rate of approximately two-hundred and fifty (250) milliliters per minute and depth to water will continually be monitored to not draw down the water level in the well.

Field parameters will be collected using a YSI multi-parameter direct reading field instrument connected via purge tubing to a flow-through cell. Parameters collected in the field will be entered on a field log form. These values will be monitored at approximately 5-minute intervals and recorded on the field form.

The YSI direct reading instrument will be calibrated at the beginning of each field day when samples are collected. Calibration specifications will be recorded in the field log forms. For each sample location, field parameters will be collected by either submerging the decontaminated YSI direct reading instrument directly into water at the sample location or by using the peristaltic pump and a flow-through cell for parameter collection.

A YSI direct read instrument will be used to collect field parameters readings, including:

- pH,
- Dissolved oxygen,
- Temperature,
- Conductivity, and
- Oxygen-reduction potential.

Purging is considered complete when field parameters have stabilized, and water level drawdown is controlled in accordance with U.S. Environmental Protection Agency low flow purging and sampling procedures (EPA, 2017). If these conditions are not met, purging is considered complete when the following sequencing takes place:

1. A minimum of three (3) well volumes has been removed and successive field parameter measurements agree with the stability criteria based on three consecutive measurements taken five (5) minutes apart.
2. At least five well volumes have been removed (even if field parameter stabilization criteria cannot be attained.
3. The well has been pumped dry and allowed to recover sufficiently such that adequate sample volumes can be collected within twenty-four (24) hours of the initial well purging.

Final field parameters will be collected, and purge tubing removed from the flow-through the cell prior to collecting groundwater sample directly from purge tubing. Purge water can be placed in a bucket with lid and a representative sample(s) collected to determine if disposal off-site is required. If determined to be non-hazardous, water will be left on-site, if determined to be hazardous, purge water will be disposed of at the nearest publicly owned water treatment facility.

Groundwater will be sampled approximately one day (24 hours) after well installation to allow solids to settle to achieve low turbidity in samples. Two (2) groundwater samples will be collected during each sampling event and be analyzed for the following:

- Semi-volatile organic compounds,
- Volatile organic compounds,
- Polybrominated Diphenyl Ethers by Gas Chromatography/Mass Spectrometry Select Ion Method,
- Polychlorinated biphenyls,
- Polycyclic aromatic hydrocarbons,
- Total petroleum hydrocarbons NWTPH-Gx/Dx, depending on these results samples may also be run for:
    - Extractable petroleum hydrocarbon,
    - Volatile petroleum hydrocarbons.

- Metals (totals and dissolved in liquid):
  - Arsenic,
  - Barium,
  - Beryllium,
  - Cadmium,
  - Chromium (III and VI),
  - Cobalt,
  - Copper,
  - Lead,
  - Nickel,
  - Selenium,
  - Silver,
  - Thallium,
  - Vanadium,
  - Zinc, and
- Cations and anions:
  - Ferric iron
  - Ferrous iron
  - Manganese
  - Alkalinity
  - Sulfate
  - Sulfite
  - Nitrate
  - Nitrite
  - Ammonia, and
  - Methane.

Sub-Task 3.6 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms,
2. Boring locations figure,
3. Email updates on borings completed,
4. Boring logs,
5. Laboratory analytical reports, and
6. Archeologic field log(s) if applicable.

Sub-Task 3.7: Source and Contaminant Characterization – Surface Water Sampling (Seeps and Springs) and Sediment

At a minimum, surface water locations sampled in January 2021 will be resampled. Other surface water samples will be collected from all seeps or springs daylighting within the wetland area. Minimal equipment is anticipated to be required for collecting the samples. Due to the dry weather conditions, sampling seeps may require digging a shallow pit to enable effective sample collection. If sample is obtained by digging a pit to concentrate the water, adequate time will be allowed prior to sample collection to reduce the turbidity/total solids content of the sample.

If seeps are easily accessed, bottles will be filled by decanting from a decontaminated scoop. During sample collection the sample bottle outside will not come in contact with water being sampled. If digging is required to access seeps, a peristaltic pump will be used to transfer samples into bottles, ideally collecting water from the center of the water column containing low suspended solids/turbidity (as determined by visual observation). To decrease potential turbidity care will be exercised to minimize disturbance to the

surrounding sample area or pit while collecting samples. Where a bottle cannot easily be placed under the points of flow, a peristatic pump and disposable tubing will be used to collect low-flow samples.

A YSI direct reading instrument will be used to collect field parameters in conjunction with seep sample collection for the following parameters:

- pH,
- Dissolved oxygen,
- Temperature,
- Conductivity, and
- Oxygen-reduction potential.

One (1) sediment sample will be collected from flowing water exiting the wetland area or as close as possible to that area. The goal being to sample sediment from the stream that discharges to the Mashel River. A decontaminated hand-auger, trowel or push tube will be used for sample collection.
The number of seeps or standing water is unknown so the number of samples can only be estimated, at least three (3) samples is expected, and one (1) sediment sample will be collected during each sampling event and be analyzed for the following:

- Semi-volatile organic compounds,
- Volatile organic compounds,
- Polybrominated diphenyl ethers by gas chromatography/mass spectrometry select ion method,
- Polychlorinated biphenyls,
- Polycyclic aromatic hydrocarbons,
- Total petroleum hydrocarbons NWTPH-Gx/Dx, depending on these results samples may also be run for:
  - Extractable petroleum hydrocarbon,
  - Volatile petroleum hydrocarbons.
- Total organic carbon, and
- Metals (totals and dissolved in liquid):
  - Arsenic,
  - Barium,
  - Beryllium,
  - Cadmium,
  - Chromium (III and VI),
  - Cobalt,
  - Copper,
  - Lead,
  - Nickel,
  - Selenium,
  - Silver,
  - Thallium,
  - Vanadium,
  - Zinc, and
- Cations and anions:
  - Ferric iron
  - Ferrous iron
  - Manganese
  - Alkalinity
  - Sulfate
  - Sulfite

- Nitrate
- Nitrite
- Ammonia, and
- Methane.

Sub-Task 3.7 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation (RI) data):

1. Field log forms,
2. Boring locations figure,
3. Email updates on borings completed,
4. Boring logs,
5. Laboratory analytical reports, and
6. Archeologic field log(s) if applicable.

Sub-Task 3.8: Wetland Delineation

Formal classification of soils at the base of the landfill within Weyerhaeuser property limits has not been adequately documented to date. In order to determine technical and regulatory requirements for any remedial action of soil and or sediment at the landfill base, a wetland delineation is needed. A certified wetlands ecologist will delineate the extents of wetland area from the base of the landfill slope to at least the Weyerhaeuser southern property limits.

A wetland survey will be performed in accordance with methodologies as defined by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2).*

Sub-Task 3.8 Deliverables (to be incorporated into the remedial investigation report due ninety days following Ecology receipt of fully validated remedial investigation data):

1. Wetland Delineation Report.

Sub-Task 3.9: Weight of Evidence Ecological Evaluation Approach

The Terrestrial Ecological Evaluation (TEE) allows for a Weight of Evidence (WOE) approach to determining ecological risk screening values. The TEE will be performed/completed by a licensed ecologist led by GSI Water Solution Inc. with support from SLR who will provide a biologist for the field efforts. As part of the WOE, field efforts are required and are planned to be implemented in August 2022. The purpose of the WOE approach is to evaluate conditions in the wetland below the former Eatonville Landfill in relation to other similar wetland settings in locations outside of high metals concentrations but within the general wetland area, including the following:

- Surface conditions,
- Vegetation conditions, and
- Soil moisture conditions.

The anticipated work has been detailed in a WOE memorandum developed for Washington Department of Ecology:
GSI, 2022. Former Eatonville Landfill - Work Plan for Terrestrial Ecological Evaluation Using a Weight of Evidence Ecological Evaluation Approach. From: Katie Lippard and Josh Bale, GSI Water Solutions, Inc.; To: Sam Meng, Washington Department of Ecology. August 31, 2022.

The scope of the WOE approach is composed of four (4) principal components:

1. Literature review to determine what levels of contaminant concentrations are currently considered to be protective based on comparison to other sites and studies.

a. The literature review consists of reviewing available Site data regarding metal concentrations and comparing to data collected by other government agencies (either inside or outside of State of Washington) through screening level research projects to evaluate for reasonable cleanup levels, including but not limited to:
    i. U.S. Environmental Protection Agency (EPA) Soil Screening,
    ii. Risk Assessment Information System (RAIS), and
    iii. Oak Ridge National Laboratory.
b. This is a desktop exercise to be performed remotely.

2. Visual evaluation and documentation of existing Site vegetation to determine if there are negative impacts to elevated metals concentrations for the following elements:
    a. Species composition,
    b. Density, and
    c. Condition.
3. Soil samples will be collected from the Site from strategic locations, including:
    a. Five (5) locations with known concentrations of elevated metals, and
    b. Five (5) locations un-impacted by metals for comparison
    c. These samples will be sent to an Ecology approved laboratory for evaluation of soil biota (invertebrates) to allow for group identification and enumeration.
4. In summer of 2022, wildlife cameras will be set throughout the Site for one (1) month in strategic locations to document avian and mammalian wildlife behaviors and characteristics including but not limited to the following:
    a. Abnormal walking or flying patterns,
    b. Large lumps that may be indicative of contaminant exposure,
    c. Deformities, and
    d. Any other non-typical behaviors or characteristics the biologist notes.

Sub-Task 3.9 Deliverables (to be incorporated into the Remedial Investigation/Feasibility Study (RI/FS) report):

1. Field forms,
2. Evaluation location figure,
3. Photos,
4. Summary report that includes the results of the four (4) components of the TEE WOE approach.

Sub-Task 3.10: Feature Survey

A feature survey is needed at the Site to address comments on the Draft RI/FS and support preliminary infrastructure development. Work will be completed using a Global Positioning Unit (GPS), camera, and field notes. The feature survey will include:

- Establishing general elevations at the Mashel River Ordinary High-Water mark and in the wetlands,
- Identifying and documenting the types of debris and location in the wetland,
- Documenting evidence of firearm shooting at the borrow pit and former landfill,
- Evaluating the drainage network between the wetlands and the Mashel River, and
- Identifying surface water features near the property line that could serve as Points of Compliance.

Sub-Task 3.10 Deliverables (to be incorporated into the Revised Draft of the Remedial Investigation/Feasibility Study (RI/FS) report):

1. Feature survey figure, and
2. Photos.

Task 4 – Remedial Investigation Report

A remedial investigation report will be completed in accordance with WAC 173-340-350. Results of the remedial investigation (Task 3) activities coupled with the historical data will be presented in a Draft Remedial Investigation and will be subject to public review and comment.

The remedial investigation and feasibility study report will include the following elements:

- Background Information.
  - Site history, and
  - Information from previous site investigations.
- Nature and Extent of Contamination – the Contractor will prepare a description and assessment of the degree and extent of contamination. This must include:
  - Data analysis:
    - Analyze all data collected during Tasks 2 through 4, and
    - Prepare supporting figures and tables.
  - Conceptual Site Model:
    - Discuss:
      - Contaminant release,
      - Fate and transport,
      - Exposure pathways, and
      - Potential receptors.
  - Lab reports,
  - Information from previous investigations,
  - Well boring logs,
  - ~~Test pit logs, and~~
  - Any other documentation of site characterization activities.
- Applicable or Relevant and Appropriate Requirements Analysis:
  - Identify applicable:
    - Local,
    - State, and
    - Federal laws for cleanup of the site in accordance with WAC 173-340-710.
- Cleanup Levels/Risk Assessment Analysis
  - Final cleanup levels and points of compliance will be generated by ECOLOGY;
    - The remedial investigation report should incorporate these values and provide a general discussion of why the cleanup levels and points of compliance are appropriate for the site based on site location.
    - The remedial investigation report should discuss projected future use.
    - The remedial investigation report should discuss contaminant concentrations.
    - The remedial investigation report should also include any risk assessment information generated by ECOLOGY.
- Discussion of remedial investigation data
  - Interpret and discuss data to determine the nature and extent of the contamination and to support final cleanup recommendations for the site.
  - Include a summary of all possible and suspected source areas of contamination based on the data collected.
- Discuss any known or potential risks to public health and the environment.

Task 4 Deliverables (to be incorporated into the deliverables for Task 5 – Feasibility Study):

1. Ecology Review Draft Remedial Investigation Report, including:
    a. Any archaeological findings,
    b. Daily field logs,
    c. Analytical reports, and
    d. Figures and tables.
    e. This deliverable is due for ECOLOGY review ninety (90) calendar days following completion of remedial investigation activities and will include all of the deliverables outlined above for all sub-tasks of task 3.
    f. ECOLOGY will provide their comments to this version of the Ecology Review Draft Remedial Investigation Report within forty-five (45) calendar days following receipt.
2. Public Review Ready Draft Remedial Investigation Report, including all of the elements as outlined in #1 above and ECOLOGY's comments on the draft version is due for ECOLOGY review sixty (60) calendar days following submittal of ECOLOGY's comments on #1 above.

Note: The Public Review Ready Draft Remedial Investigation and Feasibility Study Reports will go out for public comment for thirty-days (30) minimum. The Agreed Order does not provide a schedule on when the public comment period should start. ECOLOGY will provide a response to comments received during the public comment period, if any provided. ECOLOGY will approve the Public Review Ready Draft Remedial Investigation and Feasibility Study document. The Agreed Order does not provide a schedule for approving the Public Review Ready Draft Remedial Investigation and Feasibility Study document.

Task 5 – Feasibility Study and Report

A feasibility study will be conducted following the completion of the task 3 remedial investigation activities and incorporate any and all historical or previous assessment information to determine the best potential cleanup methods to present to ECOLOGY for consideration.

The following will be performed as part of the feasibility study:

- Conduct technology screening and evaluation sufficient to develop site-specific cleanup action alternatives.
- Propose cleanup action alternatives and perform a disproportionate cost analysis on said alternatives.
- Present a preferred cleanup action based on site-specific information.

Task 5 Deliverables:

1. Ecology Review Draft Feasibility Study Report, including:
    a. Ecology Review Draft Remedial Investigation Report, including all items outlined under Task 4 Deliverables,
    b. Technology screening and evaluation,
    c. Proposal of cleanup action alternatives,
    d. A disproportionate cost analysis, and
    e. Presentation of a preferred cleanup action.
    f. This deliverable is due to ECOLOGY for review one-hundred twenty (120) calendar days following ECOLOGY's approval of the Public Review Ready Draft Remedial Investigation Report.
    g. ECOLOGY will provide their comments to the Ecology Review Draft Feasibility Study Report within forty-five (45) calendar days following receipt.

2. Public Review Ready Draft Feasibility Study Report, including:
    a. The Public Review Ready Draft Remedial Investigation Report, and
    b. All of the elements as outlined in #1 above and ECOLOGY's comments on the draft version is due for ECOLOGY review sixty (60) calendar days following submittal of ECOLOGY's comments on #1 above.

Note: The Public Review Ready Draft Remedial Investigation and Feasibility Study Reports will go out for public comment for thirty-days (30) minimum. The Agreed Order does not provide a schedule on when the public comment period should start. ECOLOGY will provide a response to comments received during the public comment period, if any provided. ECOLOGY will approve the Public Review Ready Draft Remedial Investigation and Feasibility Study document. The Agreed Order does not provide a schedule for approving the Public Review Ready Draft Remedial Investigation and Feasibility Study document.

Task 6 – Preliminary Draft Cleanup Action Plan
A Preliminary Draft Cleanup Action Plan will be submitted to ECOLOGY after the Public Review Ready Remedial Investigation and Feasibility Study document has been approved by ECOLOGY.

The preliminary draft cleanup action plan will include the following:

- General description of the proposed cleanup action.
- Summary of the rationale for selecting the proposed cleanup action.
- Summary of other cleanup action alternatives evaluated.
- Identifies site-specific cleanup levels and points of compliance for each hazardous substance and medium of concern for the proposed cleanup action.
- Identifies applicable state and federal laws for the proposed cleanup action.
- Institutional controls, if any, required as part of the proposed cleanup action.
- Identifies residual contamination remaining on the site after cleanup and restrictions on future uses and activities at the site to ensure continued protection of human health and the environment.
- A preliminary determination by the Ecology that the proposed cleanup action will comply with Washington Administrative Code 173-340-360.
- Discusses compliance monitoring requirements.
- Presents the schedule for implementing the CAP and if known, restoration timeframe.

Task 6 Deliverable:

1. Preliminary Draft Cleanup Action Plan is due ECOLOGY ninety (90) calendar days following ECOLOGY's approval of the Public Review Remedial Investigation and Feasibility Study Reports.

Note: Following ECOLOGY's receipt of the Preliminary Draft Cleanup Action Plan and when it has been determined by both ECOLOGY and the Attorney General's Office that obligations of Agreed Order 20072 have been met, ECOLOGY will provide to the Town of Eatonville and Weyerhaeuser a Notice of Completion Letter indicating such. The Agreed Order does not provide a schedule for providing a Notice of Completion Letter. The Interagency Agreement ends with submittal of the Satisfaction Letter on or prior to June 30, ~~2023,~~ 2024, whichever comes first.

Task 7 – Supplemental Field Programs for Construction

Supplemental field programs are needed to support the objectives of the project. Supplemental field programs are not intended to be included in the RI/FS but are necessary to ensure that the project can advance on a reasonable schedule. The supplemental field programs include:

Sub-Task 7.1: State Parks Requirements/Processes

This subtask is intended to cover the needs of State Parks during the development of preliminary infrastructure and the completion of a Real Property Agreement (RPA) application. The full scope of work necessary to address the needs of State Parks is not known at this time but may include:

- Archaeological monitoring,
- Road use plans, and
- Different sets of design plans to address questions in the RPA.

The work that is known to be needed at this time includes:

- A tree survey will be required along the upper access road area to the landfill in support of an application for permits from State Parks for the installation of preliminary roads and work pads.
    - Additional survey work may be completed around the landfill and wetlands to support the permitting of the future remedial action. The additional work will involve:
        - Evaluation of tree species,
        - Evaluation of tree size,
        - Evaluation of tree age, and
        - Other tree characteristics deemed important by an ecological specialist or arborist engaged to complete this task and support the permitting needs that State Parks requires.

Sub-Task 7.1 Deliverable (to be provided for Ecology review at least four weeks prior to period of performance ending date):

1. State Parks coordination progress report.
2. Tree survey report.

Sub-Task 7.2: Landfill Waste Characterization

Landfill waste characterization is needed to support the development of:

- A waste management plan,
- A disposal management plan, and
- Refinement of the selected and preferred remedial alternative costs.

This work will include:

- The review of waste-related regulations,
- Consultation with State Parks about regulatory and permitting needs for the proposed infrastructure improvements,
    - If the necessary improvements impinge on Parks property, then a Real Property Agreement (RPA) application will be needed.
- Development of a waste characterization memorandum in consultation with a waste handling/disposal expert, and
- Completion of a field program.
    - The field program will characterize the landfill wastes for disposal through:
        - Test pitting,

- Testing pitting is proposed within the thickest portions of the former landfills waste prism that are accessible to heavy construction equipment.
  - ✓ These portions of the waste prism will provide the best representation of the wastes that will be removed. To facilitate the test pitting all areas will need to be accessible to heavy construction equipment such as long reach excavators.
- Test pits will be distributed across the waste prism to provide as much representation of the waste prism as possible. This is a necessary step due to the challenges encountered with using drilling technologies that limited the number of waste prism samples that could be collected for evaluation and did not provide information related to the types of waste present and the amount of cover and waste comingled within the most significant parts of the waste prism.
- To facilitate access to conduct the test pitting the development of gravel roads and work pads may be needed. If needed this work will include the development of designs for the enhancement and development of access roads and work area pads at the top of the former landfill to facilitate safe access for test pitting.
- A geotechnical engineer will support the development of the road and pad designs. These designs will be implemented and oversight of the construction of these improvements will be provided.

- Sample collection, and
  - Collect up to ten (10) landfill waste and/or mix soil cover samples for physical and chemical testing.
    - ✓ If additional samples are required to be collected to better determine waste characterization, this scope of work will be formally amended to modify this task/sub-task.
- The physical and chemical evaluation of the landfill waste and/or mix soil cover sample.,
  - The exact types of testing that will be required by the landfill(s) to characterize the waste for disposal is not known at this time.
    - ✓ When more information is available to TOWN as to what physical and chemical testing is required for waste characterization purposes, this scope of work will be formally amended to modify this task/sub-task.

Sub-Task 7.2 Deliverables (to be provided for Ecology review at least four weeks prior to period of performance ending date):

1. Waste characterization progress report.
2. A Memorandum summarizing road and work pad design
3. Road and work pad development progress report.
4. A Memorandum summarizing the results of the landfill waste characterization efforts will be prepared.

Task 8 – Wetland Consultation and Permitting

Based on post-Draft RI/FS discussions with ECOLOGY, it was agreed to that an assumption of the wetlands being jurisdictional can be made for the Final RI/FS so long as formal consultation was being sought and necessary permitting completed prior to implementation of a remedial action. This task is intended to facilitate initial consultation with the United States Army Corps of Engineers (USACE) and ECOLOGY to

determine if the wetlands are considered jurisdictional "Waters of the United States" and/or "Waters of the State". Depending on the outcome of these consultations and the preferred remedial alternative selected, the permitting and mitigation needs for impacts to the wetland could vary and therefore can't be fully identified at this point. If additional permitting requirements, not outlined in this task, are discovered while this agreement is active, TOWN will notify ECOLOGY that an amendment to this task is necessary in order to continue the project.

This task will cover the identification and hiring of a capable wetland scientist to facilitate the consultation process and conduct any additional wetland delineation work that may be needed to support permitting the selected remedial alternative. Additionally, the contracted wetland scientist will develop a Joint Aquatic Resource Permit Application (JARPA), if needed, which will streamline the environmental permitting process for the project's wetland impacts across regulatory agencies responsible for the permits themselves including:

- USACE Section 10 and 404 permits,
- ECOLOGY 401 water quality certifications,
- Washington Department of Fish and Wildlife Hydraulic Project Approval,
- Washington Department of Natural Resources Aquatic Use Authorization, and
- Local (city, town, county, etc.) ordinances related to shorelines.

Task 8 Deliverable (to be provided to Ecology for review at least four weeks prior to the period of performance ending date):

1. Wetland consultation and permitting progress report.

3) The Budget is amended to read as follows:

The total compensation is increased by $249,215.00, from $392,000.00 to 641,215.00.

Please see budget modifications indicated by deleted text being strike thru (~~sample~~) and new text is indicated being underlined (sample).

Budget:

Task	Description	Amount
1	Prepare a Remedial Investigation Work Plan	$20,200.00
2	Site Reconnaissance	$3,500.00
3	Remedial Investigation	~~$162,200.00~~ $171,450.00
4	Remedial Investigation Report	~~$92,800.00~~ $114,340.00
5	Feasibility Study and Report	~~$79,200.00~~ $91,200.00
6	Preliminary Draft Cleanup Action Plan	~~$34,100.00~~ $63,850.00
7	Supplemental Field Programs	$131,800.00
8	Wetland Consultation and Project Permitting	$44,875.00
	Total Project Cost	$641,215.00

***Overall Budget Table Note**:* Task budgets may be moved between tasks without formal amendment.

All other terms and conditions of the original Agreement including any other amendments remain in full force and effect, except as expressly provided by this Amendment.

This Amendment is signed by persons who represent that they have the authority to execute this Amendment and bind their respective organizations to this Amendment.

This Amendment is effective upon the signature date of ECOLOGY or on July 1, 2023, whichever comes first.

IN WITNESS WHEREOF, the parties below, having read this Amendment in its entirety, including any attachments, do agree in each and every particular as indicated by their below signatures.

State of Washington
Department of Ecology

By:

_____
Signature Date

_____
Heather R. Bartlett

_____
Deputy Director

Town of Eatonville

By:

_____
Signature Date

_____
Print Name

_____
Title