

View looking west in SMA-1



Photo 3



Photo 4

View looking southeast in SMA-1

View looking east in SMA-1



Inset

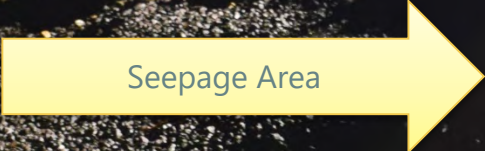


Photo 5

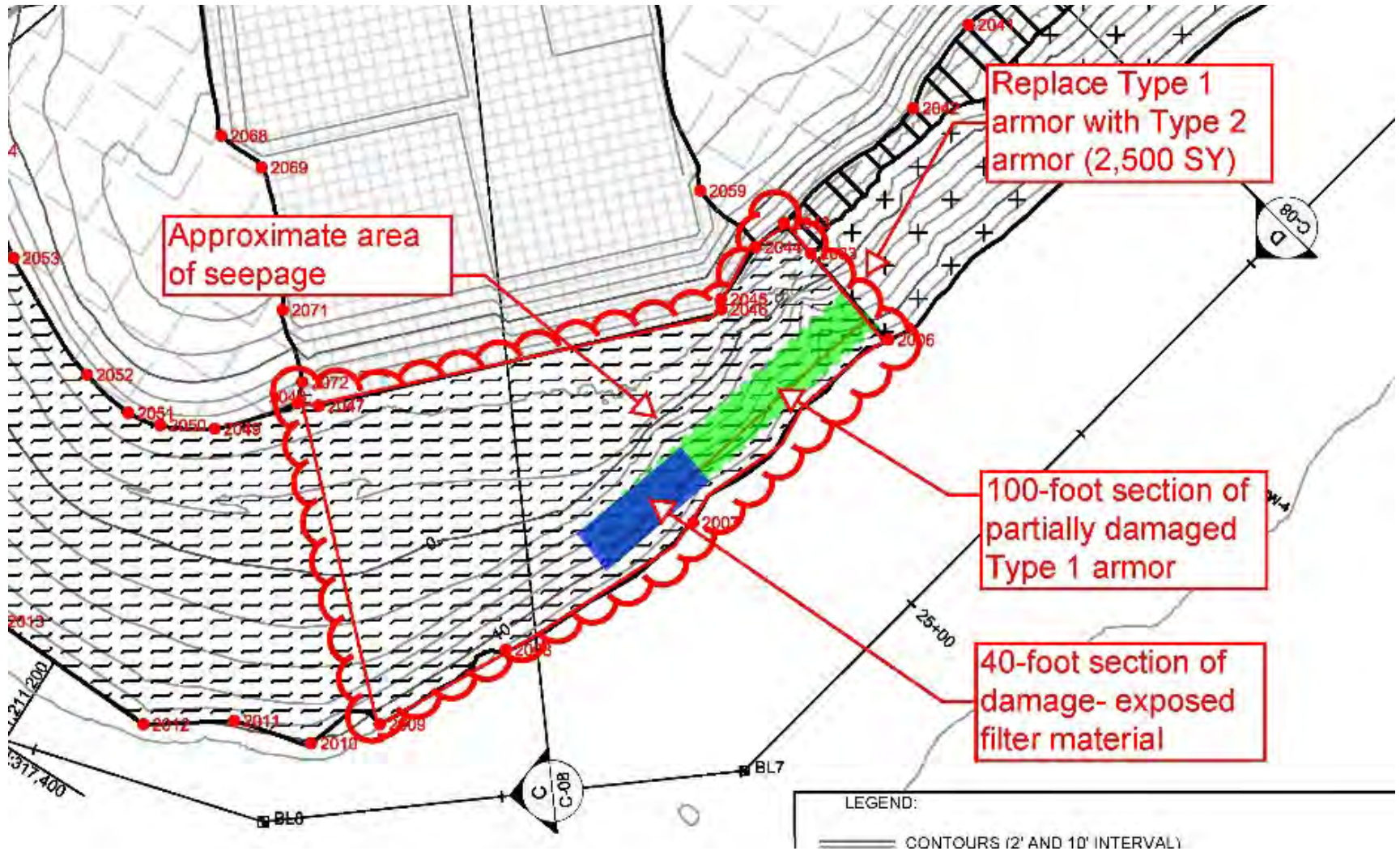
Potential Causes

- Wave action, potentially due to the end of the jetty being less effective at “shadowing” energy
- Toe undermining, potentially from seepage and/or inadvertent prop wash

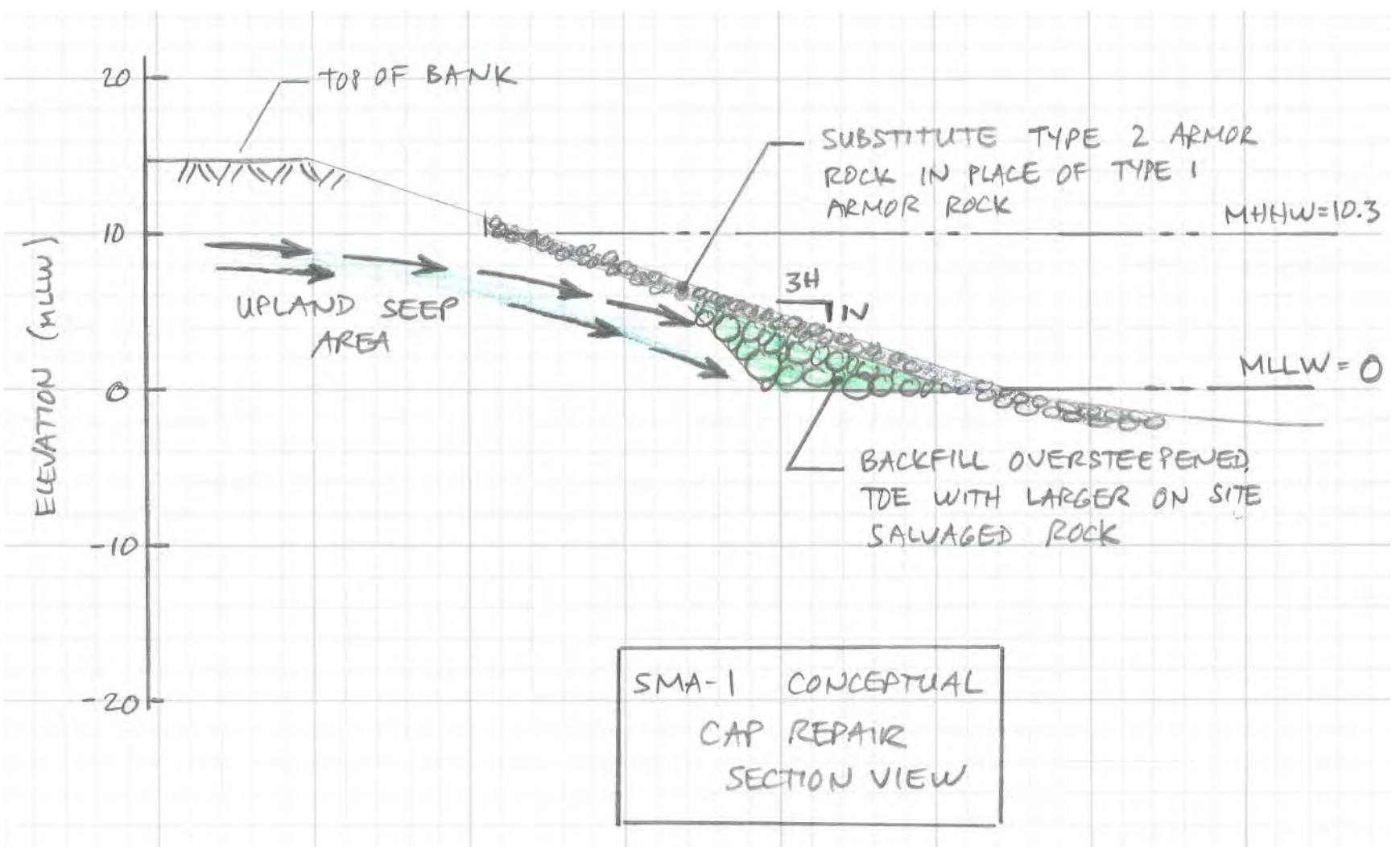
Likely Solutions

- Wave action
 - Upsize the armor rock from Type 1 to Type 2
 - Coastal engineering evaluation confirming this recommendation
- Toe undermining
 - Buttress toe of slope with larger armor rock to provide weight counteracting seepage and additional protection from potential prop wash forces
 - Geotechnical engineering evaluation confirming this recommendation

Recommended Repairs – Conceptual Plan



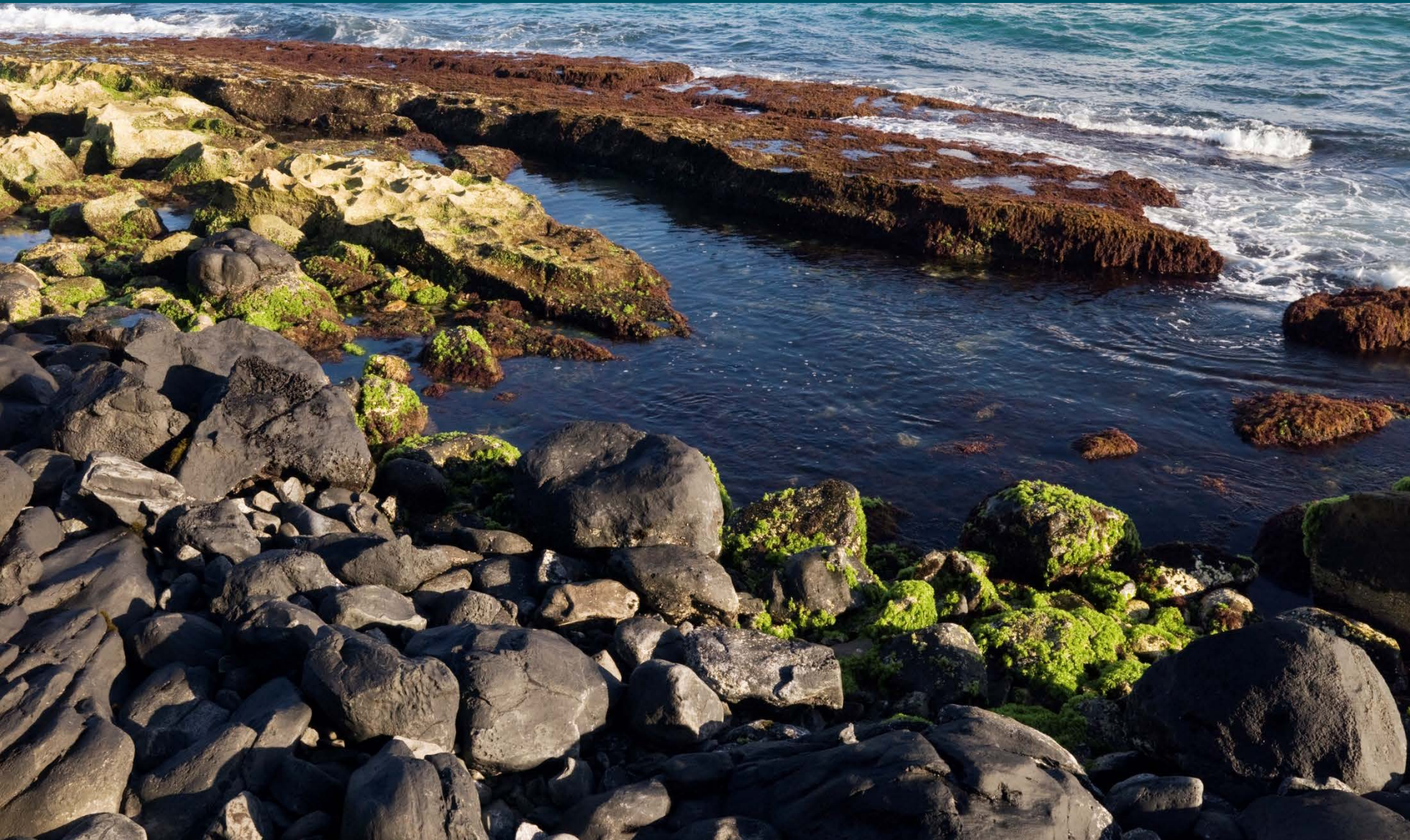
Recommended Repairs – Conceptual Section



Proposed Path Forward

- Recommendations for repairs being prepared
- Anticipated recommendation for repairs, subject to completing engineering evaluation:
 - Backfill oversteepened toe with larger armor rock, to 3H:1V
 - Substitute Type 2 armor for Type 1 armor in area of damage
- Refine if needed after engineering evaluations complete
- Submit to Ecology on or before 12/23
- Feedback needed 12/27 to maintain schedule

Questions/Discussion



Appendix D

Coastal Engineering Evaluation of Shoreline Erosion Memorandum

DRAFT MEMORANDUM

To: Linda Berry-Maraist, Pope Resources/Olympic Property Group
From: Kathy Ketteridge, Ph.D., P.E., and John Laplante, P.E., Anchor QEA, LLC
Cc: Clay Patmont, Anchor QEA, LLC
Re: Port Gamble Bay Cleanup Project Coastal Engineering Evaluation of Shoreline Erosion

The Port Gamble Bay Cleanup Project (Project) includes structure removal, excavation, and armored capping of shorelines at the former Mill Site (Site) located in Port Gamble, Washington. The 2 year construction project is currently underway, with the first season of in-water work being completed in February 2016. In March 2016, several significant wind events caused movement of relatively small areas of the shoreline armor rock. In addition to the observed armor movement, areas of the unarmored shorelines where structures were removed during Season 1 have eroded. Subsequent storm events in mid-October 2016 caused localized additional erosion of the unarmored shorelines.

This purpose of this memorandum is to summarize observations and evaluations of the movement of armor rock along the shoreline and erosion of unarmored shoreline areas at the Site that were the result of a series of significant storm events that occurred in March 2016 October 2016. This memorandum also presents design solutions to address erosion issues where necessary. As part of this discussion, wind statistics at the site were revised using updated wind data, which includes wind information through July 2016. This memorandum is divided into two sections: 1) Review of Storm Wind Conditions; and 2) Observed Armor Movement, Shoreline Erosion, and Mitigation Recommendations.

REVIEW OF STORM WIND CONDITIONS

In March 2016, two high wind storm events occurred throughout the Puget Sound area a few days apart, one on March 10 and one on March 13. In October 2016, another significant wind storm event occurred between October 13 and October 15, 2016. Sustained wind speeds during these storm events are available from a buoy owned and maintained by the

University of Washington (NOAA Station #46125) located in Hood Canal, 4 miles northwest of the Site. The height of the anemometer for that buoy is 2.1 meters above sea level. In order to compare the wind speeds measured at the buoy with wind statistics developed in the Port Gamble Bay Cleanup Project Engineering Design Report (Appendix D; Anchor QEA 2015), the buoy wind data were transposed to the equivalent wind speeds at 10 meters above sea level¹. Wind and tide data for both storms are summarized in Table 1.

Table 1
Summary of Winds during March and October 2016 Storm Events

| Date | High Tide Elevations at Port Townsend ¹ (MLLW) | Sustained Winds ² | | | Maximum Winds ² | | |
|------------------------|-----------------------------------------------------------|------------------------------|-----------------------|------------------------|----------------------------|----------------|-----------------------------------------------------------------|
| | | Wind Speed (mph) | Wind Duration (hours) | Average Wind Direction | Wind Speed (mph) | Wind Direction | Time and Tide Elevation During Maximum Wind ¹ (MLLW) |
| March 10, 2016 | 11.1 feet 9.7 feet | ≥ 20 | 17 | ~140 degrees | 46 | ~130 | 3:30 pm 7 feet |
| March 13 to 14, 2016 | 10.2 feet 9.1 feet | ≥ 20 | 9 | ~140 degrees | 48 | ~130 | 11:00 pm 6 feet |
| October 13 to 15, 2016 | 10.0 feet 7.1 feet | ≥ 20 | 6 | ~140 degrees | 36 | ~150 | 12:00pm 7 feet |

Notes:

MLLW = mean lower low water

mph = miles per hour

1. Measured tide data from Port Townsend Station #9444900. Multiple high tides occurred over the duration of the storm event.
2. Wind speeds from NOAA Station #46125, transposed to 10 meters above sea level

To support the Engineering Design Report for the Project (Anchor QEA 2015), a coastal engineering evaluation was completed to evaluate extreme wind speeds and associated wave heights at the Site for use in cap armor design. Long-term wind data used for this evaluation was taken from NOAA station WPOW1 in West Point, Washington, and included hourly wind speeds (2 minute averages) for the years from 1984 to 2009. The West Point station was used for Port Gamble because it is the closest gage location that has a long-term hourly sustained wind speed record (32 years at 10 meters above sea level).

¹ 10 meters is the standard accepted height above the water surface where wind speeds are measured (or estimated) for use in wind-wave prediction. Data from the buoy (measured at 2.1 meters above sea level) was transposed to the equivalent wind speed at 10 meters above mean sea level using a logarithmic wind profile.

Based on the wind statistics shown in Table 2 (from Anchor QEA 2015), the March 10 and March 13 storms were 50-year and 100-year return period events, respectively. The October storm event was not as strong in terms of maximum wind speeds, and was somewhere between a 2-year and a 10-year storm event. In addition to being significant events, each storm event had an unusually long duration. The average duration of high wind events (wind speeds greater than approximately 20 miles per hour) from southerly directions is about 4 hours (Finlayson 2006). The March 10 and 13 storms had durations of 17 hours and 9 hours, respectively. The October storm had a duration of approximately 6 hours. Such a prolonged high wind event would have likely caused a local wind-setup along the Port Gamble shoreline, increasing the water level above the predicted tide height for some portion of the storm events.

Table 2
Return Period Wind Speeds for South-East Storm Directions¹

| Direction (degrees) | 2-year (mph) | 10-year (mph) | 20-year (mph) | 50-year (mph) | 100-year (mph) |
|---------------------|--------------|---------------|---------------|---------------|----------------|
| 121-150 | 33 | 41 | 44 | 47 | 49 |

Notes:

mph = miles per hour

1. Return period wind speeds are from Table D1-2 from Anchor QEA 2015.

OBSERVED ARMOR MOVEMENT, SHORELINE EROSION, AND MITIGATION RECOMMENDATIONS

On separate occasions in June, July, and August 2016, Anchor QEA, LLC, staff conducted site visits at Port Gamble to observe shoreline conditions and discuss armor movement and shoreline erosion with Pope Resources and Washington Department of Ecology (Ecology) staff. Four areas of interest were identified along the Port Gamble shoreline, as shown in Figure 1. Areas 1 through 3 are areas where structures were removed during Season 1 demolition, but no armored cap was required. Shoreline erosion in these areas has resulted in damage to existing asphalt and/or erosion of bank material. Area 4 was capped with Type 2 armor rock material (d₅₀ of 9 inches) during Season 1 in accordance with the Ecology-approved design. Observations in this area noted movement of Type 2 armor rock in the upper inner tidal area. The cap material in this area was sized to balance requirements

for protection of underlying isolation layer and habitat concerns. Therefore, material was sized to allow for some localized movement under the design storm event.

Area 1

Area 1 is located along the north-eastern corner of the Site (see Figure 1).

Observations

The shoreline erosion in this area occurred after creosote-treated piling were removed as part of Site remediation. The shoreline area above mean higher high water has eroded in this area, undermining asphalt paving at the top of the slope, as shown in Photograph 1. Figure 2e shows a pre- and post-storm survey transect that illustrates the erosion that has occurred at this location. In general, the slope of the beach in the upper intertidal area is adjusting to match the milder slope present in the lower intertidal area.



Photograph 1

Shoreline Erosion in Area 1

Recommendations

Design recommendations to address shoreline erosion in this area are shown in Figure 2e. These design recommendations are focused on preventing erosion of the entire slope from top of bank to the lower vertical extent of wave impact (where natural sediments could be eroded during storms). Damaged asphalt at the top of the slope will be removed and the shoreline armored from the top of the bank down to elevation of -5 feet mean lower low water, which is consistent with armoring extent designed for adjacent capping areas (see Port Gamble EDR, Appendix D). The armor will extend horizontally from the existing armored slope to the south of Area 1 (Area 2A) to the west to cover the entire pocket beach area. Armor will consist of a layer of Type 3 material covered with large salvaged armor rock.

Area 2A (work completed)

Area 2A is located along the eastern shoreline that faces the inlet into Port Gamble Bay (see Figure 1), which is armored with large rip rap with asphalt paving along the top of the bank.

Observations

Similar to Area 1, asphalt at the top of the slope was damaged due to wave runup and overtopping, as shown in Photograph 2, which occurred after the structure in this area (the former Eastern Wharf) was removed. Figure 2d shows a pre- and post-storm survey transect that shows no movement of the armor rock on the slope occurred as a result of the storm events.



Photograph 2

Shoreline Erosion in Area 2

Recommendations

The following recommendations to address shoreline erosion (shown in Figure 2d) were carried out prior to publication of this memorandum:

- Damaged asphalt at the top of the armored slope was removed
 - Armor rock at the top of the slope was left in place
 - The area where asphalt was removed was armored from the top of the remaining armor rock on the slope to the top of the bank
 - Placed armor consisted of a layer approximately 1 foot thick of Type 3 material covered with large salvaged armor rock (varied in size from 1 to 3 feet in diameter).
-

The work described above was completed on August 12, 2016. The completed stabilization work is shown in Photograph 3.



Photograph 3

Completed Shoreline Repair in Area 2

Area 2B

Area 2B is located to the east of the temporary transload facility. Similar to Area 2A, structures and piling were removed from this area as part of demolition for Site remediation. This area is presently armored from about mid-slope down into the water, but does not have any armoring at the upper portion of the slope. This area is the only site that sustained damage due to the October 2016 storm event.

Observations

Erosion of the area during the October storm event was focused along the top of the bank and upper portions of the slope due to a lack of armoring in those areas, as shown in Photograph 4. Photograph 5 shows an image of this area following the October 2016 storm, which illustrates erosion of the top portion of the slope and bank line. Similar to other areas of erosion, the upper shoreline has eroded back to a milder slope to match the existing slope in the lower intertidal area.



Photograph 4

Shoreline Area 2B Prior to October 2016 storm event



Photograph 5

Shoreline Area 2B Following to October 2016 storm event

Recommendations

Recommendations to address erosion in Area 2B (as shown in Photograph 5) should be in-line with slope armoring suggested at Area 2A, which has already been completed:

- Damaged asphalt at the top of the armored slope should be removed
- The bank should be armored from mid-slope where armor currently exists to the top of bank (upper extent of armoring in adjacent area as shown in Photograph 5).
- Placed armor should consist of Type 3 material covered with large salvaged armor rock

Area 3

Area 3 is located between the temporary transload facility and the eastern end of the Type 2 intertidal cap in SMA-2. Structures and piling were removed from this area as part of demolition for Site remediation, and this area is not presently armored.

Observations

Erosion of the area during this storm event was intensified due to the two adjacent armored areas, as seen in Photograph 4. Figure 2c shows a pre- and post-storm survey transect that shows the shoreline erosion in this area. Similarly to Area 1, the upper shoreline has eroded back to a milder slope to match the existing slope in the lower intertidal area.



Photograph 4

Shoreline Erosion in Area 3

Recommendations

Design recommendations to address shoreline erosion in this area are shown in Figure 2c. These design recommendations are focused on preventing erosion of the entire slope from top of bank to the lower vertical extent of wave impact (where natural sediments could be eroded during storms). The shoreline in this area will be armored between the end of the

Type 2 cap area and the armored shoreline at the location of the temporary transload area. Armor will consist of a layer of Type 3 material covered with large salvaged armor rock. The armor will extend from the top of the bank down to elevation of -5 feet mean lower low water, which is consistent with armoring extent designed for adjacent capping areas (see Port Gamble EDR, Appendix D).

Areas 4 and 5

Areas 4 and 5 are located west of Pier 4, on the south-facing upper intertidal shoreline of SMA-2 as shown in Figure 1.

Observations

The upper intertidal shoreline in Areas 4 and 5 were capped with Type 2 armor rock. Some of the armor rock was displaced in the upper inner tidal zone due to wave impact from the storm events. As stated previously, localized movement of armor rock can occur during a design storm event; this design decision allows for a balance of using a more habitat-friendly armor rock size while still ensuring the protectiveness of the remedy. Specifically, the armor was sized to allow for “start of damage,” or movement of some armor rock but not failure of the slope (USACE, 2002). The March 13 storm, as documented in Section 1, was up to a 100-year storm event based on wind velocity data, which was the design storm event for the slope. In addition, the high winds that occurred during that storm event lasted for approximately 32 hours, which is significantly longer than the typical design storm event in the Puget Sound area.

Figure 2b shows a survey transect within Area 4 that illustrates Type 2 rock movement where the majority of the design rock thickness was displaced. However, as seen in Photograph 5, the extent of this level of damage is small, affecting approximately 20 to 30 feet of shoreline.

Figure 2a shows a survey transect in Area 5 that illustrates more typical and expected movement of rock on the slope; this area still has acceptable coverage of armor rock over the filter material.



Photograph 5

Shoreline Erosion in Area 4

Recommendations

No work is proposed along the majority of the upper shoreline in SMA-2, as characterized by Area 5.

Design recommendations to address movement of the Type 2 cap material localized within Area 4 include adding additional armor rock larger than the Type 2 rock previously placed in that area. As mentioned above, Type 2 rock was sized using design wave conditions (See Port Gamble EDR, Appendix D) assuming movement of some armor rock during the design

storm event (100-year return period) but not failure of the slope (USACE, 2002). Ecology has expressed concerns about this area, and would prefer a more conservative armoring solution for this area. Therefore, a larger armor rock has been sized for placement in Area 4 assuming a “zero damage” factor as opposed to the “start of damage” factor used in the previous calculations to balance stability and habitat goals for the project. Using the same design significant wave height (2.7 feet) the armor rock size assuming “zero damage” (or no movement of the rock at all) is 1.5 feet. Based on this, Anchor QEA recommends placing two-layers of 1 to 1.5 foot rock within Area 4 where significant movement has occurred (the approximate extent of this damage is shown in Figure 1).

CLIMATE CHANGE CONSIDERATIONS

Two considerations related to climate change are applicable to the design of shoreline cap design at Port Gamble, which are discussed in more detail below:

1. Sea level rise
2. Increase in storm wind speeds and/or frequency

Sea Level Rise

The study conducted by National Research Council in 2002 (NRC, 2012) entitled “Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future” provides predictions for sea level rise in the Puget Sound region through 2100 and is accepted as the best available estimates of sea level rise for the area². The study provides ranges for sea level rise in the Puget Sound region at several time points into the future.

As illustrated by the ranges of sea level rise predictions provided by the NRC (2012) study, there is a great deal of uncertainty in long-term predictions of sea level rise and the amount of sea level rise that will be realized at Port Gamble Bay over the long term is unknown.

The current (2016) mean higher high water (MHHW) elevation is 10.2 feet relative to mean lower low water (MLLW) from NOAA station 9445016 (Anchor QEA, 2015). King (extreme) tide elevations can reach up to 11.5 feet MLLW, based on review of tidal predications for the same tidal station over a typical year. Using median values for predicted sea level rise for

² For example, this study is referenced by Washington Department of Ecology and USACE, Seattle District.

2050, future MHHW elevations could be 11.0 feet MLLW³. The elevation of the majority of the upland areas at Port Gamble along the shoreline ranges from 15 to 16 feet MLLW.

If sea levels rise based on current predictions, the location of the surf zone may move landward and there could be increased wave runup and overtopping at the top of bank. As the surf zone moves landward, shear stress on the cap at lower intertidal elevations will be reduced. The potential of increased wave runup and overtopping has already been accounted for in the current design by armoring up to and over the top of bank along the shoreline at the site.

Increased Wind Speeds

Increased “storminess” when discussing coastal processes refers to two things: (1) increased wave heights in the open ocean and (2) changes to wind speeds in the local project area. Port Gamble is not exposed to waves from the Pacific Ocean, and therefore increased “storminess” at the Port Gamble site is limited to consideration of changes to wind speeds in the local area.

While there is general agreement in literature that “storminess” associated with precipitation (i.e. snowfall vs. rain) in the Pacific Northwest (PNW) will likely undergo significant changes due to climate change over the next 50 to 100 years (USGCRP, 2014) there is not as much discussion in literature about changes to wind speeds in the PNW. The effect of climate change on local storm winds is important because if winds increase in the future this would increase locally generated wave heights as well.

An academic study conducted by several researchers at the Climate Impacts Group at the University of Washington evaluated potential changes to wind speeds and frequencies, as well as frequency of lightening, in the PNW (Salathé, et. al. 2015). The study conducted multiple climate model simulations and found (1) “no statistically significant change in the frequency of heavy⁴ surface winds” and (2) “no consistent trend toward more extreme wind storms over western Washington in future climate projections.” The researches also noted that their results concerning future wind speeds and frequencies does “not conflict with other studies showing more heavy precipitation in future storms. First, heavy precipitation is

³ Relative to mean lower low water elevation in 2016.

⁴ “Heavy” here refers to storm winds.

associated with a different weather pattern (atmospheric rivers) than high wind events. Second, thermodynamic effects associated with warming are sufficient to drive increases in precipitation absent changes in the dynamics of future storms.”

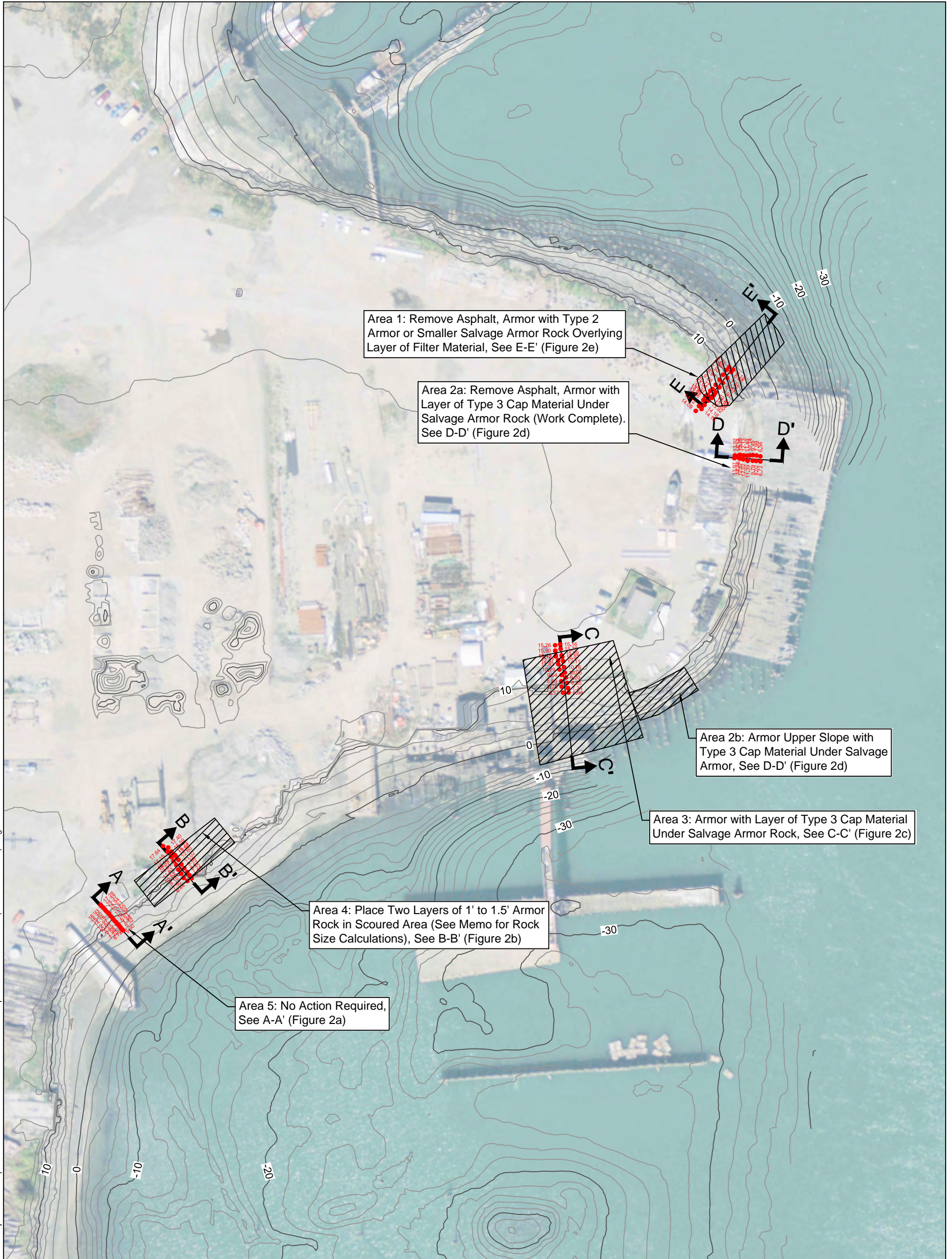
Based on the results of this study, we do not anticipate climate change to have significant impacts to storm winds (and therefore storm waves) locally generated in Port Gamble Bay.

REFERENCES

- Anchor QEA, 2015. Engineering Design Report, Port Gamble Bay Cleanup Project.
- Finlayson, D., 2006. The Geomorphology of Puget Sound Beaches. Technical Report 2006-02. Prepared in support of the Puget Sound Nearshore Partnership. Seattle, Washington: Washington Sea Grant Program, University of Washington. October 2006.
- National Research Council (NRC), 2002. Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future (2012). NRC, Division on Earth and Life Sciences, Board on Earth Sciences and Resources, Ocean Studies Board. 2012.
- Salathé, E.P. Jr., Mauger, G. S., Mass, C. F., Steed R., and B. Dotson. 2015. Final Project Report: Regional Modeling for Windstorms and Lightning. Report prepared for Seattle City Light by the Climate Impacts Group, University of Washington, Seattle.
- USGCRP (2014) Mote, P., A. K. Snover, S. Capalbo, S. D. Eigenbrode, P. Glick, J. Littell, R. Raymondi, and S. Reeder, 2014: Ch. 21: Northwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 487-513
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FIGURES

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Area 1: Remove Asphalt, Armor with Type 2 Armor or Smaller Salvage Armor Rock Overlying Layer of Filter Material, See E-E' (Figure 2e)

Area 2a: Remove Asphalt, Armor with Layer of Type 3 Cap Material Under Salvage Armor Rock (Work Complete). See D-D' (Figure 2d)

Area 2b: Armor Upper Slope with Type 3 Cap Material Under Salvage Armor, See D-D' (Figure 2d)

Area 3: Armor with Layer of Type 3 Cap Material Under Salvage Armor Rock, See C-C' (Figure 2c)

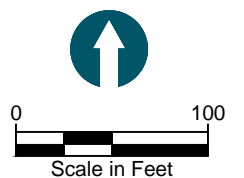
Area 4: Place Two Layers of 1' to 1.5' Armor Rock in Scoured Area (See Memo for Rock Size Calculations), See B-B' (Figure 2b)

Area 5: No Action Required, See A-A' (Figure 2a)

SOURCE: Topography from Triad, dated 2012. Bathymetry from eTrac, dated August 17, 2016. Pocket beach sample locations from Orion, dated August 6, 2016.
HORIZONTAL DATUM: Washington State Plane North, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

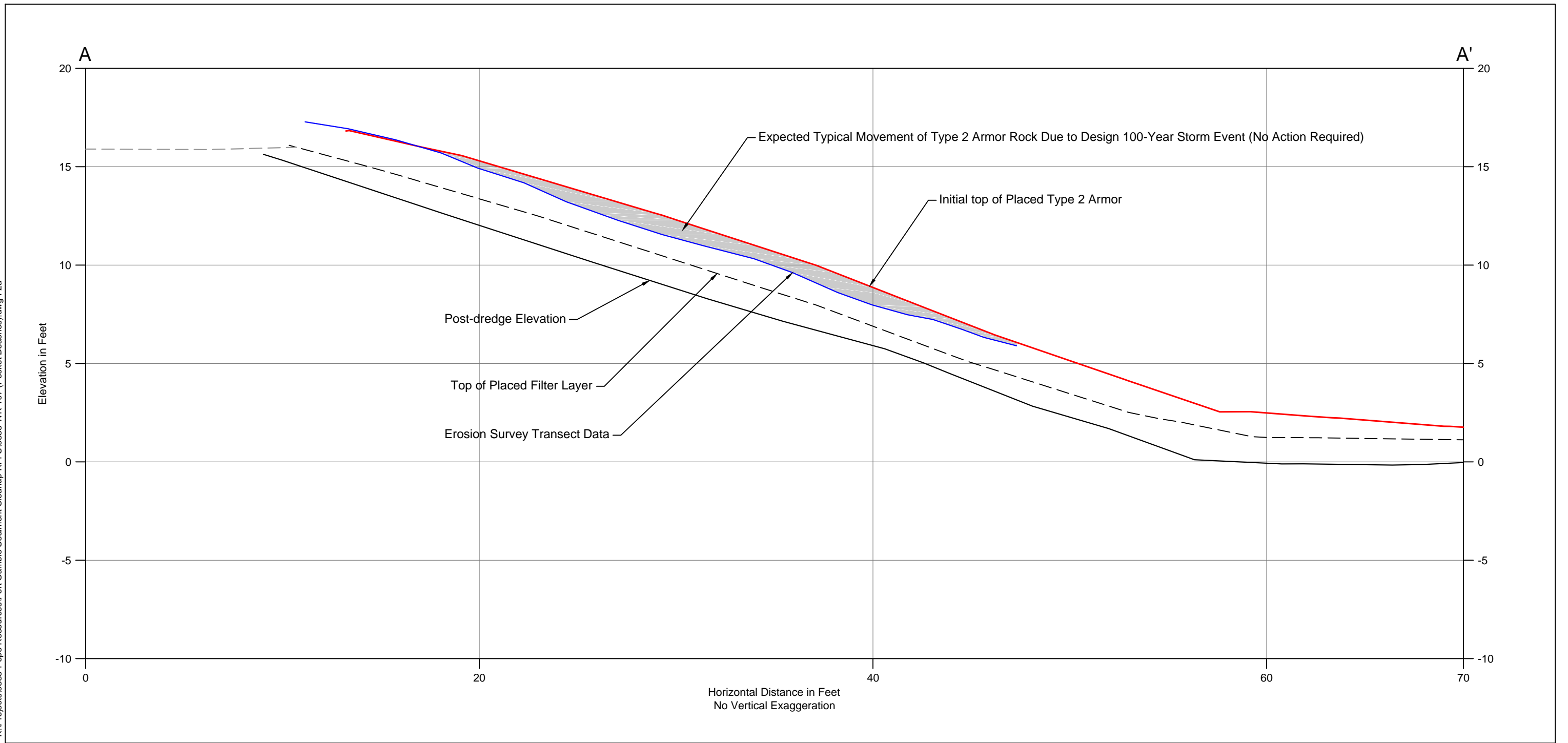
LEGEND:

- Existing Contours (2' and 10' Interval)
- Pocket Beach Sample Location and Elevation



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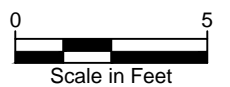
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SOURCE: Topography from Triad, dated 2012. Bathymetry from eTrac, dated August 17, 2016. Pocket beach sample locations from Orion, dated August 6, 2016.
HORIZONTAL DATUM: Washington State Plane North, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

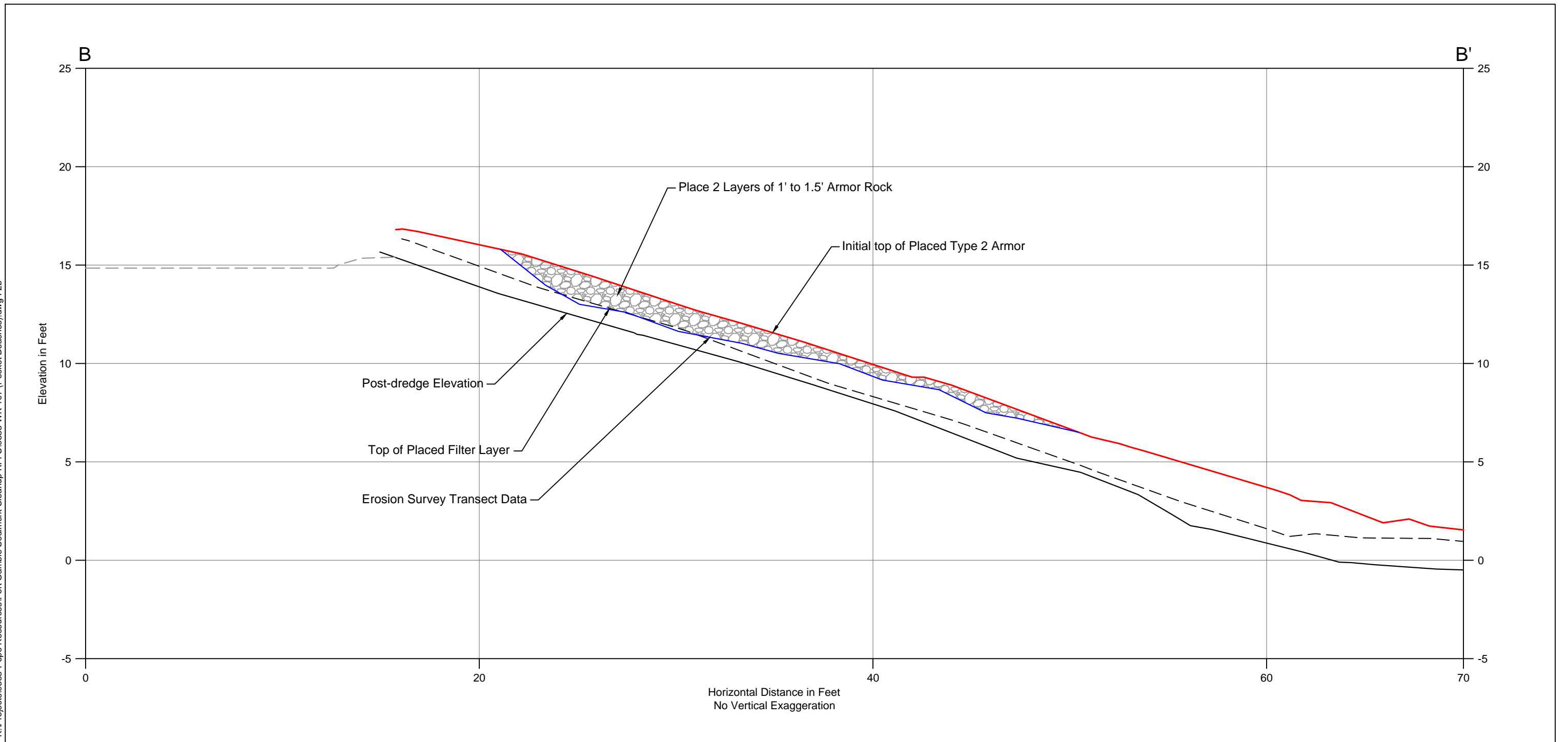
LEGEND:

- Existing Grade
- Season 1 Post-dredge Survey
- Season 1 Post-filter Placement Survey
- Season 1 Post-armor Placement Survey
- Erosion Survey Transect Data

█ Typical Expected Movement of Type 2 Armor Rock (No Action Required)




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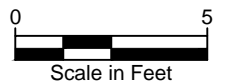


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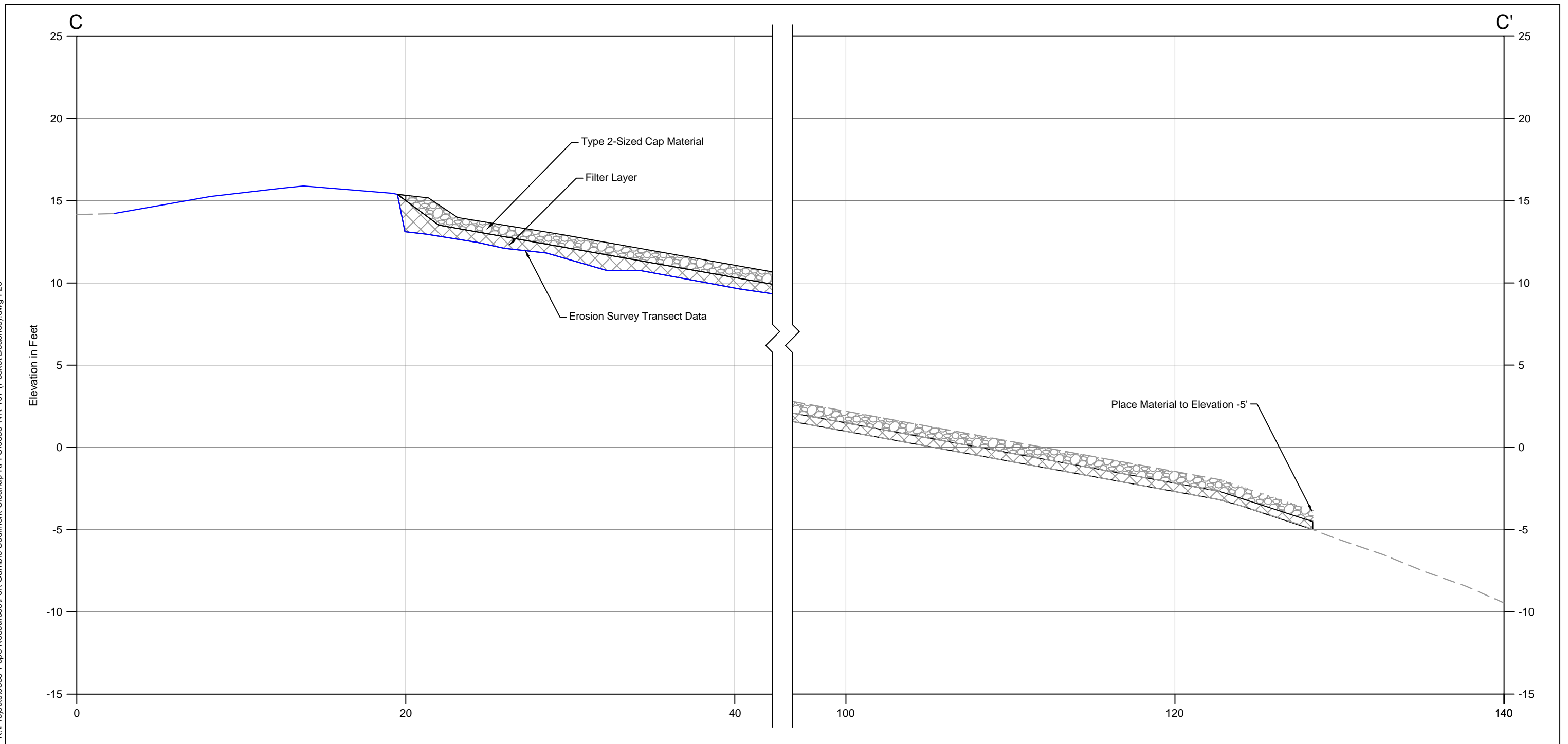
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HORIZONTAL DATUM: Washington State Plane North, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Existing Grade
- Season 1 Post-dredge Survey
- Season 1 Post-filter Placement Survey
- Season 1 Post-armor Placement Survey
- Erosion Survey Transect Data
-  Place Salvage Riprap




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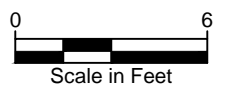


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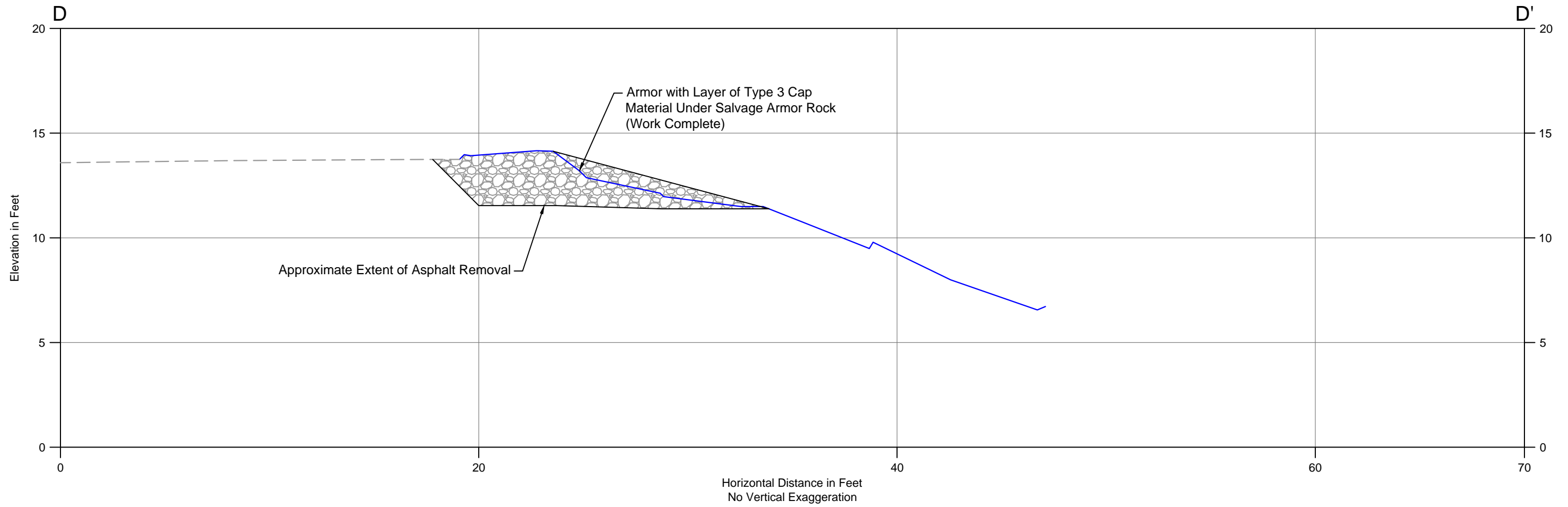
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VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Existing Grade
- Erosion Survey Transect Data
-  Place Salvage Riprap over Filter Material




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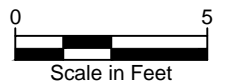


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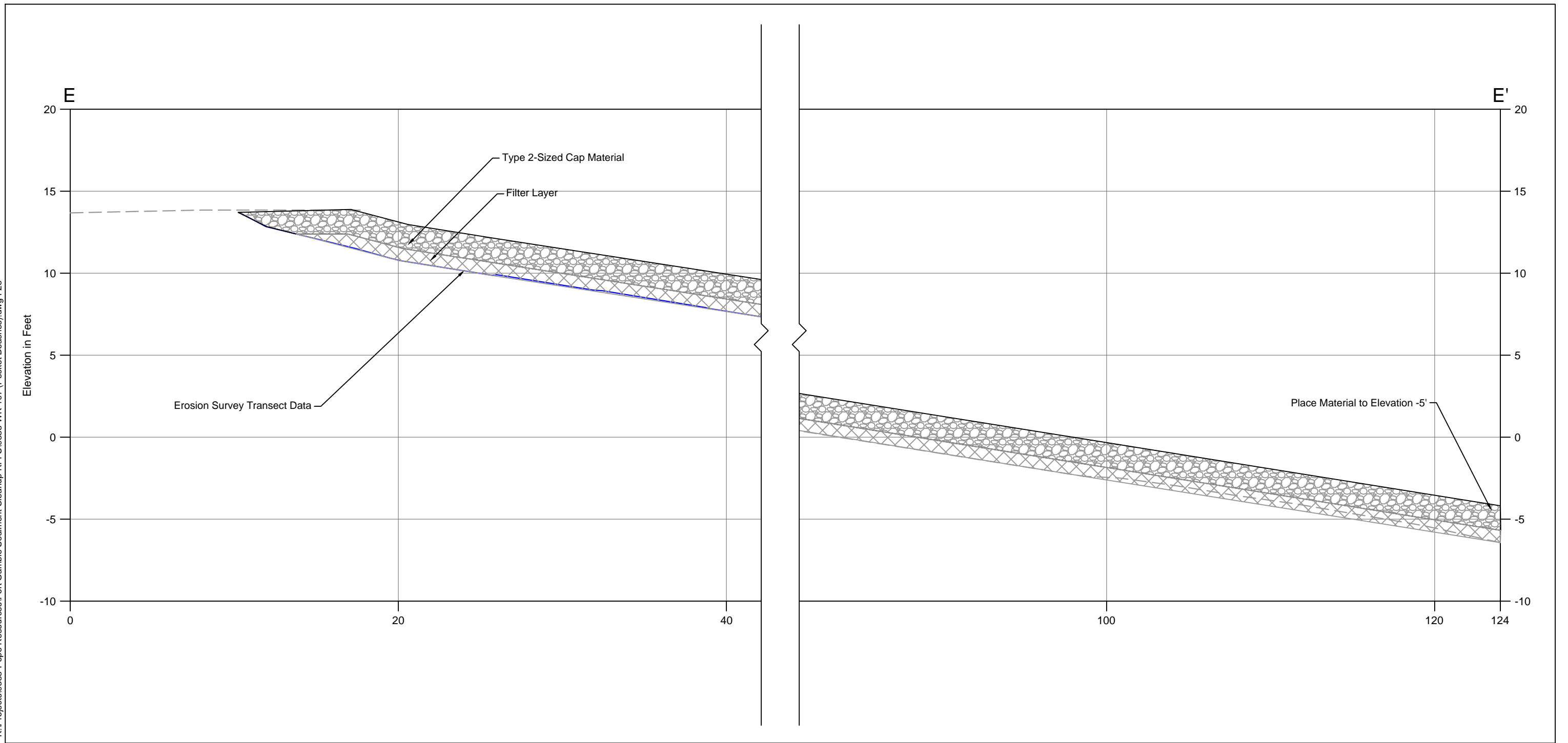
SOURCE: Topography from Triad, dated 2012. Bathymetry from eTrac, dated August 17, 2016. Pocket beach sample locations from Orion, dated August 6, 2016.
HORIZONTAL DATUM: Washington State Plane North, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).
NOTE: Work shown has been completed.

LEGEND:

- Existing Grade
- Erosion Survey Transect Data
-  Salvage Riprap over Type 3 Cap Material (Work Complete)




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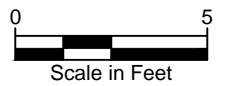


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SOURCE: Topography from Triad, dated 2012. Bathymetry from eTrac, dated August 17, 2016. Pocket beach sample locations from Orion, dated August 6, 2016.
HORIZONTAL DATUM: Washington State Plane North, NAD83, U.S. Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

LEGEND:

- Existing Grade
- Erosion Survey Transect Data
-  Place Salvage Riprap over Filter Material



Appendix E

Water Quality Monitoring, Season 2
Monitoring Results Memorandum

Memorandum

March 8, 2017

To: Matthew Longenbaugh, National Oceanic and Atmospheric Administration
Jerry Gregory, U.S. Army Corps of Engineers

From: Linda Berry-Maraist, Pope Resources, LP/OPG Properties, LLC

cc: Stephanie Foster, Pope Resources, LP/OPG Properties, LLC
Heather Page, Anchor QEA, LLC
Artie Kapell, Washington State Department of Ecology

Re: Port Gamble Bay Cleanup Project Water Quality Monitoring, Season 2 Monitoring Results (WCR-2015-2348 and NWS-2013-1270)

Summary

As required by the Port Gamble Bay Cleanup Project Biological Opinion (WCR-2015-2348), this memorandum summarizes water quality monitoring results for sediment cleanup actions in Port Gamble Bay ("Site") for the second and final season of construction. Monitoring was conducted consistent with the Water Quality Monitoring Plan (WQMP) included in the Engineering Design Report – Appendix E (Construction Quality Assurance Project Plan) dated May 2015. The WQMP was prepared to support project compliance with the requirements of Washington State's Water Quality Standards for Surface Water (Washington Administrative Code 173-201A).

Water quality monitoring occurred during in-water work between June 15, 2016, and January 13, 2017. Data was collected to confirm compliance with turbidity and pH standards. Standards for turbidity were exceeded during a single monitoring event, as described in this memorandum; all other samples were compliant with turbidity and pH standards.

Sampling Details

Water quality measurements were collected at several points along a 150-foot radius from active construction operations or from the edge of the turbidity curtain, when deployed, in accordance with the WQMP. Monitoring stations were selected based on the tide, current, and best professional judgement of the water quality lead. Each monitoring event consisted of measuring turbidity and pH at one background location and at the compliance stations at designated depths of 3 feet below the water surface, mid-depth within the water column, and 3 feet above the bottom.

The frequency and schedule of water quality monitoring during in-water work periods occurred at three different levels, as follows:

Intensive: Collection of turbidity and pH measurements occurred every 4 hours during in-water work, with at least two measurements per day, for the first 3 days.

Routine: If no confirmed exceedances occurred during the Intensive monitoring period, collection of turbidity and pH measurements changed to once daily during in-water work for 3 additional days, or if turbidity plumes become visually evident within the 150-foot compliance area.

Limited: If no confirmed exceedances occurred during the Routine monitoring period, collection of turbidity and pH measurements changed to once per week during in-water work.

Monitoring was conducted on 58 calendar days; multiple levels of monitoring could occur on the same day if multiple in-water activities were taking place. Intensive monitoring occurred on 25 days, routine monitoring on 20 days, and limited monitoring on 20 days. Turbidity exceeded standards at one monitoring location on January 12, 2017 (see Table 1). After the turbidity exceedance was confirmed, the contractor and the Washington State Department of Ecology were notified of the exceedance, and the contractor was instructed to modify their operations in order to meet turbidity standards. Modifications to the capping operations included slowing down the production rate and repairing or modifying existing best management practices for turbidity control (silt curtains). No exceedances of the pH criteria were observed.

Conclusion

The WQMP was implemented as planned during Season 2 and was completed successfully.

References

Ecology (Washington State Department of Ecology), 2013. *Final Cleanup Action Plan*. Exhibit A to the Port Gamble Bay Consent Decree No. 13-2-02720-0.

Table 1
Water Quality Exceedance

| Date | Monitoring Type | Station ¹ | Station Position Relative to Work Zone | Time | Tide | Turbidity Reading (NTU) ² | | | Activity Dredge (D)/ Capping (C) |
|-----------|------------------------|-----------------------------|----------------------------------------|-------|------|--------------------------------------|------------|-------------|----------------------------------------|
| | | | | | | Surface | Mid-depth | Bottom | |
| 1/12/2017 | Limited | BG-1 | >1,000 feet uptide | 11:56 | Ebb | 1.0 | 1.1 | 1.0 | C |
| | | CS-3 | Northwest | 12:33 | Ebb | 8.0 | 2.2 | 2.6 | C |
| | | BG-2 (recheck) | >1,000 feet uptide | 12:49 | Ebb | 1.0 | 0.9 | 0.9 | C |
| | | CS-3 | Northwest | 13:01 | Ebb | 4.9 | 6.5 | 9.1 | C |
| | | BG-3 (recheck) | >1,000 feet uptide | 13:09 | Ebb | 0.6 | 0.7 | 0.7 | C |
| | | CS-3 | Northwest | 13:18 | Ebb | 3.5 | 3.1 | 26.7 | C |
| | Intensive ³ | BG-4 ⁴ (recheck) | >1,000 feet uptide | 14:12 | Ebb | 0.7 | 0.7 | 0.7 | C |
| | | CS-2 ⁴ | West | 14:27 | Ebb | 6.3 | 8.4 | 13.4 | C |
| | | CS-3 ⁴ | Northwest | 14:32 | Ebb | 6.4 | 6.5 | 6.0 | C |
| | | BG-5 ⁴ (recheck) | >1,000 feet uptide | 14:41 | Ebb | 0.7 | 0.7 | 0.7 | C |
| | | CS-2 ⁴ | West | 14:57 | Ebb | 2.4 | 2.3 | 2.3 | C |
| | | CS-3 ⁴ | Northwest | 14:59 | Ebb | 6.0 | 5.9 | 5.7 | C |
| | | BG-6 ⁴ (recheck) | >1,000 feet uptide | 15:27 | Ebb | 1.4 | 0.7 | 0.7 | C |
| | | CS-3 ⁴ | Northwest | 15:39 | Ebb | 3.4 | 3.2 | 3.5 | C |

Notes:

1. CS stations are compliance stations 150 feet from the active work zone; BG stations are background stations. Turbidity data from CS stations were compared to BG stations; measurements greater than 5 NTU over background exceeded the compliance criteria.
2. **Bold lettering** indicates an elevation of turbidity. **Red lettering** indicates a confirmed exceedance (two measurements approximately 10 minutes apart).
3. Intensive monitoring resumed due to confirmed exceedance of turbidity.
4. In-water work was discontinued by the time of these readings. Distance from the work zone was measured using GPS coordinates from prior readings.

NTU: Nephelometric Turbidity Units

Appendix F

Weekly Summary Reports – Season 2



PROJECT NO.: 130388-01.02

REPORT PERIOD: June 13 to June 17, 2016

REPORT NO.: 018

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer New Shine Pyramid MJ Trucking |

1. Structure Demolition and Pile Extraction

- Area worked: Eastern Wharf and SMA-1
- Activities:
 - Pulled intertidal and subtidal piles with barge-mounted crane and vibratory hammer
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 material barge

3. Former Landfill Shoreline Debris Removal

- Areas Worked: N/A
- Activities: Activity Not Started, currently scheduled to start in mid-July 2016

4. Intertidal Excavation and Capping

- Areas Worked: N/A
- Activity Not Started for Season 2, currently scheduled to start in mid-August 2016

5. Stockpile Management

- Activities:
 - On-going stockpile sparging

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start in mid-July 2016

7. Subtidal Dredging

- Areas Worked: N/A
- Activity: Not Started for Season 2, currently scheduled to start on October 17, 2016



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: June 13 to June 17, 2016

REPORT NO.: 018

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed on 6/15/16 through 6/17/16 for intertidal and subtidal pile removal and no exceedances of water quality criteria were observed.
- Shellfish and biotoxin monitoring: Activity not started, scheduled to start with SMA-1 intertidal excavation.
- Archaeological monitoring: Activity not started, scheduled to start with beach cleanup in landfill 4a and 4b areas.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 with barge-mounted crane
- Offload material barge and transfer extracted piling to the creosote processing area
- Continue material importing and stockpiling

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Season 2 pile removal starting in south end of SMA-1



Comment: Pile removal north of Eastern Wharf



Comment: "Danger Keep Out" sign installed on silt fence at the Eastern Wharf area



Comment: Pile removal at Sta. 21+00



Comment: Pile removal progressing north into SMA-1



Comment: Lower slope at the former Eastern Wharf demolition area looking south



PROJECT NO.: 130388-01.02

REPORT PERIOD: June 20 to June 24, 2016

REPORT NO.: 019

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking |

1. Structure Demolition and Pile Extraction

- Area worked: SMA-1
- Activities:
 - Pulled intertidal and subtidal piles with barge-mounted crane and vibratory hammer
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 material barge
 - Offloaded piles at Pier 4 and transferred to creosote processing area

3. Former Landfill Shoreline Debris Removal

- Areas Worked: N/A
- Activities: Activity Not Started, currently scheduled to start in mid-July 2016

4. Intertidal Excavation and Capping

- Areas Worked: N/A
- Activity Not Started for Season 2, currently scheduled to start in mid-August 2016

5. Stockpile Management

- Activities:
 - On-going stockpile sparging

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start in mid-July 2016

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016



PROJECT NO.: 130388-01.02

REPORT PERIOD: June 20 to June 24, 2016

REPORT NO.: 019

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed on 6/20/16 through 6/22/16 for intertidal and subtidal pile removal and no exceedances of water quality criteria were observed.
- Shellfish and biotoxin monitoring: Activity not started, scheduled to start with SMA-1 intertidal excavation.
- Archaeological monitoring: Activity not started, scheduled to start with beach cleanup in landfill 4a and 4b areas.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 with barge-mounted crane
- Offload material barge and transfer extracted piling to the creosote processing area
- Begin processing extracted creosote pilings
- Continue material importing and stockpiling

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: SMA-1 pile removal



Comment: Transferring pilings from material barge to upland containment and processing area



Comment: Piling stockpiled in containment/processing area



Comment: Piling removal near material loading conveyor



Comment: Removing partially extracted pilings with choker chain



Comment: Piling removal near floating dock area (floating dock removed)



PROJECT NO.: 130388-01.02

REPORT PERIOD: June 27 to July 01, 2016

REPORT NO.: 020

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking |

1. Structure Demolition and Pile Extraction

- Area worked: SMA-1
- Activities:
 - Pulled intertidal and subtidal piles with barge-mounted crane and vibratory hammer
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 and 196 material barge
 - Offloaded piles at Pier 4 and transferred to creosote processing area

3. Former Landfill Shoreline Debris Removal

- Areas Worked: N/A
- Activities: Activity Not Started, currently scheduled to start in mid-July 2016

4. Intertidal Excavation and Capping

- Areas Worked: N/A
- Activity Not Started for Season 2, currently scheduled to start in mid-August 2016

5. Stockpile Management

- Activities:
 - On-going stockpile sparging

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start in mid-July 2016

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: June 27 to July 01, 2016

REPORT NO.: 020

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed on 7/1/16 for intertidal and subtidal pile removal and no exceedances of water quality criteria were observed.
- Shellfish and biotoxin monitoring: Activity not started, scheduled to start with SMA-1 intertidal excavation.
- Archaeological monitoring: Activity not started, scheduled to start with beach cleanup in landfill 4a and 4b areas.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 with barge-mounted crane
- Offload material barge and transfer extracted piling to the creosote processing area
- Begin processing extracted creosote pilings
- Continue material importing and stockpiling

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: SMA-1 pile removal



Comment: Offloading 152 material barge to upland containment and processing area



Comment: Stockpiled sand



Comment: Pile offloading at Pier 4



Comment: Removing dolphin at 26+00



Comment: Pile removal at Dolphin offshore of Convey/Pier



PROJECT NO.: 130388-01.02

REPORT PERIOD: July 05 to July 08, 2016

REPORT NO.: 021

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking |

1. Structure Demolition and Pile Extraction

- Area worked: SMA-1, SMA-2, and SMA-5
- Activities:
 - Pulled intertidal and subtidal piles with barge-mounted crane and vibratory hammer
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 and 196 material barge

3. Former Landfill Shoreline Debris Removal

- Areas Worked: N/A
- Activities: Activity Not Started, currently scheduled to start in mid-July 2016

4. Intertidal Excavation and Capping

- Areas Worked: N/A
- Activity Not Started for Season 2, currently scheduled to start in mid-August 2016

5. Stockpile Management

- Activities:
 - On-going stockpile sparging

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start in mid-July 2016

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016



PROJECT NO.: 130388-01.02

REPORT PERIOD: July 05 to July 08, 2016

REPORT NO.: 021

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for intertidal and subtidal pile removal on 7/6/16 for SMA-2 and SMA-5 (intensive schedule), and on 7/7/16 and 7/8/16 for SMA-5 (intensive schedule). No exceedances of water quality criteria were observed.
- Shellfish and biotoxin monitoring: Activity not started, scheduled to start with SMA-1 intertidal excavation.
- Archaeological monitoring: Activity not started, scheduled to start with beach cleanup in landfill 4a and 4b areas.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 and SMA-5 with barge-mounted crane
- Offload material barge and transfer extracted piling to the creosote processing area
- Begin processing extracted creosote pilings
- Continue material importing and stockpiling
- Mobilize a second barge-mounted crane to be used for SMA-3 EMNR material placement starting on 7/18/16.

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Removing piles with vibratory hammer at Station 17+00 in SMA-2



Comment: Removing piles with vibratory hammer in SMA-5



Comment: Removing piles with vibratory hammer in SMA-5, viewed from shoreline of project site.



Comment: SMA-5 pile removal



Comment: Pile removal SMA-1, pile with concrete base



Comment: Removing piles during low tide with vibratory hammer at Station 34+00 (SMA-1 Jetty area)



PROJECT NO.: 130388-01.02

REPORT PERIOD: July 11 to July 15, 2016

REPORT NO.: 022

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking |

1. Structure Demolition and Pile Extraction

- Area worked: SMA-5
- Activities:
 - Pulled intertidal and subtidal piles with barge-mounted crane and vibratory hammer
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 material barge
 - Offloaded piles at Pier 4 and transferred to creosote processing area
 - Creosote processing and container loading with Walratak processor in the creosote processing area

3. Former Landfill Shoreline Debris Removal

- Areas Worked: N/A
- Activities: Activity Not Started, currently scheduled to start in mid-July 2016

4. Intertidal Excavation and Capping

- Areas Worked: N/A
- Activity Not Started for Season 2, currently scheduled to start in mid-August 2016

5. Stockpile Management

- Activities:
 - On-going stockpile sparging

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start July 18, 2016

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: July 11 to July 15, 2016

REPORT NO.: 022

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for intertidal and subtidal pile removal on 7/11/16, 7/14/16, and 7/15/16 for SMA-5 (routine schedule). No exceedances of water quality criteria were observed.
- Shellfish and biotoxin monitoring: Activity not started, scheduled to start with SMA-1 intertidal excavation.
- Archaeological monitoring: Activity not started, scheduled to start with beach cleanup in landfill 4a and 4b areas.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site
- Loaded EMNR material barges for placement beginning on 7/18/16.

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 and SMA-5 with barge-mounted crane
- Continue offloading material barges and transferring extracted piling to the creosote processing area
- Continue processing extracted creosote pilings
- Continue material importing and stockpiling
- Begin demolition at the Former Log Transfer Facility (FLTF)
- Begin EMNR material placement in SMA-3

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Piling staged on the 152 material barge



Comment: Offloading piles and transferring to upland containment/processing area



Comment: Processing piles in containment area



Comment: Loading material barge for EMNR placement starting on 7/18/16



Comment: Pile removal in SMA-5 north of the FLTF



Comment: Pile removal in SMA-5 at the FLTF



PROJECT NO.: 130388-01.02

REPORT PERIOD: July 18 to July 22, 2016

REPORT NO.: 023

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking |

1. Structure Demolition and Pile Extraction

- Area worked: SMA-5
- Activities:
 - Pulled intertidal and subtidal piles with barge-mounted crane and vibratory hammer
 - Demolished the Former Log Transfer Facility (FLTF)
 - Removed portions of the derelict vessel at the FLTF
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 material barge
 - Offloaded piles and demolition debris from the FLTF at Pier 4 and transferred to creosote processing area
 - Creosote processing and container loading with Walratak processor in the creosote processing area

3. Former Landfill Shoreline Debris Removal

- Areas Worked: Landfill 4b
- Activities: Removed surficial debris (brick, wood, asphalt, glass, etc.) from the southern portion of Landfill 4b.

4. Intertidal Excavation and Capping

- Areas Worked: N/A
- Activity Not Started for Season 2, currently scheduled to start in mid-August 2016

5. Stockpile Management

- Activities:
 - On-going stockpile sparging

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Began placing EMNR material in SMA-3 on July 18, 2016



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: July 18 to July 22, 2016

REPORT NO.: 023

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Intensive monitoring was conducted for demolition activities in SMA-5 and EMNR placement in SMA-3 on 7/18, 7/19, and 7/20
 - Routine monitoring was conducted for demolition activities in SMA-5 and EMNR placement in SMA-3 on 7/21 and 7/22
 - No exceedances of water quality criteria were observed.
- Shellfish and biotoxin monitoring: Activity not started, scheduled to start with SMA-1 intertidal excavation.
- Archaeological monitoring started on Friday 7/22/16 with beach cleanup in landfill 4b area. No issues identified.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site
- Loaded EMNR material barges for placement in SMA-3

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 and SMA-5 with barge-mounted crane
- Continue offloading material barges and transferring extracted piling and demolition debris to the creosote processing area
- Continue processing and off-site disposal of extracted creosote pilings
- Continue material importing and stockpiling
- Continue demolition at the Former Log Transfer Facility (FLTF)
- Continue loading material barges and EMNR material placement in SMA-3
- Continue beach cleanup at Landfill 4a and 4b
- Continue loadout of concrete and asphalt for off-site recycling
- Rip rap removal from intertidal areas of SMA-1

13. Changes and Modifications

WEEKLY SUMMARY REPORT

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

PHOTOGRAPHS



Comment: EMNR material placement in SMA-3



Comment: Removing decking from FLTF pier with barge-mounted crane



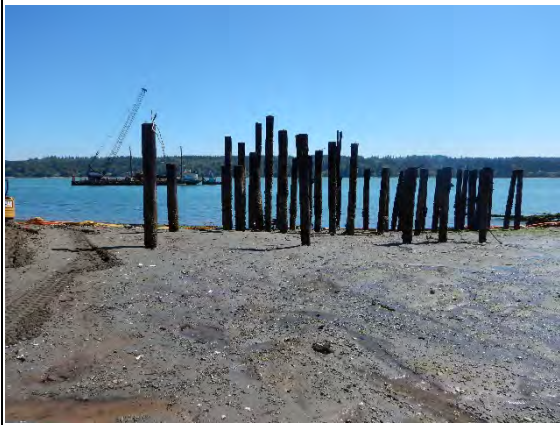
Comment: FLTF pier demolition progress



Comment: FLTF bulkhead removal, pilings remain.

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Piles to extract off-shore from FLTF bulkhead



Comment: FLTF area after bulkhead and piling removal



Comment: Large portion of the derelict vessel removed from FLTF and placed on material barge



Comment: South end of Landfill 4b beach cleanup area pre-cleanup.



Comment: South end of Landfill 4b beach cleanup area post-cleanup.



Comment: Skip boxes filled with debris from landfill 4b cleanup (day 1)



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 8 to August 12, 2016

REPORT NO.: 026

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Areas worked: Eastern Wharf, SMA-5, and SMA-1
- Activities:
 - Pulled subtidal piles from the Eastern Wharf and SMA-1 with barge-mounted crane, vibratory hammer and Harbor Offshore dive crew
 - Pulled intertidal piles from the Eastern Wharf and SMA-1 with the land-based excavator and vibratory hammer
 - Removed concrete from the SMA-1 jetty and replaced with rip rap re-used from the on-site stockpile
 - Removed concrete and broken/eroded asphalt from the upper portion of the Eastern Wharf bank and replaced with Type 1 armor and rip rap re-used from the on-site stockpile
 - Continued removing portions of the derelict vessel at the FLTF
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling and demolition debris staged on the 152 material barge
 - Offloaded piles and demolition debris from SMA-1, the Eastern Wharf, and the FLTF at the transload facility and transferred to creosote processing area
 - Creosote processing and container loading with Walratak processor in the creosote processing area

3. Former Landfill Shoreline Debris Removal

- No activity

4. Intertidal Excavation and Capping

- No activity, work will resume during low tides the week of 8/15/16

5. Stockpile Management

- Activities: on-going stockpile sparging



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 8 to August 12, 2016

REPORT NO.: 026

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in SMA-3 with 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for pile removal in SMA-5 and for capping in SMA-3 on 8/8/16.
 - Limited monitoring (once per week) was conducted for pile removal in the Eastern Wharf and SMA-1 on 8/11/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Activity not started, scheduled to start on 8/15/16.
- No archaeological monitoring was conducted.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site
- Loaded EMNR material barges for placement in SMA-3

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 and Eastern Wharf with barge-mounted crane and assistance from Harbor Offshore dive crew
- Continue pulling intertidal piling in SMA-1 with land-based excavator and vibratory hammer
- Continue offloading material barges and transferring extracted piling and demolition debris to the creosote processing area
- Continue processing and off-site disposal of extracted creosote pilings
- Continue capping material importing and stockpiling
- Continue loading material barges and EMNR material placement in SMA-3
- Continue loadout of concrete and asphalt for off-site recycling
- Continue intertidal excavation and capping in SMA-1
- Continue FLTF vessel removal

WEEKLY SUMMARY REPORT

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

PHOTOGRAPHS



Comment: Pulling pilings from south end of Eastern Wharf with diver assistance



Comment: Concrete removal from SMA-1 jetty



Comment: Pulling intertidal pilings from upper portion of Eastern Wharf bank



Comment: Removal of asphalt and concrete from upper portion of Eastern Wharf bank

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Placement of Type 1 armor on upper portion of Eastern Wharf bank



Comment: Placement of rip rap over Type 1 armor on upper portion of Eastern Wharf bank



Comment: SMA-1 jetty after completion of piling removal, concrete removal, and rip rap placement



Comment: SMA-1 jetty after concrete and piling removal and rip rap replacement



Comment: Completed portion of SMA-1 intertidal cap



Comment: Diver assisted pile removal



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 15 to August 19, 2016

REPORT NO.: 027

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Areas worked: Eastern Wharf and SMA-1
- Activities:
 - Pulled subtidal piles from the Eastern Wharf and SMA-1 with barge-mounted crane, vibratory hammer and Harbor Offshore dive crew
 - Pulled intertidal piles during intertidal excavation in SMA-1 with the land-based excavator and vibratory hammer
 - Pile removal was conducted within containment and sorbent booms

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 material barge
 - Offloaded piles from SMA-1 and the Eastern Wharf at the transload facility and transferred to creosote processing area
 - Creosote processing and container loading with Walrath processor in the creosote processing area

3. Former Landfill Shoreline Debris Removal

- No activity

4. Intertidal Excavation and Capping

- Intertidal excavation and capping in SMA-1
- Excavated areas capped with filter layer material (minimum 6-inches) during the same tide cycle they were excavated
- Containment boom deployed around intertidal excavation areas

5. Stockpile Management

- Activities: on-going stockpile sparging
- Containment cells/berms for subtidal sediment were constructed from intertidal excavation material

6. Subtidal Capping, EMNR , and RMC Placement



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 15 to August 19, 2016

REPORT NO.: 027

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in SMA-3 with 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for SMA-1 intertidal excavation and SMA-3 EMNR material placement on 8/15/16.
 - Limited monitoring (once per week) was conducted for SMA-1 pile removal on 8/19/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16.
- No archaeological monitoring was conducted.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site
- Loaded EMNR material barges for placement in SMA-3

12. Anticipated Work for Next Week

- Continue pulling intertidal and subtidal piling in SMA-1 and Eastern Wharf with barge-mounted crane and assistance from Harbor Offshore dive crew
- Continue pulling intertidal piling in SMA-1 with land-based excavator and vibratory hammer
- Continue offloading material barges and transferring extracted piling and demolition debris to the creosote processing area
- Continue processing and off-site disposal of extracted creosote pilings
- Continue capping material importing and stockpiling
- Continue loading material barges and EMNR material placement in SMA-3
- Continue loadout of concrete and asphalt for off-site recycling
- Continue intertidal excavation and capping in SMA-1
- Continue FLTF vessel removal
- Build berm and install silt fence around completed SMA-1 intertidal excavation area

WEEKLY SUMMARY REPORT

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

PHOTOGRAPHS



Comment: Placing filter material in completed areas and excavating 2-foot cut



Comment: Filter material placed on lower area of excavation



Comment: Placing armor layer Sta. 25+00



Comment: SMA-1 intertidal excavation at Sta. 34+69

WEEKLY SUMMARY REPORT

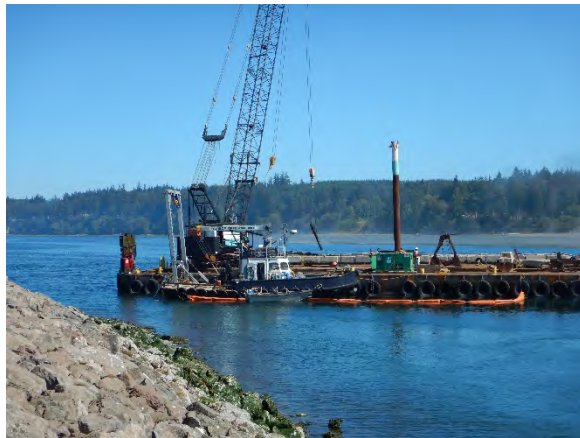
PHOTOGRAPHS



Comment: Filter layer placement at end of SMA-1 jetty



Comment: Completed armor layer Sta. 25+00 to 27+00



Comment: Diver assisted pile removal at the north end of the E. Wharf.



Comment: Placing habitat substrate over armor layer Sta. 25+00



Comment: Completed habitat substrate area Sta. 25+00



Comment: Filter layer placement at end of SMA-1 jetty



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 22 to August 26, 2016

REPORT NO.: 028

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Areas worked: Eastern Wharf, SMA-5, and SMA-1
- Activities:
 - Pulled subtidal piles from the Eastern Wharf and SMA-1 with barge-mounted crane, vibratory hammer and Harbor Offshore dive crew.
 - Pulled intertidal piles during intertidal excavation in SMA-1 and in the Eastern Wharf with the land-based excavator and vibratory hammer.
 - Removed remaining portions of the derelict vessel at the FLTF.
 - Pile removal was conducted within containment and sorbent booms.

2. Creosote Processing and off Site Disposal

- Activities:
 - Extracted piling staged on the 152 material barge.
 - Offloaded piles from SMA-1 and the Eastern Wharf at the transload facility and transferred to creosote processing area.
 - Creosote processing and container loading with Walratak processor in the creosote processing area.

3. Former Landfill Shoreline Debris Removal

- No activity

4. Intertidal Excavation and Capping

- Intertidal excavation and capping in SMA-1.
- Excavated areas capped with filter layer material (minimum 6-inches) during the same tide cycle they were excavated.
- Containment boom deployed around intertidal excavation areas.

5. Stockpile Management

- Activities: on-going stockpile sparging
- Containment cells/berms for subtidal sediment were constructed from SMA-1 intertidal excavation material.



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 22 to August 26, 2016

REPORT NO.: 028

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in SMA-3 with 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for SMA-3 EMNR material placement on 8/24/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16.
- Archaeological monitoring of SMA-1 intertidal excavation was conducted on 8/25/16.
- Dust control using water truck performed daily.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded EMNR material barges for placement in SMA-3.
- Perimeter containment berm constructed along top of bank at the Eastern Wharf area.
- Silt fence installed along top of bank in the southern portion of SMA-1.

12. Anticipated Work for Next Week

- Continue processing and off-site disposal of extracted creosote pilings.
- Continue capping material importing and stockpiling.
- Continue loading material barges and EMNR material placement in SMA-3.
- Continue intertidal excavation and capping in SMA-1.
- Inspect FLTF vessel removal area at low tide.

13. Changes and Modifications

- No Changes or Modifications required

WEEKLY SUMMARY REPORT

14. Quantities (See Attached Tracking Tables)

15. Photos

PHOTOGRAPHS



Comment: Perimeter containment berm at the Eastern Wharf



Comment: Silt fence installed at the south end of SMA-1 along top of bank



Comment: Removing derelict vessel at the FLTF



Comment: Piles in upper portion of Eastern Wharf (south end) exposed for extraction

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Filter layer placement along SMA-1 jetty



Comment: Completed intertidal cap along the SMA-1 jetty



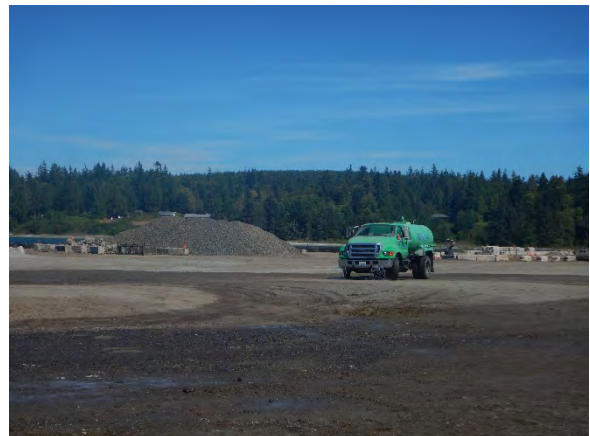
Comment: Processing creosote piles in the processing area



Comment: Placement of filter material along SMA-1 jetty intertidal cap area



Comment: Building containment berms



Comment: Water truck spraying water for dust control



PROJECT NO.: 130388-01.02

REPORT PERIOD: August 29 to September 2, 2016

REPORT NO.: 029

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Areas worked: Eastern Wharf and SMA-1
- Activities:
 - Pulled intertidal piles during intertidal excavation in SMA-1 and in the Eastern Wharf with the land-based excavator and vibratory hammer.
 - Pile removal was conducted within containment and sorbent booms.

2. Creosote Processing and off Site Disposal

- Activities:
 - Creosote processing and container loading with Walratak processor in the creosote processing area.

3. Former Landfill Shoreline Debris Removal

- No activity

4. Intertidal Excavation and Capping

- Intertidal excavation and capping in SMA-1.
- Excavated areas capped with filter layer material (minimum 6-inches) during the same tide cycle they were excavated.
- Containment boom deployed around intertidal excavation areas.

5. Stockpile Management

- Activities: on-going stockpile sparging
- Containment cells/berms for subtidal sediment were constructed from SMA-1 intertidal excavation material.

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in SMA-3 with the 1201 spud barge and 9260 American Crane and began placing EMNR material in SMA-3 with the 1901 spud barge and 9299 American Crane using the 4 CY re-handle buckets.



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: August 29 to September 2, 2016

REPORT NO.: 029

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for SMA-3 EMNR material placement and SMA-1 intertidal capping on 8/30/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16.
- No archaeological monitoring conducted.
- Dust control using water truck performed daily.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded EMNR material barges for placement in SMA-3.

12. Anticipated Work for Next Week

- Continue processing and off-site disposal of extracted creosote pilings.
- Continue capping material importing and stockpiling.
- Continue loading material barges and EMNR material placement in SMA-3.

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Intertidal excavation at nearshore end of SMA-1 jetty



Comment: Creosote processing



Comment: Placing intertidal excavation material for containment berms



Comment: Filter layer placement at nearshore end of SMA-1 jetty



Comment: Habitat substrate placement at nearshore end of SMA-1 jetty



Comment: Intertidal excavation at southern end of SMA-1 jetty

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Intertidal capping southern at end of SMA-1



Comment: Stockpiling EMNR material



Comment: Habitat substrate on SMA-1 3:1 slope looking up from toe



Comment: SMA-1 intertidal cap area south of conveyor



PROJECT NO.: 130388-01.02

REPORT PERIOD: September 5 to September 9, 2016

REPORT NO.: 030

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Areas worked: Eastern Wharf
- Activities:
 - Pulled intertidal piles from the Eastern Wharf with the land-based excavator and vibratory hammer.
 - Pile removal was conducted within containment and sorbent booms.

2. Creosote Processing and off Site Disposal

- Activities:
 - Creosote processing and container loading with Walratak processor in the creosote processing area.

3. Former Landfill Shoreline Debris Removal

- No activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- No activity

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in the central portion of SMA-3 with the 1201 spud barge and 9260 American Crane, and continued placing EMNR material in the eastern portion of SMA-3 with the 1901 spud barge and 9299 American Crane using the 4 CY re-handle buckets.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016



PROJECT NO.: 130388-01.02

REPORT PERIOD: September 5 to September 9, 2016

REPORT NO.: 030

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for SMA-3 EMNR material placement and SMA-1 intertidal capping on 9/8/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16. PEMDs retrieved on 9/9/16.
- Archaeological monitoring of SMA-1 intertidal excavation spoils conducted on 9/8/16.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded EMNR material barges for placement in SMA-3.

12. Anticipated Work for Next Week

- Continue processing and off-site disposal of extracted creosote pilings.
- Continue capping material importing and stockpiling.
- Continue loading material barges and EMNR material placement in SMA-3.

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Completed intertidal excavation and capping at SMA-1 jetty



Comment: EMNR material stockpiling



Comment: SMA-3 EMNR material placement



Comment: SMA-3 EMNR material placement



Comment: Loading EMNR material on barge with conveyor belt



Comment: Creosote processing



PROJECT NO.: 130388-01.02

REPORT PERIOD: September 12 to September 16, 2016

REPORT NO.: 031

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- No Activity

2. Creosote Processing and off Site Disposal

- Activities:
 - Creosote processing and container loading with Walratak processor in the creosote processing area.

3. Former Landfill Shoreline Debris Removal

- Follow-up inspection identified some exposed anthropogenic debris, predominantly small pieces of asphalt and concrete at the end of the access trail and to the south. PR/OPG performed additional removal following the inspection. A follow-up inspection is scheduled for 9/20/16 at 1:30 pm.

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Season 2 intertidal material stockpile sparging.

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in the central portion of SMA-3 with the 1201 spud barge and 9260 American Crane, and continued placing EMNR material in the eastern portion of SMA-3 with the 1901 spud barge and 9299 American Crane using the 4 CY re-handle buckets.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: September 12 to September 16, 2016

REPORT NO.: 031

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for SMA-3 EMNR material placement on 9/16/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16. PEMDs retrieved on 9/9/16. Mussel cages scheduled to be retrieved in mid-October.
- No archaeological monitoring conducted. Monitoring will resume during subtidal dredging.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded EMNR material barges for placement in SMA-3.

12. Anticipated Work for Next Week

- Continue processing and off-site disposal of extracted creosote pilings.
- Continue capping material importing and stockpiling.
- Continue loading material barges and EMNR material placement in SMA-3.
- Mobilize the DB Rainier to the site.

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: SMA-3 EMNR material placement



Comment: EMNR material placement in SMA-3 with 4 CY re-handling bucket



Comment: SMA-3 EMNR material loading to conveyor



Comment: SMA-3 EMNR material barge loading



Comment: Area with some exposed asphalt and concrete debris at beach cleanup Area 4



Comment: SMA-3 EMNR material placement



PROJECT NO.: 130388-01.02

REPORT PERIOD: September 19 to September 23, 2016

REPORT NO.: 032

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- No Activity

2. Creosote Processing and off Site Disposal

- Activities:
 - Creosote processing and container loading with Walratak processor in the creosote processing area.

3. Former Landfill Shoreline Debris Removal

- PR/OPG crews performed additional cleanup of anthropogenic debris at area 4.
- Ecology inspection of beach cleanup area 4 on 9/20/16 at 1:30 pm. Ecology confirmed that the beach cleanup requirements for this area have been met.

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Season 2 intertidal material stockpile sparging.

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-3
- Activities: Continued placing EMNR material in the central portion of SMA-3 with the 1201 spud barge and 9260 American Crane, and continued placing EMNR material in the eastern portion of SMA-3 with the 1901 spud barge and 9299 American Crane using the 4 CY re-handle buckets.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016

8. Environmental Controls



PROJECT NO.: 130388-01.02

REPORT PERIOD: September 19 to September 23, 2016

REPORT NO.: 032

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (once per week) was conducted for SMA-3 EMNR material placement on 9/20/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16. PEMDs retrieved on 9/9/16. Mussel cages scheduled to be retrieved in mid-October.
- No archaeological monitoring conducted. Monitoring will resume during subtidal dredging.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded EMNR material barges for placement in SMA-3.

12. Anticipated Work for Next Week

- Continue processing and off-site disposal of extracted creosote pilings.
- Continue capping material importing and stockpiling.
- Continue loading material barges and EMNR material placement in SMA-3.
- Begin placing SMA-2 subtidal cap.
- Begin placing SMA-1 subtidal cap.
- Begin placing SMA-2 EMNR material.
- Install temporary pilings at transload and barge mooring areas.

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Additional cleanup of asphalt and brick at Area 4



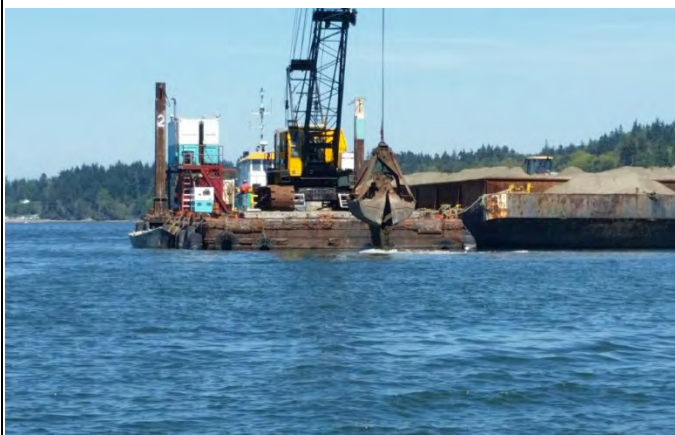
Comment: Caution signs installed at the FLTF slope



Comment: FLTF area at low tide



Comment: 1:1 slope at the FLTF



Comment: SMA-3 EMNR material placement



Comment: Creosote processing



PROJECT NO.: 130388-01.02

REPORT PERIOD: September 26 to September 30, 2016

REPORT NO.: 033

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- No Activity

2. Creosote Processing and off Site Disposal

- Activities:
 - Creosote processing and container loading with Walratak processor in the creosote processing area.

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Season 2 intertidal material stockpile sparging.

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-1, SMA-2, and SMA-3
- Activities:
 - Continued placing EMNR material in the central portion of SMA-3 with the 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.
 - Began placing EMNR material in SMA-2 with the 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.
 - Began placing subtidal cap in SMA-2 with the DB Rainier and Bombay box.
 - Began placing subtidal cap in SMA-1 with the 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Not Started for Season 2, currently scheduled to start on October 17, 2016



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: September 26 to September 30, 2016

REPORT NO.: 033

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Intensive monitoring was conducted for subtidal capping and EMNR placement in SMA-2 on 9/27/16, 9/28/16, and 9/29/16
 - Intensive monitoring was conducted for subtidal capping in SMA-1 on 9/29/16 and 9/30/16.
 - Routine monitoring was conducted for subtidal capping in SMA-2 on 9/30/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16. PEMDs retrieved on 9/9/16. Mussel cages scheduled to be retrieved in mid-October.
- No archaeological monitoring conducted. Monitoring will resume during subtidal dredging.
- Marine mammal monitoring conducted during pile driving activities.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded EMNR material barges for placement in SMA-3.
- Installed temporary pilings at transload area.

12. Anticipated Work for Next Week

- Continue processing and off-site disposal of extracted creosote pilings.
- Continue capping material importing and stockpiling.
- Continue loading material barges and EMNR material placement in SMA-1 and SMA-2.
- Continue placing SMA-2 subtidal cap.
- Continue placing SMA-1 subtidal cap.
- Install temporary pilings at barge mooring area in SMA-1.

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



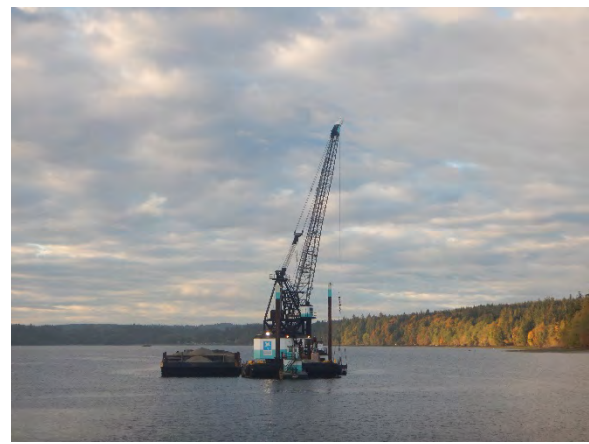
Comment: Intensive water quality monitoring for subtidal capping



Comment: Placing subtidal cap in SMA-1



Comment: Installing temporary pilings at the transload area



Comment: DB Rainier placing subtidal cap in SMA-2



Comment: SMA-1 subtidal cap filter layer placement



Comment: SMA-2 subtidal cap placement with Bombay Box



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 10 to October 14, 2016

REPORT NO.: 035

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- No Activity

2. Creosote Processing and off Site Disposal

- No Activity

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Season 2 intertidal material stockpile sparging.

6. Subtidal Capping, EMNR , and RMC Placement

- Areas Worked: SMA-1, SMA-2, and Eastern Wharf
- Activities:
 - Continued placing Habitat Substrate at the Eastern Wharf with the 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.
 - Continued placing subtidal cap in SMA-2 with the DB Rainier and Bombay box.
 - Continued placing subtidal cap in SMA-1 with the 1201 spud barge and 9260 American Crane using the 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: N/A
- Activities: Continued preparations for dredging scheduled to start on October 17, 2016.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum)



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 10 to October 14, 2016

REPORT NO.: 035

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:

- Limited monitoring was conducted for subtidal capping in SMA-2 on 10/10/16.
- No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring: Mussel cages deployed on 8/16/16. PEMDs retrieved on 9/9/16. Mussel cages were retrieved on 10/11/16.
- No archaeological monitoring conducted. Monitoring will resume during subtidal dredging.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.
- Loaded material barges for placement in SMA-1, SMA-2, and Eastern Wharf.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue loading material barges and cap material placement in SMA-2.
- Continue placing EMNR in SMA-2.
- Begin dredging in SMA-1
- Begin dredging in SMA-2
- Offloading dredge spoils

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Sand placement in SMA-2 viewed from Water Quality Boat



Comment: Type 1 Armor placement in SMA-1



Comment: Retrieval of shellfish monitoring mussel cages for analysis.



Comment: Loading barge with sand material for placement in SMA-2.

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Completed offload facility platform



Comment: South end of SMA-2 perimeter berm



Comment: SMA-2 perimeter berm looking north



Comment: Sand placement in SMA-2



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 17 to October 23, 2016

REPORT NO.: 036

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during dredging activities in both SMA-1 and SMA-2

2. Creosote Processing and off Site Disposal

- No Activity

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Constructing interior containment berms for season 2 subtidal material using season 1 intertidal material from stockpile SS-03.

6. Subtidal Capping, EMNR , and RMC Placement

- No activity

7. Subtidal Dredging

- Areas Worked: SMA-1 and SMA-2
- Activities: Started dredging on October 17, 2016. DB Rainer and 5 CY digging bucket dredged in SMA-2 south half of the northern dredge prism. Komatsu PC400 with 3.5 CY hydraulic Young bucket working off of the White Horse spud barge dredged in SMA-1.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 17 to October 23, 2016

REPORT NO.: 036

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- Intensive monitoring was conducted for dredging in SMA-1 and SMA-2 on 10/17/16, 10/18/16, and 10/19/16.
- Routine monitoring was conducted for dredging in SMA-1 and SMA-2 on 10/20/16, 10/21/16, and 10/22/16.
- No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring is complete.
- Archaeological monitoring was conducted for subtidal dredging. No significant archaeological resources were observed.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue dredging in SMA-1
- Continue dredging in SMA-2
- Continue offloading dredge spoils

13. Changes and Modifications

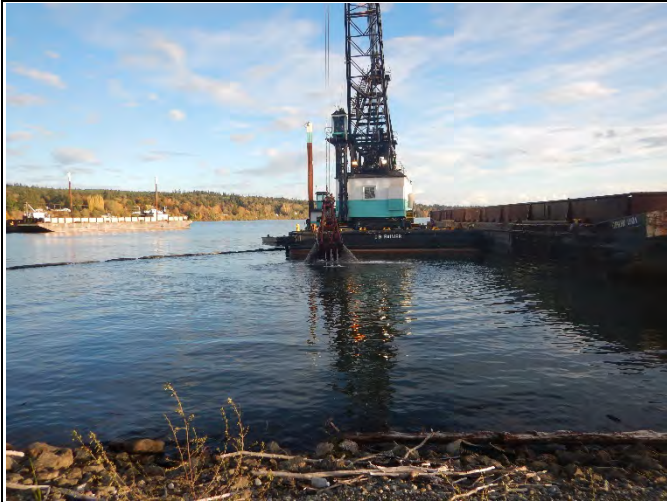
- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Start of dredging in SMA-2 with DB Rainier



Comment: Numerous piles removed during dredging in SMA-2



Comment: Offloading dredge spoil barge



Comment: Offload setup with new piles and platform

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Typical dredge sediment



Comment: Dredge sediment offloaded and placed in cell #5



Comment: Dredging in SMA-1, filling the ITB 166



Comment: DB Rainier filling 1801 material barge

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Dredge material in SMA-2 viewed from crane



Comment: PC400 Dredging in SMA-1



Comment: Stockpiled dredge material



Comment: Young bucket loading material barge



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 24 to October 30, 2016

REPORT NO.: 037

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during dredging activities in both SMA-1 and SMA-2

2. Creosote Processing and off Site Disposal

- No Activity

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Constructing interior containment berms for season 2 subtidal material using season 1 intertidal material from stockpile SS-03.

6. Subtidal Capping, EMNR , and RMC Placement

- No activity

7. Subtidal Dredging

- Areas Worked: SMA-1 and SMA-2
- Activities: DB Rainer and 5 CY digging bucket dredged in SMA-2. Komatsu PC400 with 3.5 CY hydraulic Young bucket working off of the White Horse spud barge dredged in SMA-1.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring (day 1) was conducted for dredging in SMA-1 and SMA-2 on 10/24/16.

WEEKLY SUMMARY REPORT

- No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring is complete.
- Archaeological monitoring was conducted for subtidal dredging. No significant archaeological resources were observed.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue dredging in SMA-1
- Continue dredging in SMA-2
- Continue offloading dredge spoils
- Begin placing RMC in SMA-1

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

PHOTOGRAPHS



Comment: Dredge stockpiles and interior containment berms



Comment: Dredging with the PC400 and Young bucket in SMA-1

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Collecting confirmatory sediment cores



Comment: DB Rainier dredging in SMA-2



Comment: Dredging with the PC400 in SMA-1



Comment: Dredge sediment offloaded and placed in stockpile

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Dredge material offloading - ITB 166 material barge



Comment: DB Rainier filling material barge – wood waste



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 31 to November 04, 2016

REPORT NO.: 038

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during dredging activities in both SMA-1 and SMA-2

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Constructing interior containment berms for season 2 subtidal material using season 1 intertidal material

6. Subtidal Capping, EMNR , and RMC Placement

- No activity

7. Subtidal Dredging

- Areas Worked: SMA-1 and SMA-2
- Activities: DB Rainer and 5 CY digging bucket dredged in SMA-2. Komatsu PC400 with 3.5 CY hydraulic Young bucket working off of the White Horse spud barge dredged in SMA-1.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring was conducted for dredging in SMA-1 and SMA-2 on 11/04/16.



PROJECT NO.: 130388-01.02

REPORT PERIOD: October 31 to November 04, 2016

REPORT NO.: 038

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- No confirmed turbidity exceedances were measured during monitoring activities.
- Shellfish COC monitoring is complete.
- Archaeological monitoring was conducted for subtidal dredging. No significant archaeological resources were observed.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue dredging in SMA-1 and SMA-2
- Continue offloading dredge spoils
- Pier 4 demolition
- Begin placing RMC and subtidal cap in SMA-1 and SMA-2

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Dredge material barge and removed pilings in SMA-2



Comment: Wattle and filter material installed along northern edge of containment berm



Comment: Piling removed during SMA-2 dredging



Comment: DB Rainier dredging in SMA-2

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Collecting confirmatory samples in SMA-1



Comment: Wood waste material placed in dredge material barge



Comment: Creosote processing



Comment: PC400 with Young bucket dredging in SMA-1



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 07 to November 11, 2016

REPORT NO.: 039

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Demolition of Pier 4 and extraction of pilings
- Pile extraction during dredging activities in SMA-1

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging and as part of the Pier 4 demolition were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- No activity

6. Subtidal Capping, EMNR , and RMC Placement

- Subtidal capping in SMA-2 with the DB Rainier and Bombay Box

7. Subtidal Dredging

- Areas Worked: SMA-1
- Activities: Komatsu PC400 with 3.5 CY hydraulic Young bucket working off of the White Horse spud barge dredged in SMA-1.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: November 07 to November 11, 2016

REPORT NO.: 039

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

- Limited monitoring was conducted for dredging in SMA-1 and subtidal capping in SMA-2 on 11/11/16.
- No confirmed turbidity exceedances were measured during monitoring activities.
- Additional shellfish cages were deployed on 11/10/16 and 11/11/16.
- Archaeological monitoring was conducted for subtidal dredging. No significant archaeological resources were observed.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue dredging in SMA-1 and SMA-2
- Continue offloading dredge spoils
- Continue placing subtidal cap in SMA-2
- Begin placing RMC in SMA-2
- Begin placing RMC and subtidal cap in SMA-1

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Offloading dredge material at Transload Facility



Comment: SMA-1 dredge material on barge



Comment: PC400 dredging in SMA-1



Comment: DB Rainier dredging in SMA-2

WEEKLY SUMMARY REPORT

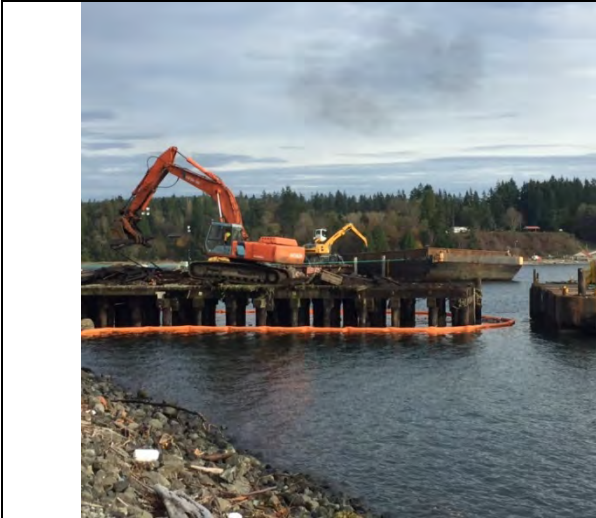
PHOTOGRAPHS



Comment: Pilings in processing area



Comment: Stockpiling offloaded dredge material barge



Comment: Pier 4 demolition



Comment: Loading sand for continued subtidal capping in SMA-2



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 12 to November 18, 2016

REPORT NO.: 040

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during dredging activities in SMA-1 and SMA-2

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Offloaded dredge material and transported to stockpiles

6. Subtidal Capping, EMNR , and RMC Placement

- Subtidal capping in SMA-2 with the DB Rainier and Bombay Box
- RMC and EMNR placement in SMA-2 with 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket.
- Subtidal capping in SMA-1 with 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: SMA-1 and SMA-2
- Activities: DB Rainer and 5 CY digging bucket dredged in SMA-2. Komatsu PC400 with 3.5 CY hydraulic Young bucket working off of the White Horse spud barge dredged in SMA-1.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum)



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: November 12 to November 18, 2016

REPORT NO.: 040

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:

- Limited monitoring was conducted for subtidal capping in SMA-1 and dredging in SMA-2 on 11/18/16.
- No confirmed turbidity exceedances were measured during monitoring activities.
- Additional shellfish cages were deployed on 11/10/16 and 11/11/16 and scheduled for removal on 11/21/16.
- Archaeological monitoring was conducted for subtidal dredging. No significant archaeological resources were observed.

9. Problems Encountered and Corrective Actions

- No problems encountered or corrective actions required

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue dredging in SMA-1 and SMA-2
- Continue offloading dredge spoils
- Continue placing subtidal cap, RMC, and EMNR in SMA-2
- Continue placing subtidal cap in SMA-1
- Begin placing RMC and EMNR in SMA-1

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: SMA-1 subtidal capping



Comment: SMA-2 dredging



Comment: Wood waste material dredged in SMA-2



Comment: RMC placement in SMA-2

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Wood waste material dredged from SMA-2



Comment: SMA-2 dredge material barge



Comment: Stockpiled dredge material from SMA-2



Comment: On-going Creosote processing



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 21 to November 25, 2016

REPORT NO.: 041

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during dredging activities in SMA-1 and SMA-2

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No activity

5. Stockpile Management

- Offloaded dredge material and transported to stockpiles
- Stacked dredge stockpiles higher to make additional room in stockpile area

6. Subtidal Capping, EMNR , and RMC Placement

- Subtidal capping (filter layer placement) in SMA-1 with 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: SMA-1 and SMA-2
- Activities: DB Rainer and 5 CY digging bucket dredged in SMA-2. DB Rainier pulled piles in SMA-1 that had been marked but could not be extracted using the PC400 excavator. Komatsu PC400 with 3.5 CY hydraulic Young bucket working off of the White Horse spud barge dredged in SMA-1.
- Dredging in SMA-1 is complete pending review of progress survey data.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls

- Water quality monitoring: Water quality monitoring was scheduled for 11/23/16 but was canceled due to wind and waves (small craft advisory).



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 21 to November 25, 2016

REPORT NO.: 041

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- PEMDs were retrieved on 11/22/16 from mussel cages. Final round of mussel cage retrieval is scheduled for removal the week of 1/9/17.

9. Problems Encountered and Corrective Actions

- A revised dredge plan and cap design to allow for additional removal of wood debris identified in the slope near the former Pier 4 and extending into the upland area is being prepared in collaboration with Ecology.

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Begin upland removal of material near Pier 4 area and continue dredging in SMA-2
- Continue offloading dredge spoils
- Continue placing RMC, and EMNR in SMA-2
- Continue placing subtidal cap in SMA-1
- Begin placing RMC and EMNR in SMA-1
- Continue moving stockpiles, berms, and haul road to facilitate removal of additional material in the bank near Pier 4

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: SMA-1 pile removal using the DB Rainier



Comment: SMA-1 dredging



Comment: Upland area along bank in SMA-2 where additional wood debris has been identified (former Pier 4 area)



Comment: SMA-1 dredging with the PC400



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 21 to November 25, 2016

REPORT NO.: 041

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Pile processing area



Comment: Season 2 stockpile area



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 28 to December 3, 2016

REPORT NO.: 042

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during dredging activities in SMA-2

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- Intertidal excavation and capping activities were performed as part of re-dredging bank area at former Pier 4 area to chase additional wood waste

5. Stockpile Management

- Offloaded dredge material and transported to stockpiles
- Stacked dredge stockpiles higher to make additional room in stockpile area

6. Subtidal Capping, EMNR , and RMC Placement

- Subtidal capping (filter and armor layer placement) in SMA-1 with 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket.
- RMC placement in SMA-1 with 1901 spud barge and 9299 American Crane using 4 CY re-handle bucket.
- EMNR and RMC placement in SMA-2 with 1901 spud barge and 9299 American Crane using 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: SMA-2 re-dredge area in bank near former Pier 4 to chase additional wood waste.
- Activities: DB Rainer and 5 CY digging bucket dredged in SMA-2.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls



PROJECT NO.: 130388-01.02

REPORT PERIOD: November 28 to December 3, 2016

REPORT NO.: 042

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring was conducted for dredging in SMA-2 and subtidal capping in SMA-1 on 12/3/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- The final round of mussel cage retrieval is scheduled for removal the week of 1/9/17.
- Archaeological monitoring was conducted for subtidal dredging on 12/2/16. No significant archaeological resources were observed.

9. Problems Encountered and Corrective Actions

- A revised dredge plan and cap design to allow for additional removal of wood debris identified in the slope near the former Pier 4 and extending into the upland area has been prepared in collaboration with Ecology.

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, and RMC materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue placing subtidal cap in SMA-1
- Perform final removal of vessel at FLTF
- Continue placing Subtidal Cap in SMA-2
- Begin placing contingent Subtidal Cap in SMA-2

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Placing filter layer for SMA-1 subtidal cap



Comment: Placing EMNR in SMA-2



Comment: Upland excavation in SMA-2 bank adjacent to former Pier 4 area



Comment: Upland excavation in SMA-2 bank adjacent to former Pier 4 area.

WEEKLY SUMMARY REPORT

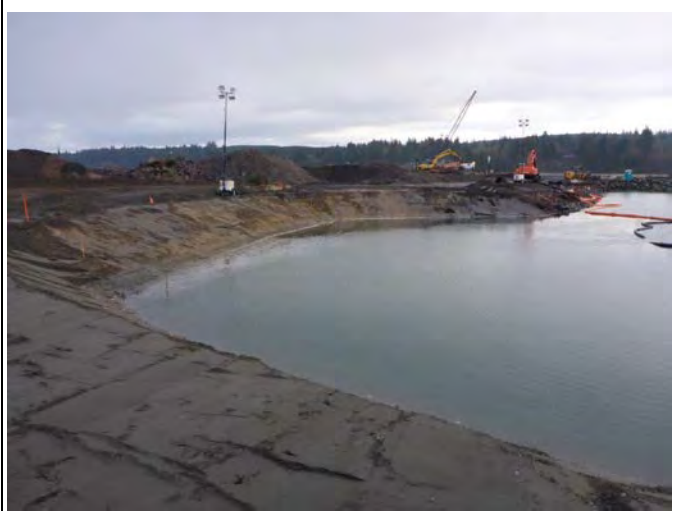
PHOTOGRAPHS



Comment: Upland excavation in SMA-2 bank, adjacent to former Pier 4 area at approximately 0 MLLW



Comment: Placing initial lift of 3" minus backfill on 3h:1v slope



Comment: Additional dredging area adjacent to former Pier 4



Comment: Type 2 armor rock placed on 5h:1v backfilled slope at dredging area adjacent to former Pier 4



PROJECT NO.: 130388-01.02

REPORT PERIOD: December 5 to December 10, 2016

REPORT NO.: 043

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Pile extraction during re-dredging activities in SMA-2

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No Activity

5. Stockpile Management

- Offloaded dredge material and transported to stockpiles
- Stacked dredge stockpiles higher to make additional room in stockpile area

6. Subtidal Capping, EMNR , and RMC Placement

- Subtidal capping (filter and armor layer placement) in SMA-1 with 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket and 1901 spud barge and 9299 American Crane using 4 CY re-handle bucket.
- Subtidal capping in SMA-2 with DB Rainier.
- Placement of 3" minus backfill in SMA-2, 2:1 slope areas with 9299 American Crane using 4 CY re-handle bucket.

7. Subtidal Dredging

- Areas Worked: SMA-2 re-dredge area near former Pier 4 to remove additional wood waste.
- Activities: DB Rainer and 5 CY digging bucket dredged in SMA-2.
- Dredge spoils from material barges were offloaded at the transload facility.

8. Environmental Controls



PROJECT NO.: 130388-01.02

REPORT PERIOD: December 5 to December 10, 2016

REPORT NO.: 043

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring was conducted for capping in SMA-1 on 12/7/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- The final round of mussel cage retrieval is scheduled for removal the week of 1/9/17.

9. Problems Encountered and Corrective Actions

- None.

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, RMC, and backfill materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping material importing and stockpiling.
- Continue placing subtidal cap in SMA-1
- Continue placing RMC in SMA-2
- Continue placing 3" minus backfill in 2h:1v slope areas in SMA-2
- Begin removal of transload facility

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Placing SMA-1 subtidal cap



Comment: Pier 4 excavation/dredging area looking east



Comment: Pier 4 excavation/dredging area looking west



Comment: Stockpiles stacked higher to make room for additional dredge material

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Subtidal capping in SMA-1



Comment: Offloading dredge material from SMA-2



Comment: Subtidal capping in SMA-2 with DB Rainier



Comment: Bank area adjacent to former Pier 4



PROJECT NO.: 130388-01.02

REPORT PERIOD: December 12 to December 17, 2016

REPORT NO.: 044

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

WEEKLY SUMMARY REPORT

| Report Submitted to: | | Contractor Name and Contact: | |
|----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------|
| To: | Arthur Kapell, Celina Abercrombie, WA Dept. of Ecology | General: | Orion Marine Contractors Inc. (OMCI) |
| cc: | Linda Berry-Maraist, PR/OPG John Laplante, PE, Clay Patmont, Ross Pickering, PE, Jason Cornetta, Anchor QEA, LLC | Subcontractors: | Zimmer Sand Pit New Shine Quarry Pyramid Materials MJ Trucking Harbor Offshore |

1. Structure Demolition and Pile Extraction

- Began demolition of transload facility, removed offload platform, temporary pilings, and upper portion of 3" minus backfill behind container bulkhead with 1901 spud barge and 9299 American Crane.

2. Creosote Processing and off Site Disposal

- Piling extracted during dredging were processed in the creosote processing area for off-site disposal

3. Former Landfill Shoreline Debris Removal

- No Activity

4. Intertidal Excavation and Capping

- No Activity

5. Stockpile Management

- No Activity

6. Subtidal Capping, EMNR , and RMC Placement

- Subtidal capping (armor and habitat substrate layer placement) in SMA-1 with 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket.
- Placement of RMC material in SMA-2 with the 1201 spud barge and 9260 American Crane using 4 CY re-handle bucket.
- Placement of the 4-foot subtidal contingency cap in SMA-2 1201 spud barge and 9260 American Crane.
- Placement of 3" minus backfill in SMA-2, 2:1 slope areas, with the 1901 spud barge and 9299 American Crane using 10 CY rock box.

7. Subtidal Dredging

- No Activity – Subtidal dredging is complete.

8. Environmental Controls



WEEKLY SUMMARY REPORT

PROJECT NO.: 130388-01.02

REPORT PERIOD: December 12 to December 17, 2016

REPORT NO.: 044

PREPARED BY: Jason Cornetta

PROJECT NAME/LOCATION: Port Gamble Bay Cleanup

- Water quality monitoring: Water quality monitoring was performed in accordance with the Ecology-approved Water Quality Monitoring Plan (Appendix E 401 Water Quality Memorandum) and the Water Quality Monitoring Plan (Attachment 2 of Appendix E to the BODR). Water quality monitoring was performed for:
 - Limited monitoring was conducted for capping in SMA-1 and SMA-2 on 12/15/16.
 - No confirmed turbidity exceedances were measured during monitoring activities.
- The final round of mussel cage retrieval is scheduled for the week of 1/9/17.
- The final round of archeological monitoring is scheduled for the week of 1/9/17, for the remaining intertidal excavation in SMA-1.

9. Problems Encountered and Corrective Actions

- None.

10. Health and Safety Observations

- Daily health and safety tool box talks performed.
- No health and safety incidents.

11. Other on Site Activities

- Subtidal and Intertidal Capping, EMNR, RMC, and backfill materials were imported and stockpiled on Site.

12. Anticipated Work for Next Week

- Continue capping and backfill material importing and stockpiling.
- Complete placing subtidal cap in SMA-1
- Continue placing contingent subtidal cap in SMA-2
- Continue placing 3" minus backfill in 2h:1v slope areas in SMA-2
- Continue removal of transload facility
- Begin SMA-2 dredge prism/subtidal cap perimeter area tie-in
- Begin placing habitat substrate on completed 3" minus backfill areas

13. Changes and Modifications

- No Changes or Modifications required

14. Quantities (See Attached Tracking Tables)

15. Photos

WEEKLY SUMMARY REPORT

PHOTOGRAPHS



Comment: Placing SMA-1 subtidal cap – armor layer



Comment: Placing 3" minus backfill in SMA-2



Comment: Creosote processing



Comment: Transload facility demolition