Pacific County Department of Community Development

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PACIFIC COUNTY COURTHOUSE
National Historic Site

REFERRAL: 4 Time LLC RV Park Expansion – SEPA Re-issuance after previous withdrawal

DATE: August 20th, 2024

TO:

___PACIFIC COUNTY BLDG. DIVISION	____ DPW/LADO/ROADS
____ ENVIRONMENTAL HEALTH	___ASSESSOR'S OFFICE
____ DEPT. OF ECOLOGY (SHORELANDS REVIEW)	_X_ DEPT. OF ECOLOGY (SEPA REVIEW)
__x_WA. ST. DEPT. OF FISH & WILDLIFE	____US DEPT. OF FISH & WILDLIFE
__x_DEPT. OF NATURAL RESOURCES	___ARMY CORPS OF ENGINEERS
____PACIFIC CO. FIRE DIST. AREA _____	____PACIFIC TRANSIT SYSTEM
____OCEAN PARK WATER SYSTEM	_____PACIFIC COUNTY PUD
____WASH. STATE PARKS & REC. COMM.	____GILLNETTER'S ASSOC.
____CRABBER'S ASSOCIATION	___OYSTERMEN'S ASSOC.
____WSDOT	____OTHER

FROM: PACIFIC COUNTY DEPT. OF COMMUNITY DEVELOPMENT
ATTN. Zane Johnson, Sr. Planner

RE: AGENCY COMMENTS PER ENCLOSED REFERRAL. FILE NO. P2300819

SUBMITTED BY: Joel Fodor

PROPOSAL:

The applicant is proposing to expand an existing RV park by adding 23 new spots, 16 of which will be located inside shoreline jurisdiction, but outside of the required buffer for Willapa Bay. The project also includes a loop access road, which will provide access to all of the proposed spots, a portable bathroom structure and associated utility hook-ups for each spot. The proposed RV pads and access road will be gravel and will account for roughly 30,000 square feet of semi-impervious area. There will be an additional 600 square feet of impact for the bathroom structure. This structure will be located greater than 200 feet from the OHWM of Willapa Bay. There is a Category IV wetland on-site, located between the existing portion of the park and the newly proposed portion. This wetland has been delineated and all of the newly proposed work will occur outside of the wetland and the associated buffers. The current undeveloped portion of the park is roughly 4 acres that is vegetated. Upon completion of the proposal, roughly 60% of the existing trees and vegetation within these 4 acres will remain. This includes the required shoreline and wetland buffer areas, as well as the trees and vegetation the applicants have proposed to keep throughout the development site. A Substantial Shoreline Development Permit will be required in order to expand the RV park within shoreline jurisdiction as well as a zoning conditional use

permit, which is required in order to allow an expansion of an RV Park within this specific zoning district.

Please submit your comments regarding the proposed project to the Department of Community Development by September 3rd, 2024. If comments are not submitted by the indicated date, our office will assume that the agency has no comment regarding the project.

NOTICE OF APPLICATION
SEPA DETERMINATION OF NON-SIGNIFICANCE

Case No (s): P2300819

Description of Proposal: The applicant is proposing to expand an existing RV park by adding 23 new spots, 16 of which will be located inside shoreline jurisdiction, but outside of the required buffer for Willapa Bay. The project also includes a loop access road, which will provide access to all of the proposed spots, a portable bathroom structure and associated utility hook-ups for each spot. The proposed RV pads and access road will be gravel and will account for roughly 30,000 square feet of semi-impervious area. There will be an additional 600 square feet of impact for the bathroom structure. This structure will be located greater than 200 feet from the OHWM of Willapa Bay. There is a Category IV wetland on-site, located between the existing portion of the park and the newly proposed portion. This wetland has been delineated and all of the newly proposed work will occur outside of the wetland and the associated buffers. The current undeveloped portion of the park is roughly 4 acres that is vegetated. Upon completion of the proposal, roughly 60% of the existing trees and vegetation within these 4 acres will remain. This includes the required shoreline and wetland buffer areas, as well as the trees and vegetation the applicants have proposed to keep throughout the development site. A Substantial Shoreline Development Permit will be required in order to expand the RV park within shoreline jurisdiction as well as a zoning conditional use permit, which is required in order to allow an expansion of an RV Park within this specific zoning district.

Proponent(s): 4 Time LLC (owner) & Joel Fodor (applicant)

Location of Proposal: The subject property is located at 457 Bay Center Rd. in Bay Center, Washington. The County Assessor's Parcels number is 13100834109; located in Section 08, Township 13 North, Range 10 West of W.M.

Lead Agency: Pacific County Department of Community Development.

The lead agency originally issued a Determination of Non-significance (DNS) for this project on January 17th, 2024 and the determination was withdrawn on January 31st, 2024 after reviewing the comments that were received. After receiving revised documents and further information for this proposal, the lead agency is re-issuing the determination for this project. The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of the updated environmental checklist and additional information filed with the lead agency by the applicant. This information is available to the public on request or by visiting our website at https://co.pacific.wa.us/dcd/Public_Notices.htm. This DNS is issued under WAC 197-11-340 (2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted for the SEPA Determination of Non-Significance by September 3rd, 2024.

Responsible Official: Zane Johnson
Position/Title: Sr. Planner Date of Publication: August 21st, 2024

Name 4 Time LLC DPA# 13100834109

Re-Route Sheet

Resubmitted of Revised site plan, SEPA checklist and Geotech report

Department Review	Date Re-Routed	Action	Action Date	Signature	Comments/ Notes
Planning	8/13/24				
LADO					
Building					
Health					
Other					

Fees Received

Date Paid	Amount	Receipt No.

Notes $1280 due

SEPA Environmental Checklist

A. Background

1. **Name of proposed project, if applicable:**

   Bay Center KOA Expansion

2. **Name of applicant:**

   Joel P Fodor (4Time Holdings, LLC)

3. **Address and phone number of applicant and contact person:**

   457 Bay Center Road

   Bay Center WA 98527

   Joel Fodor: 951-318-8563

4. **Date checklist prepared:**

   8/7/2024

5. **Agency requesting checklist:**

   Pacific County Department of Community Development

6. **Proposed timing of schedule (including phasing, if applicable):**

   Fall 2024 Phase 1- Prep Land

   Fall 2024 Phase 2- Installation of utilities

   March 2025 Phase 3- Installation of 23 new campsites, small bathhouse and gravel access roads

   Timing is pending permit approvals and delays and is subject to change.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   Not at this time

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   Wetlands delineation performed by Leonard Taylor with A+ Design and Washington State Ecology. A GeoTech report has been performed by Cynthia Hovind with EVREN Northwest, Inc.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

   Not at this time

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    - County Building Permits
    - Septic Permits

- Critical Area Permits
- Shoreline Permits
- GeoTech Report
- Zoning Conditional Use Permits

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Addition to the current Bay Center KOA campground of 23 new recreational campsites, 1 small bathhouse and access roads. 16 of said campsites will be located inside the shoreline jurisdiction and outside the required buffer for Willapa Bay. The proposed site of the additions would lie between the 65-foot setback from the OHWM and the 50-foot setback of the wetlands delineation. Total undeveloped land is currently 4 acres proposed use of 2.5 acres of said land for development. No building and or clearing of land in the OHWM and or delineated wetlands. Site of said project is located 65 feet east of the OHWM of the Willapa Bay set forth by A+ Design and approved by Washington State Department of Ecology. The project area has been delineated and is located outside the set 50-foot wetlands buffer to the West of designated wetlands.

The Bay Center KOA Campground has been developed strategically to embrace the surrounding environmental needs and allow the outdoor enthusiasts continued enjoyment of the area without significant impact. The Campground creates a location for water-enjoyment which fits the needed requirement to achieve a Substantial Shoreline Development permit. Said permit will be required before the proposed work begins.

A new septic system, which has been proposed and engineered to handle the new additions, will be added in accordance with A+ Design and Pacific County permits and approval. This new septic system would be located within the current campground footprint and outside of the proposed development site.

(Project Plans Attached)

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project will take place on the west side of given address

457 Bay Center Road, Bay Center WA 98527

The County Assessor's Parcels number is 13100834109; located in Section 08, Township 13 North, Range 10 West of W.M.

B. Environmental Elements

1. Earth

a. General description of the site: Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

The site of said project is within an existing KOA/RV Campground. The east side of the property has been developed and the proposed site of the expansion is to the west side of the property. The ground of the proposed development site is mainly flat with a slight slope. Current land contours the neighboring campground and other areas which are mostly flat with slight hills and valleys. At the shoreline bluff, 45+ feet from the proposed development site, there is a steep drop off that contains areas that include up to 100% slope. As the Geotech report suggests there will be an approximate 45 foot setback from said slope. The site of development will be outside the 65 feet OHWM as a shoreline buffer requirement as well.

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 2-4% slope in the proposed development site.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

According to the Natural Resources Conservation Services (NRCS) Web Soil Survey (NCRS 2018), the soils on the subject property area were mapped as 158 Willapa silt loam and 159 Willapa silt loam. 158 & 159 Willapa silt loam are moderately well drained.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Geotech report states they "did not observe soil conditions with the proposed development that would be considered highly susceptible to soil erosion".

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Fill will be from onsite cut and movement of current soil. Cut and fill is expected to balance and no additional fill is to be brought in. Road gravel will come from Naselle Rock and or Hawk Rock, local sources.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

Areas that will be stripped of vegetation during construction may have potential for erosion. In accordance with the Geotech report proposed erosion control measures shall be considered in an event of such erosion. Please see section B.h in SEPA application for additional details. Contains but is not limited to the following:

- Striping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion.
- Minimize cut and fill operations
- Minimize time in which soils will be exposed
- Use of stabilization measures of mulch or other materials to prevent surface water damage

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

In the finality of the proposed project, only the 600 SqFt Bathhouse will be 100% impervious which is 0.6% of the total proposed site. All other roads and new campsites will be semi-pervious-impervious surfaces. Gravel roads will cover 15,000 SqFt created by 7 inches of 3 inch rock and 3 inches of ¾ Mius - 1 ½ Mius aggregate. RV sites Pads will cover 15,000 SqFt and will be created by 7-8 inches of ¾ Mius - 1 ½ Mius aggregate. All together the altered surfaces are estimated at 30,600 SqFt. Roads and RV pads will be created by ¾ inch Mius or 1 ½ Mius crushed aggregate with at least 7% passing No 200 Sieve. Said aggregate was suggested by Geotech engineers.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

We will be implementing strategies for clearing and grading suggested in the Geotech report to aid in the reduction of erosion to the area. If erosion at the site is observed during construction it will be minimized by implementing the project erosion control plan. Which includes judicious use of straw wattles, fiber rolls, and/or silt fences. Other measures found in the Geotech report under section 4.3 Erosion Control Measures will be implemented as needed such as but not limited to the following:

-Striping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion.

-Minimize cut and fill operations

-Minimize time in which soils will be exposed

-Use of stabilization measures of mulch or other materials to prevent surface water damage

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Short-term in Phase 1-3: (2-4 weeks) air emissions from equipment exhaust, dust, other development activities and wood smoke due to minimal burning of limbs and debris.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Off-site sources of emissions and odors may be produced from additional campers and campfires from new campsites. Approximately 46% additional to current sources of emissions.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Construction impacts will not be significant and can be controlled by trying to limit the usage of construction equipment, controlling dust with water on roads and truck wheels as needed and use of any other reasonable means of controlling air pollution.

3. Water

a. Surface:

1. **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

   Yes, the Willapa Bay.

2. **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

   Yes. Minimal work will be done and will only be performed adjacent to the wetlands buffer and shoreline buffer. The entire project has been sited outside of all required buffers. See Attached Plans

3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

   None. Work will only be performed outside the 50-foot wetlands buffer.

4. **Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

   No water withdrawals or diversions will take place.

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   Not to our knowledge.

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   No, a large On-Site Septic will be installed to serve the campsites and bathhouse. There will be no discharge of waste materials to surface waters.

b. Ground:

Find help answering ground water questions[1]

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.**

   No, public water mains will be installed to serve the additional campsites and a bathhouse. No groundwater will be withdrawn or discharged.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

   The additional new septic system will service 23 new campsites, a bathhouse and 15 sites from the original campground. This septic system will be located within the existing campground footprint and will not create additional discharge into the proposed build site. However, the new additions to the campground, in accordance with Washington State Campground Licensing, will create an estimated 45 gallons per day per campsite and 195 gallons per bathhouse. The new septic system will be engineered with large holding tanks for solid waste and effluents and a drain field that will discharge no more than 1,950 gallons of wastewater per day.

   Septic system design will be performed by A+ Design and approved by Pacific County and Washington State.

c. Water Runoff (including stormwater):

1. **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

   Stormwater and other runoff will continue to be directed to the culvert on the Northeast of the proposed build site. Which directs water under Ranta Road. This is congruent with how the stormwater and other runoff currently flow. The water flow will be evaluated and monitored as needed.

2. **Could waste materials enter ground or surface waters? If so, generally describe.**

No. Additional campsites are designed for RV campers which are self-contained and will deposit all waste materials into appropriate septic risers which then enter a sealed septic tank and system.

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[1] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

3. **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

The pattern of drainage is unlikely to be affected. The added surfaces will be pervious - semi-pervious except for a bathhouse. See attached plans

d. **Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

Continuation of monitoring and evaluation will be conducted. Proposed is not expected to create a change in current water runoff. To help ensure surface/storm water discharge is not directed towards the shore line slope and or wetlands during construction the site will be lined by silt fencing. Straw and/or mulch will be on hand for stabilization measures as necessary. At the shore line slope there will be a vegetation buffer of approximately 45 feet from the proposed construction site to said slope. Striping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize such impacts.

4. Plants

Find help answering plants questions

a. **Check the types of vegetation found on the site:**

X **deciduous tree: alder, maple, aspen, other**

X **evergreen tree: fir, cedar, pine, other**

☐ **shrubs**

X **grass**

☐ **pasture**

☐ **crop or grain**

☐ **orchards, vineyards, or other permanent crops.**

☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**

☐ **water plants: water lily, eelgrass, milfoil, other**

☐ **other types of vegetation**

deciduous tree: alder, maple, aspen, other and evergreen tree: fir, cedar, pine, other, shrubs, grass, wet soil plants and other.

b. **What kind and amount of vegetation will be removed or altered?**

We would like to retain as many trees and vegetation as possible. The current campground is nestled in the woods surrounded by pine/fir, alder and other species that we would like to mimic in the new proposed site. In construction trees and vegetation will be removed to build an access road and install underground utilities. Roughly 60% of trees and vegetation, in the undeveloped 4 acres attached to the current campground, will remain after the project is completed.

c. **List threatened and endangered species known to be on or near the site.**

No known species on site.

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.**

Working to preserve as much vegetation and native plants as possible. A mitigation plan is proposed to restore the existing impacts. Landscaping will be as needed once the project is complete.

e. **List all noxious weeds and invasive species known to be on or near the site.**

None known.

5. Animals

Find help answering animal questions[2]

a. **List any birds and other animals that have been observed on or near the site or are known to be on or near the site.**

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:**
- **Mammals: deer, bear, elk, beaver, other:**
- **Fish: bass, salmon, trout, herring, shellfish, other:**

Songbirds and Deer

b. **List any threatened and endangered species known to be on or near the site.**

None known onsite. In the greater area, Northern Spotted Owl and shorebirds.

c. **Is the site part of a migration route? If so, explain.**

Western Washington is in the migration path of a wide variety of non-tropical songbirds and waterfowl. Including many species of geese.

d. **Proposed measures to preserve or enhance wildlife, if any.**

None at this time. Minimal impact design congruent with the natural environment.

e. **List any invasive animal species known to be on or near the site.**

None known

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2 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals

6. Energy and natural resources

Find help answering energy and natural resource questions[3]

a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

Electric to be provided by Pacific PUD. Be used to supply power and water to campsites and the bathhouse.

b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No. All utilities are underground

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.**

Energy conservation will be conducted by metering seasonal sites. In additio, RVs often come equipped with solar panels to help reduce the overall energy consumption. The bathhouse will be equipped with motion-detecting lights and on-demand hot water system.

7. Environmental health

Health Find help with answering environmental health questions[4]

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.**

There are no known health hazards that could occur due to the proposed.

1. **Describe any known or possible contamination at the site from present or past uses.**

   Unlikely but possible runoff from trailers or vehicles.

2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

   None

3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

   None

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[3] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou

[4] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health

4. **Describe special emergency services that might be required.**

   No additional services are known due to health hazards or toxic waste. Standard services from Fire, EMS and Police may be marginally increased.

5. **Proposed measures to reduce or control environmental health hazards, if any.**

   A septic system in place to manage effluent and other special measures are not anticipated.

b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

   The primary source of "noise" would be from the adjacent road from busses and large delivery trucks.

2. **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?**

   Short Term: During the construction time frame only (Early Fall and Late Spring) Construction noise such as gravel trucks, mini excavators, skid-steers and other like equipment will run during daylight hours in accordance with local noise ordinances.

   Long Term: Associated with roughly 30% additional use to the current campground includes but not limited to additional RV and passenger vehicle traffic on local roads. An increase of other noises, similar to current noise from existing campground, including but not limited to people's enjoyment, laughing, kids playing, and other social noise types.

3. **Proposed measures to reduce or control noise impacts, if any:**

   Current campground and new addition will continue to maintain quiet hours in accordance with local ordinances. After construction is complete we will continue to maintain vegetation along neighboring properties.

8. Land and shoreline use

Find help answering land and shoreline us questions[5]

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

   Current adjacent properties are single-family residential. The proposed property improvement will not affect adjacent land use.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have**

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5 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

None to our knowledge

1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

   Not to our knowledge

c. **Describe any structures on the site.**

   No current structures on the site

d. **Will any structures be demolished? If so, what?**

   No structures will be demolished

e. **What is the current zoning classification of the site?**

   The current zoning classification is Rural Lands

f. **What is the current comprehensive plan designation of the site?**

   The current comprehensive plan designation is General Rural

g. **If applicable, what is the current shoreline master program designation of the site?**

   Shoreline Residential

h. **Has any part of the site been classified as a critical area by the city or county? If so, specify.**

   Wetland Onsite and shoreline have been identified

i. **Approximately how many people would reside or work in the completed project?**

   The project is for temporary stays in campsites and possible seasonally stays only. Possible additional employment opportunities may become available but are not known yet.

j. **Approximately how many people would the completed project displace?**

   None

k. **Proposed measures to avoid or reduce displacement impacts, if any.**

   None necessary

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.**

   Continuation of working with and in accordance to Pacific County Development and Washington State Regulations. CAO and SMP reviews by Pacific County as well as the Department of Ecology.

m. **Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:**

None

9. Housing

Find help answering housing questions[6]

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

None. 23 new Campsites for short term rentals only.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

None

c. **Proposed measures to reduce or control housing impacts, if any:**

None known

10. Aesthetics

Find help answering aesthetics questions[7]

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The Bathhouse will be the only structure being added to the proposed site. Bathhouse plans are included in application and would be a max of 16 feet tall at the peak.

b. **What views in the immediate vicinity would be altered or obstructed?**

No views would be altered or obstructed outside the current campground.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

The Bathhouse plans include using materials and exterior design in which encompasses the wilderness around it adding local vegetation and landscaping after construction is complete will allow for the new building to blend into the existing landscape.

11. Light and glare

Find help answering light and glare questions[8]

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

Light and or glare may occur from the lighting of the small bathhouse building, additional vehicles traffic and Recreational Vehicles onsite. The additional light would likely occur between dusk and 10 PM.

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6 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing

7 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics

8 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

b. Could light or glare from the finished project be a safety hazard or interfere with views?

The Light or glare would not create any known safety hazard or interfere with views.

c. What existing off-site sources of light or glare may affect your proposal?

None known

d. Proposed measures to reduce or control light and glare impacts, if any:

Building lighting will be installed in a manner that directs the lights downward to help reduce the impact of the light. The lights will also be pointed towards the interior of the property to keep them to minimal interference. Lights from additional traffic onsite will be monitored and continued maintenance of natural vegetation along the perimeter will be upkeep to assist in reduction.

12. Recreation

Find help answering recreation questions

a. What designated and informal recreational opportunities are in the immediate vicinity?

Camping alone is a main recreational enjoyment activity of the local outdoors. In addition visitors will also have access to beach combing, fishing, boathing, hunting, crabbing, clam digging, bird watching, hiking and other outdoor enjoyment activities.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No. The proposed will enhance these activities.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Additional camping and use of property and facilities will create more opportunities for local recreation.

13. Historic and cultural preservation

Find help answering historic and cultural preservation questions[9]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

None known

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

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9 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p

None known

c. **Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

The Washington State System for Architectural and Archaeological was used to assess the impacts on and near the project. No know sites were found.

d. **Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

Mitigation of existing impacts on the wetlands and project minimization in order to avoid buffer or direct impacts to critical areas and shoreline.

14. Transportation

Find help with answering transportation questions[10]

a. **Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**

This site is accessed from Bay Center Road South of 455 Bay Center Road. (See site plans)

b. **Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

Public transit is supplied by Pacific Transit, a public bus system. The nearest public transit stop is located at Skyler's Restaurant on the corner of Bay Center Road and Dike Road. Approximately 0.5 miles from the site.

c. **Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

None Known

d. **Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

No it will not.

e. **How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

Said project will increase the campground visitation by roughly 46%. In 2021, 2022 and 2023 the total incoming campers averaged 2,524 per year. This would suggest that the

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10 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

vehicular traffic generated from the new site build would also increase by 46%. 1161.04 additional campers checking in per year. Multiply the added check-in number by 4 to accommodate an additional trip to town 4644.16 trips per year. Divide by 365 days adds roughly 12.72 trips per day.

The peak volumes would occur between the end of May and the end of September. The main road traffic increase times would be between check-in and check-out times of 12 PM and 5 PM.

f. **Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

None known

g. **Proposed measures to reduce or control transportation impacts, if any:**

None are proposed at this time

15. Public services

Find help answering public service questions[11]

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

The proposed project is expected to create a marginal impact on public services due to the increase in visitors to the local area. Including but not limited to fire and police protection. Historically the campground has had fire and/or police protection services respond roughly 1-3 times per year. These are short-term campsites and will not impact public transport, health care or schools.

Proposed measures to reduce or control direct impacts on public services, if any.

Campground staff will undergo safety training including CPR and First Aid to assist with minor injuries to help reduce the need for first responders. Quiet times and staff patrol will be enforced nightly for campers and campsites to aid in the prevention of police protection. No other public services are impacted at this time.

16. Utilities

Find help answering utilities questions[12]

a. **Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:**

None

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11 https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services

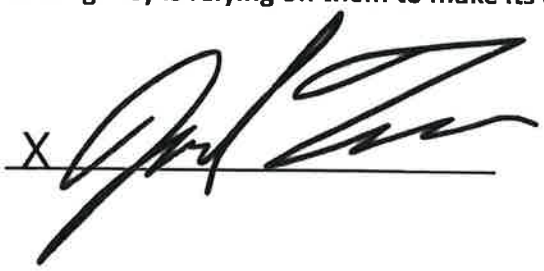
12 https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities

b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

C. Signature

Find help about who should sign[13]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.



Type name of signee:

Position and agency/organization:

Date submitted:

D. Supplemental sheet for nonproject actions

Find help for the nonproject actions worksheet[14]

Do not use this section for project actions.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

   - **Proposed measures to avoid or reduce such increases are:**

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13 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature

14 https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-d-non-project-actions

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

   - **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

3. **How would the proposal be likely to deplete energy or natural resources?**

   - **Proposed measures to protect or conserve energy and natural resources are:**

4. **How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?**

   - **Proposed measures to protect such resources or to avoid or reduce impacts are:**

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

   - **Proposed measures to avoid or reduce shoreline and land use impacts are:**

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

   - **Proposed measures to reduce or respond to such demand(s) are:**

7. **Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

BAY CENTER / WILLAPA BAY KOA

KAMPGROUND DEVELOPMENT PLAN - SITE PLAN
FRANCHISE NUMBER: 47121

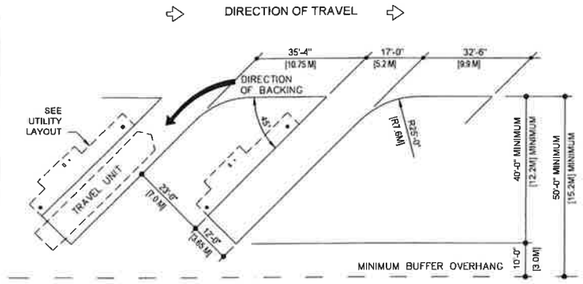
KAMPGROUNDS OF AMERICA, INC. BILLINGS, MONTANA

DATE:
06/25/2024
REVISION:
REV.
DRAWN BY:
CHRIS

SCALE:
1" = 50

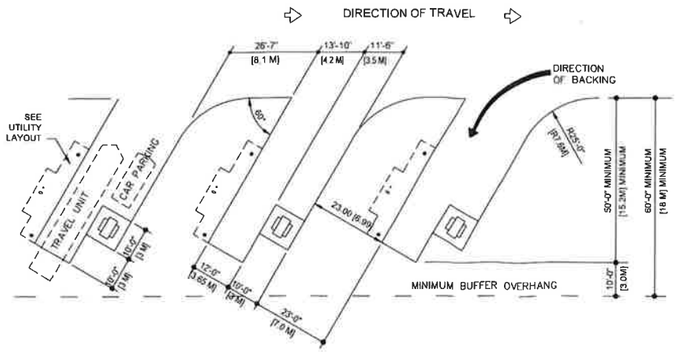
K01

1 OF 4



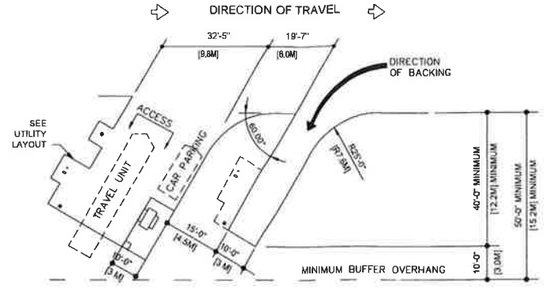
REVERSE BACK-IN SITE 12' + 23' - 45°

SCALE 1" = 20'-0"
OCTOBER 2016



VEHICLE/RV REVERSE BACK-IN SITE 12' + 23' - 60°

SCALE: 1" = 20'-0"
OCTOBER 2016



ACCESSIBLE VEHICLE/RV REVERSE BACK-IN SITE - 60°

SCALE 1" = 20'-0"
MARCH 2011

BACK-IN SITE 12' + 23' - 60°

SCALE: 1" = 20'-0"
OCTOBER 2016

NOTE USABLE LENGTH OF TRAVEL UNIT SPACE 60'-0" [18.3 M]

12+23 50 FT - REVERSE PULL-THROUGH SITE - 45°

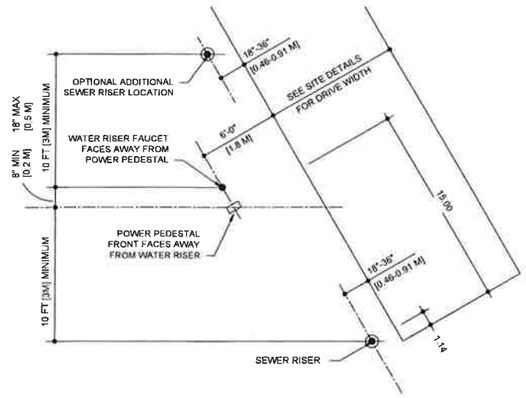
SCALE 1" = 20'-0"
MARCH 2011

BAY CENTER / WILLAPA BAY KOA
KAMPGROUND DEVELOPMENT PLAN - DETAILS
FRANCHISE NUMBER: 47121
KAMPGROUNDS OF AMERICA, INC. BILLINGS, MONTANA

DATE:
06/25/2024
REVISION:
REV.
DRAWN BY:
CHRIS

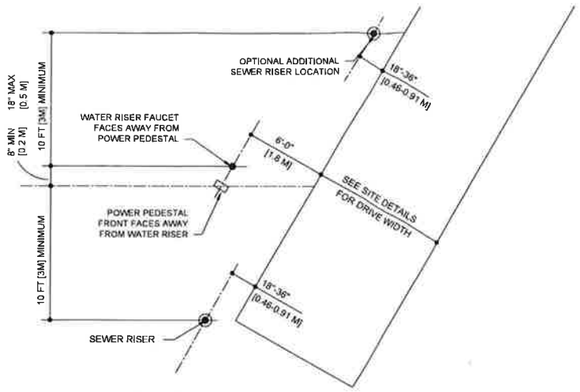
SCALE:
SEE DETAILS

K03



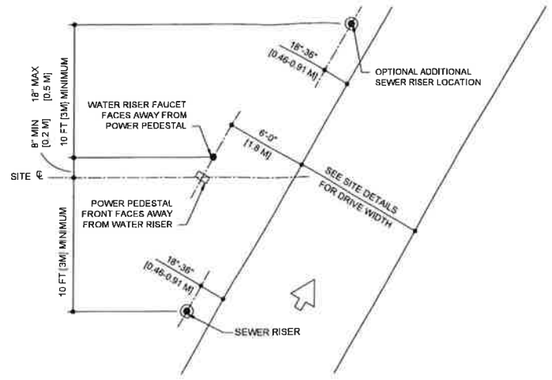
BACK-IN SITE UTILITY LAYOUT DETAIL

SCALE: 1" = 5'-0"
MARCH 2011



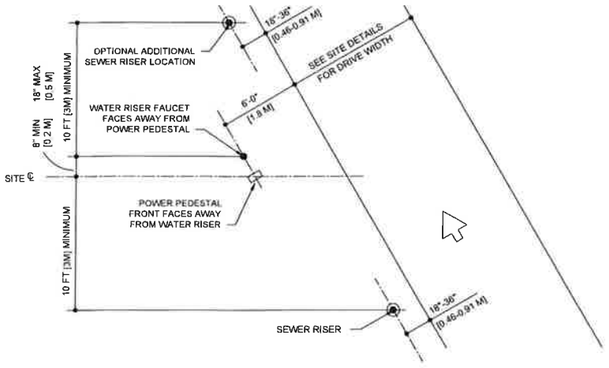
REVERSE BACK-IN SITE UTILITY LAYOUT DETAIL

SCALE: 1" = 5'-0"
MARCH 2011



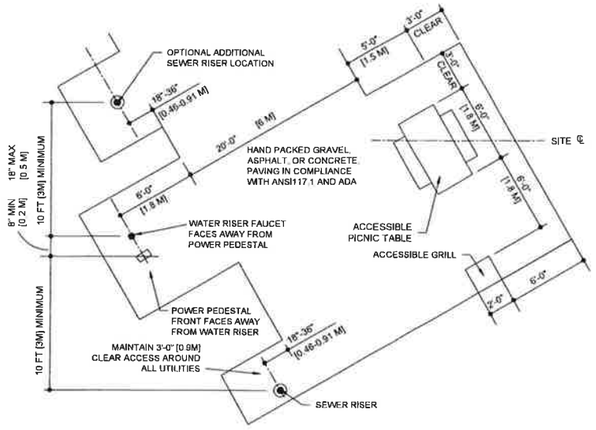
STANDARD PULL THROUGH SITE UTILITY LAYOUT DETAIL

SCALE: 1" = 5'-0"
MARCH 2011



REVERSE PULL THROUGH SITE UTILITY LAYOUT DETAIL

SCALE: 1" = 5'-0"
MARCH 2011



ACCESSIBLE BACK-IN SITE UTILITY LAYOUT DETAIL

SCALE: 1" = 5'-0"
MARCH 2011

BAY CENTER / WILLAPA BAY KOA
KAMPGROUND DEVELOPMENT PLAN - DETAILS
FRANCHISE NUMBER: 47121

KAMPGROUNDS OF AMERICA, INC. BILLINGS, MONTANA

DATE:
06/25/2024
REVISION:
REV.
DRAWN BY:
CHRIS

SCALE:
SEE DETAILS

K04

Geologic Hazard and Geotechnical Engineering Report

Proposed Expansion
Bay Center/Willapa Bay KOA
457 Bay Center Road
South Bend, Washington 98586
Pacific County Parcel No.13100834109

August 5, 2024

Prepared for:

4Time, LLC
Mr. Joel Fodor
Bay Center/Willapa Bay KOA Campground
457 Bay Center Road, South Bend, Washington 98586
Email: baycenterjoel@gmail.com

Prepared by:

EVREN NORTHWEST INC.
environmental natural resource consultants
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P.O. Box 14488, Portland, Oregon 97293
T. 503-452-5561 / E. ENW@EVREN-NW.COM

Project No. 1941-24001-01

Geologic Hazard and Geotechnical Engineering Report

Proposed Expansion
Bay Center KOA
457 Bay Center Road
South Bend, Washington 98586
Pacific County Parcel No. 13100834109

Prepared for:

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By:

EVREN NORTHWEST INC
environmental natural resource consultants

CYNTHIA L. HOVIND
STATE OF WASHINGTON
34806
REGISTERED
PROFESSIONAL ENGINEER

8/5/2024

Cynthia L Hovind, PE GE, Senior Geotechnical Engineer

State of Washington
Engineering Geologist
2978
Licensed Geologist

BENJAMIN L COOK 8/5/2024

Benjamin L. Cook, CEG, LEG, Senior Engineering Geologist

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Bay Center KOA
457 Bay Center Road
South Bend, Washington 98586
Pacific County Parcel No. 13100834109

1.0 INTRODUCTION

EVREN Northwest, Inc. (ENW) is pleased to present our geologic hazard assessment and geotechnical engineering report for the referenced property located at 457 Bay Center Road, in South Bend, Washington (see Figures 1 and 2). This report has been prepared in accordance with Pacific County Zoning and Land Development Ordinance 193: Critical Areas and Resource Land, Section 8, Geologically Hazardous Areas, and standard engineering geology practices. This report is valid for a period of five (5) years from the date of site reconnaissance.

The assessment, along with the findings and recommendations, are limited to the subject property. This report was prepared and signed by a Certified Engineering Geologist and a Professional Geotechnical Engineer, both licensed in the State of Washington.

1.1 Purpose

The purpose of this study was to assess potential geologic hazards within the subject property, and to provide geotechnical recommendations for the proposed development.

1.2 Scope

ENW completed the following scope of work:

- Review of Washington State Department of Natural Resources (DNR) geologic hazard mapping.
- Review of Historical Aerial Photographs of the Vicinity of the Property.
- Geological/Geotechnical Field Investigation conducted on July 9, 2024.
- Geologic Hazard and Beachfront Erosion Hazard Assessment.
- Geotechnical Engineering Analyses.
- Preparation of this Geologic Hazard and Geotechnical Engineering Report.

1.3 Site Description

The referenced property is located at 457 Bay Center Road, in South Bend, Washington (see Figures 1 and 2). The 10-acre site is identified as Pacific County parcel number 13100834109 (see Figure 2). The referenced site is mapped in the SW 1/4 of Section 9, T13N, R10W, Willamette Meridian, in Pacific County, Washington (see Figure 1). The site longitude and latitude are 46.621587, -123.954638. The site is bordered by Bay Center Road to the east, by existing residential properties to the north, and south, and by Willapa Bay to the west. The site is accessed via a private entrance located at Bay Center Road. The property is roughly rectangular in shape with a mid-length of about 1,150 feet, running east to west, and mid-base width of 380 feet, running north to south. The eastern portion of the property is currently developed as a KOA Campground with several tent campsites, full-service RV campsites, four cabins, two yurts, and a local store (see Figures 2 through 4). Gravel drive areas extend through the campground. Underground utilities are present including storm, sanitary, power, water, and septic systems. The

central portion of the property contains a wetland area, and the western portion of the property is primarily undeveloped with the exception of walking paths extending through the area to the beachfront at Willapa Bay.

The topography within the property is primarily relatively level to very gently sloping to the west. The central portion of the site contains a topographic low point which defines the wetland boundary. A steep west-facing bluff is present extending down to the beachfront at Willapa Bay located approximately 1,500 feet to the west of Bay Center Road. Elevations within the property range from approximately 34 to 44 feet above mean sea level (AMSL NAVD 88). Elevations at the beachfront range from approximately 8 to 12 NAVD 88. The bluff slope height extending from the property to Willapa Bay ranges from approximately 28 to 34 feet vertically, with slope gradients ranging from approximately 1H:1V to nearly vertical in locations. Wooden steps have been constructed down the bluff at the northwestern corner of the property to provide access to the beach below (see Appendix C).

1.4 Project Description

ENW understands that the proposed development at the site will include expanding the existing KOA campground west. The expansion will include some clearing of vegetation, and construction of new gravel drives, 23 new RV campsites with full hookups, a mobile bath house, and new septic tanks with septic drain fields (see Figure 4).

Based on our review of preliminary site planning, field staking, and communication with the client, we understand that the expansion of RV campsites will extend to within approximately 45 feet of the top of the bluff on the western end of the property. We understand that a 50-foot shoreline vegetation clearing buffer will be maintained, as well as a 65-foot shoreline building buffer as measured from the ordinary high-water mark at the beachfront. We understand that development will not be conducted within the wetland area in the central portion of the property (see Figure 4). We anticipate that site grading associated with the proposed development will be limited to cuts and fills on the order of 6 feet or less, primarily consisting of placement of crushed aggregate RV pads and crushed aggregate drive surfaces, with the deepest excavations being conducted during excavation for septic systems. We understand that permanent structures, foundations, and rigid or flexible pavement will not be included as part of the expansion. Underground utilities and septic systems will be installed.

2.0 GEOLOGIC CONDITIONS

2.1 Vicinity Geology

The referenced site is located on the Bay Center Peninsula situated adjacent to Willapa Bay (see Figure 1). Willapa Bay is separated from the Pacific Ocean by Long Beach Peninsula. Willapa Bay is relatively shallow, and comprises approximately 120 square miles of surface area, making it the second largest riverine estuary on the Pacific coast of the United States.

2.2 Site Geology

According to our review of geologic mapping[1], the Bay Center Peninsula is largely comprised of Quaternary-aged (2.58 million years ago to present), unconsolidated bay fill and alluvium comprised of clay, silt, sand, and gravel (Qa); and marine terrace deposits consisting of beach sand and gravel, and ancient bay fill which represent ancient shorelines that were uplifted by large seismic events over the last several million years (Qt). The subject site is mapped as being underlain by marine terrace deposits (see Figure 5).

2.3 GEOTECHNICAL FIELD INVESTIGATION

On July 9, 2024, ENW completed a field investigation of the site to evaluate the surface conditions of the site and beachfront bluff adjacent Willapa Bay, and shallow subsurface conditions within the proposed development area. General observations related to the geology and geomorphic features of the subject site and surrounding area were conducted. In addition, two (2) shallow hand auger borings were advanced at the western limit of the proposed development area (designated HA-1 and HA-2, see Figures 3 and 4). The depths of the hand auger borings were 4 feet below ground surface (bgs).

2.3.1 Surface Conditions

The proposed development/expansion area is relatively level to gently sloping to west. The top of the bluff is located approximately 45 feet west of the proposed western limit of the expansion area. The proposed development area is currently undeveloped and heavily vegetated with large coniferous trees and dense understory vegetation. Walking paths extend into the area leading to the beachfront at Willapa Bay. A shallow seasonal drainage is present extending west from the wetland area across the central portion of the property to the top of bluff (see Figure 6). The majority of the bluff at the site is heavily vegetated with trees and understory vegetation; however, waves have cut away at the toe of the slope removing vegetation and exposing soils in the lower five to ten feet.

We observed the beachfront during low tide (see Appendix C). Undulating erosion patterns are visible across the extent of the bluff (see Figure 6). The erosion patterns appear to be a result of a combination of seasonal stormwater erosion and runoff from the site, as well as wave erosion at the beach level. Shallow earth slumps are visible along the property frontage in some locations, as well as along the bluff extending north and south of the property boundaries. Larger beachfront landslides are present along the beachfront bluff to the north and south of the site (see Figure 6).

Soil conditions exposed along the face of the beachfront bluff adjacent the site boundary were observed to consist of approximately five feet of medium dense to dense sandstone, overlain by an approximately five-foot-thick layer of weakly cemented sand and clam shells, overlain by approximately twenty to twenty-five feet of medium stiff, sandy clay. Erosion at the base of the bluff has resulted in near vertical slope gradients in some locations with minor undercutting noted. A thin layer of sand was observed on the beach. In general, the sandstone layer at the base of

[1] Preliminary Geologic Map of the South Bend Quadrangle, Pacific County, Washington, Open File Report, U.S. Geological Survey, Washington, Wagner, Holly C., 1967.

the bluff appeared to be relatively resistant to erosion and is likely subjected to regular wave energy during high tides and storm events. The layer of weakly cemented shells appeared to be susceptible to higher rates of erosion. The clayey soils exposed above the layer of shells are generally located above the ordinary high-water mark and appear to have a moderate susceptibility to erosion.

2.3.2 Subsurface Conditions

ENW encountered the following subsurface conditions in the hand auger borings:

Topsoil. Underlying the ground surface, approximately 12 inches of highly organic clayey (OL) Topsoil was encountered in hand auger borings. The Topsoil was brown, soft, and moist, and had varying amounts of organics and tree roots. Topsoil thickness will likely increase to as much as 36 inches in areas where trees are present.

Topsoil is not appropriate for foundation bearing subgrade or for use as Structural Fill. These materials shall be overexcavated to the approved subgrade depth and either stockpiled onsite in designated areas or removed from the property. Once the building is complete, the Topsoil can be reused as non-structural General Fill for areas of landscaping and vegetation.

Lean CLAY. Underlying the topsoil soils were observed to consist of native, brown, stiff to very stiff, moist to very moist, moderately plastic Lean CLAY (CL). The soil type extended to the maximum depth of exploration at the locations of our explorations.

2.3.3 Groundwater

Groundwater seepage was not encountered within the shallow hand auger borings (see Appendix B).

3.0 REVIEW OF POTENTIAL NATURAL HAZARDS

To assess the presence of potential geologic hazards at the site, ENW reviewed available geologic literature and mapping, the Washington State Department of Natural Resources (WaDNR) Geologic Information Portal tool, conducted surficial field reconnaissance and observation of the site, and conducted shallow subsurface exploration. ENW has conducted a review of the following potential geologic hazards at the site in accordance with the requirements of the Pacific County Zoning and Land Development Ordinance 193: Critical Areas and Resource Land, Section 8, Geologically Hazardous Areas. The results of our review are summarized below.

- Erosion Hazard Areas.
- Coastal Erosion Hazard Areas.
- Landslide Hazard Areas.
- Mine Hazard Areas.
- Seismic Hazard Areas.
- Tsunami Hazard Areas.

3.1 Erosion Hazard Areas

Pacific County defines erosion hazard areas as areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service Official Soil Survey Data as having a "severe" or "very severe" erosion hazard based on slope gradient and a soil erosion K Factor of 0.4 or greater. Based on our review of the Web Soil Survey database, the subject site has been identified as having a K Factor of 0.37, corresponding to a "moderate" erosion hazard (see Appendix A).

We understand that a 50-foot-wide shoreline vegetation clearing buffer will be maintained, as well as a 65-foot-wide shoreline building buffer as measured from the ordinary high-water mark at the beachfront (see Figure 4). During our site reconnaissance we did not observe soil conditions within the proposed development area that would be considered highly susceptible to soil erosion. In our opinion, the primary concern regarding erosion potential will occur during construction in areas that have been stripped of vegetation. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw wattles, fiber rolls, and silt fences. If used, these erosion control devices should remain in place throughout site preparation and construction.

3.2 Coastal Erosion Hazard Areas

Pacific County defines properties mapped in Zones V and VE in the digital Flood Insurance Rate Map (dFirm) as "high hazard" coastal erosion hazard areas. Based on our review of the dFrim database[2] the subject site has been mapped as being located in Zone AE, which indicates a low coastal erosion hazard with at least 1 percent annual chance of being flooded, but where wave heights are less than three feet.

To assess the coastal erosion hazard potential at the site, ENW reviewed available historical aerial photography, available LiDAR Imagery, and conducted field reconnaissance of the beachfront bluff located along the western margin of the property. Based on our observations, erosional features were observed to be present ranging from minor undercutting and gentle erosion to several feet of scour and incising of the slope face. The exposed surface of the bluff appeared weathered, and vegetation was established above the ordinary high-water mark. We did not observe evidence of recent sloughing or erosion. A low to moderate erosion potential is indicated based on the degree of erosion we observed within the property boundary.

Properties to the north and south of the site appear to have historically experienced a higher degree of erosion than at the location of the subject site with earth slumps being visible on the properties directly adjacent to the subject site. Rip rap revetments have been constructed at some of the properties along the shoreline to protect existing residential homes from coastal erosion concerns, and at those locations our review of historic erosion rates appear to indicate that the revetments have been effective at reducing coastal erosion rates.

[2] https://hazards-fema.maps.arcgis.com/apps/webappviewer

Based on our review of the site, the coastal erosion hazard at the subject site appears to range from low to moderate. We estimate an average coastal erosion rate of the beachfront bluff on the order of 2 to 10 inches per year. Based on our review of the proposed development plan (see Figure 4), we understand that the western limit of the RV site expansion will be located approximately 45 to 125 feet from the current location of the top of slope along the beachfront bluff. Considering the horizontal distance from the top of slope to the western location of the proposed RV pads, a period of approximately 50 years or greater is expected before erosion of the bluffs would result in recession to the proposed western margin of the expansion area.

Erosion rates may vary greatly from year to year depending on total rainfall and should be anticipated to increase during heavy seasonal storm events such as El Nino. Although the anticipated coastal erosion rates are considered to be low to moderate, it is possible that several feet of erosion may occur quickly during a strong seasonal storm in any given year. Stormwater runoff discharges from the site towards the beachfront bluff may result in channelized erosion along the slope face. Strong waves could undercut at the toe of the bluff and cause further slumping. Options for mitigating potential future bluff erosion with respect to the proposed development may include controlling and limiting stormwater discharge over the top of slope or relocating or abandoning the RV parking areas on the western side of the expansion.

3.3 Landslide Hazards Areas

Mass wasting includes all forms of down slope movement of soil and rock material under the influence of gravity. It includes everything from barely perceptible soil creep to catastrophic mud flows and landslides. Steep slopes, weak soil and rock strength, and the various effects of water on soil and rock are the primary controlling factors for mass wasting. The potential for mass wasting can be increased by adding weight to the top of a slope or excavating soil from the lower portion of a slope.

The WaDNR Geologic Information Portal tool indicates that the landslide hazard at the subject site is low. Based on our review of LiDAR imagery (see Figure 6), and our field reconnaissance however, shallow earth slump landslides appear to be present along the beachfront bluffs at the western margin of the property. During our site inspection we did not observe evidence of recent soil movement along the property frontage such as tension cracks, fresh exposed head scarps, or terraced deposits. The exposed surfaces of the head scarps/beachfront bluff face typically appeared weathered with vegetation reestablishing above a height of approximately 5 to 10 feet above the beach elevation.

Larger beachfront bluff landslides are present to the north and south of the site (see Figure 6). A landslide located to the north of the site measures approximately 800 feet north to south, and 100 feet east to west. A landslide to the south measures approximately 170 feet north to south, and 50 feet east to west. Head scarp heights appear to range from approximately 8 to 22 feet high. Property owners have constructed rip rap revetments along the toe of the beachfront bluff at several of the adjacent properties to slow erosion where landslides have occurred.

3.4 Mine Hazard Areas

The WaDNR Geologic Information Portal tool does not indicate the presence of historic mines at the subject site.

3.5 Earthquake Seismic Hazards

In the past three decades, geologists have determined that the Northwest is subject to infrequent, but very powerful (magnitude 9+ on the Richter Scale) subduction zone earthquakes on the offshore Cascadia Subduction Zone (CSZ) fault system. The most recent subduction zone earthquake known to have occurred in the Northwest was in January of 1700.

Geologists have determined that very large subduction zone earthquakes occur on a 300- to 500-year recurring basis, and that smaller, but still significant, subduction related earthquakes occur on a much more frequent basis.

3.5.1 Seismic Induced Slope Failure

The effect on slope stability in the project area is difficult to predict. As discussed above, landslide deposits are mapped north and south of the subject site, with smaller, shallow earth slumps being present at the property beachfront. The State has indicated that the landslide hazard is low at the site; however, the presence of landslides along the beachfront indicates a moderate to high likelihood of future slope failure in the site vicinity. The occurrence of a major subduction zone earthquake may increase the likelihood of mass wasting on the steeply sloping beachfront bluff portion of the site; however, it is difficult to predict what the overall impact will be.

3.5.2 Amplification of Ground Shaking

The subject site is within the area of the state where peak ground accelerations of 0.77g can inflict considerable damage in specially designed structures and great damage in ordinary structures during an earthquake occurring once in every 1,000 years. Earthquake shaking potential at the site and surrounding area is expected to be severe. At this time, we understand that permanent structures or foundations are not proposed as part of the KOA expansion. The development will primarily consist of constructing gravel parking pads for seasonal recreational vehicles. Amplification of ground shaking should be accounted for in the design of structures if they are proposed.

3.6 Tsunamis

Tsunamis are seismically generated sea waves that typically cause catastrophic flooding when they strike coastal areas. Major earthquakes that occur anywhere in the Pacific Basin have the potential to generate a tsunami that could impact the project area. However, the greatest threat is from an earthquake occurring along the Cascadian Subduction Zone (CSZ), located just offshore of the Pacific Northwest coastline. The magnitude of the earthquake and its resultant tsunami are primarily driven by the amount and geometry of the slip that takes place when the North American Plate snaps westward over the Juan de Fuca Plate during a CSZ event.

The WaDNR Geologic Information Portal tool indicates that the KOA campground and proposed expansion area are located outside of the tsunami hazard area; however, the beachfront area

below the campground is located is within the hazard zone. This model predicts that the subject site and KOA campground would not be inundated by a tsunami. It has been just over 300 years since the last CSZ event. Based on modeling by the State, the maximum wave elevation for peak wave high during a seismic event is 38 to 40 feet NAVD 88, which is lower than the site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations in this report are based on the information provided to us, results of the site investigation, and professional judgment. We have observed only a small portion of the pertinent soil and groundwater conditions of the site. The recommendations presented in this report assume that the soil conditions do not deviate appreciably for those encountered during our site visit. If site conditions are found to deviate, ENW shall be provided the opportunity to amend the recommendations presented in this report.

4.1 Conclusions

It is our opinion that the site is geotechnically sound for the proposed development. The proposed development consists of expansion of non-structural, seasonal, recreational, gravel vehicle parking and drive areas for the KOA, which is considered to be a low-risk development. The primary geotechnical concern associated with the proposed development is the potential for future erosion or landsliding along the beachfront bluff which could reduce the distance between the top of slope and the proposed RV parking areas.

4.2 Erosion Hazard

The western extent of the proposed development area will consist of seven gravel RV parking pads measuring approximately 40 feet deep accessed from the new loop road (see Figure 4). Structures and foundations are not proposed in this area, however underground utilities will be installed for the RV sites. Based on review of the proposed western limit of the expansion area, a minimum 1H:1V slope setback appears to have been planned as measured from the toe of the beachfront bluff. Considering the proposed development consists of seasonal recreational vehicle parking, it appears that the setback distance from the top of slope of the 35-foot-high beachfront bluff of 45 feet is currently adequate for the proposed campground expansion. We recommend that the property owners regularly monitor and assess the beachfront bluff area for signs of erosion. If severe erosion, sloughing, or slumping begins to occur at the beachfront, a geotechnical engineer or engineering geologist should be contacted to assess soil conditions and to provide additional recommendations. Options for mitigating potential future bluff erosion with respect to the proposed development may include controlling and limiting stormwater discharge over the top of slope or relocating or abandoning the RV parking areas on the western side of the expansion.

4.3 Erosion Control Measures

To reduce the potential for surface erosion in the proposed development area, the following measures shall be considered:

- Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one-time during construction.

- Development plans shall minimize cut or fill operations to prevent off-site impacts.
- Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development.
- Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical.
- Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary.
- Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching, seeding, planting, or armoring with rolled erosion control products, stone, or other similar methods.
- All drainage provisions shall be designed to adequately carry existing and potential surface runoff from the twenty-year frequency storm to suitable drainageways such as storm drains, natural watercourses, or drainage swales. In no case shall runoff be directed in such a way that it significantly decreases the stability of known landslides or areas identified as unstable slopes prone to earth movement, either by erosion or increase of groundwater pressure.
- Where drainage swales are used to divert surface waters, they shall be vegetated or protected as necessary to prevent offsite erosion and sediment transport.
- Erosion and sediment control measures may be required include, but are not limited to:
    - Energy absorbing devices to reduce runoff water velocity.
    - Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule.
    - Dispersal of water runoff from developed areas over large undisturbed areas.
- Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures.
- Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, site monitoring and clean-up activities.

4.4 Site Recommendations

4.4.1 Site Preparation Recommendations

ENW understands that the proposed development at the site will include expanding the existing KOA campground west towards the top of the beachfront bluff extending to Willapa Bay. The expansion will include some clearing of vegetation, and construction of new gravel drives, 23 new RV campsites with full hookups, a mobile bath house, and new septic tanks with septic drain fields (see Figure 4).

ENW recommends that the areas proposed for new gravel roadways and RV pads be stripped of existing topsoil and any related debris or root systems that may be encountered to expose firm, non-yielding, native soils. Depth of stripping of existing topsoil is estimated to average approximately 10 to 12 inches with stripping depths likely increasing to 36 inches or greater where trees are present. If soft soils or Undocumented Fill soils are encountered, then these materials shall be over-excavated, removed, and replaced with additional granular Structural Fill, as described below.

The stripped Topsoil material may be stockpiled onsite in an area that will not interfere with the site grading or hauled off site. The material may be used for Non-Structural General Fill in landscaped areas; however, **it is not appropriate** as Structural Fill.

4.4.2 Wet Weather or Wet Soil Construction

During the Wet Weather months, site grading may be challenging because the fine-grained soils are easily disturbed when wet. ENW recommends that 2 to 3 inches of ¾-inch rock be spread around the exposed soil to protect it from disturbance. Should subgrade surfaces become disturbed, then the soft soils shall be removed to firm native subgrade and replaced with compacted Structural Fill, as described below.

4.4.3 Excavation

ENW understands that proposed excavations will be limited to new gravel roadways, RV pads, underground utilities, septic tanks, and septic drain fields (see Figure 4). At this time, it is anticipated that the excavation depths may range from approximately 1 to 6 feet deep, depending on final design of the septic systems. Excavation is anticipated to expose stiff, native clayey soils.

The contractor shall be solely responsible for designing and constructing stable, temporary excavations, and should shore, slope, or bench the sides of the excavations as required to maintain stability. The contractor shall evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case shall slope height, inclination, or excavation depth, including, utility trench excavation depths, exceed those specified in local, state, and federal safety regulations. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926) or be shored. The existing native soils primarily classify as Type B Soil and temporary excavation side slope inclinations as steep as 1H:1V may be assumed for planning purposes. These cut slope inclinations are applicable to excavations above the water table only.

4.4.4 Structural Fill for Gravel Drive Areas

We understand that new drive areas will be constructed with crushed aggregate, and that asphaltic concrete paving will not be conducted. The material used for Structural Fill in the new drive areas shall consist of ¾"-minus, or 1½"-minus crushed aggregate with at least 7 percent passing No 200 sieve. The Structural Fill shall have little to no organics, ice, or other deleterious materials. The Structural Fill shall be placed in maximum 12-inch-thick lifts and compacted to 95 percent of the maximum dry density as determined by the Modified Proctor (ASTM D1557). At

the time of placement, moisture content of the Structural Fill shall be within 3 percent of the Optimum Moisture Content. Based on our site review, we recommend a minimum thickness of 8 inches of crushed aggregate for the proposed drive areas. Areas of soft subgrade soils should be over-excavated and replaced with additional crushed aggregate. Woven geotextile fabric consisting of Mirafi 500x or equivalent, may be placed on subgrade soils prior to placement of base rock if determined to be necessary.

5.0 LIMITATIONS

The scope of this report is limited to observations made during on-site work; interviews with knowledgeable sources; and review of readily available published and unpublished reports and literature. As a result, the conclusions are based on information supplied by others as well as interpretations by qualified parties. Conclusions and recommendations presented in this assessment were prepared in accordance with generally accepted professional geologic engineering principles and practices. We make no warranty, either express or implied.

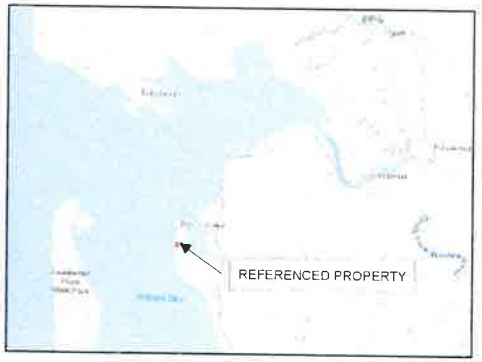
We have performed our services for this project in accordance with our agreement and understanding with the Client. This document and the information contained herein have been prepared solely for the use of the Client. We have performed this study under a limited scope of services per our agreement. It is possible, despite the use of reasonable care and interpretation that we may have failed to identify the presence of geological hazards other than those specifically mentioned in this assessment. We assume no responsibility for conditions that we did not specifically evaluate, or conditions that were not generally recognized at the time this report was prepared. This report is subject to review and should not be relied upon after a period of five (5) years.

FIGURES

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
D. SCULLY 7/17/2024	C. HOVIND 7/17/2024	L. GREEN 7/17/2024	1941-24001-01

LEGEND:

REFERENCED PROPERTY



NOTES:

1. BASE MAP DEVELOPED BY ESRI AND USGS
2. PROPERTY BOUNDARY PROVIDED BY PACIFIC COUNTY

N

EVREN NORTHWEST INC.
environmental natural resource consultants

FIGURE 1
SITE VICINITY MAP

BAY CENTER KOA PROPOSED EXPANSION
457 BAY CENTER ROAD
SOUTH BEND, WASHINGTON

LEGEND:
REFERENCED PROPERTY
NOTES:
1. AERIAL IMAGERY DEVELOPED BY ESRI
2. PROPERTY BOUNDARY PROVIDED BY PACIFIC COUNTY
EVREN NORTHWEST
FIGURE 2
AERIAL PHOTO MAP
BAY CENTER KOA PROPOSED EXPANSION
457 BAY CENTER ROAD
SOUTH BEND, WASHINGTON
BAY CENTER ROAD
13100834109
0 150 300 600
Feet
DRAWN BY
D. SCULLY 8/5/2024
CHECKED BY
C. HOVIND 8/5/2024
APPROVED BY
L. GREEN 8/5/2024
DRAWING NUMBER 1941-24001-01

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
D. SCULLY 7/17/2024	C. HOVIND 7/17/2024	L. GREEN 7/17/2024	1941-24001-01

LEGEND:

- REFERENCED PROPERTY
- EXISTING CAMPGROUND
- HAND AUGER
- CONTOUR, 2 FEET
- HEAD SCARP (INFERRED)
- TOP OF SLOPE - EROSIONAL EARTH SLUMP
- EPHEMERAL STREAM

NOTES:

1. BASE MAP DEVELOPED BY ESRI AND ENW FIELD NOTES.
2. PROPERTY BOUNDARY PROVIDED BY PACIFIC COUNTY.
3. CONTOUR LAYER MODELED FROM WASHINGTON STATE DNR LIDAR DATA (2019).
4. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
5. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.

N

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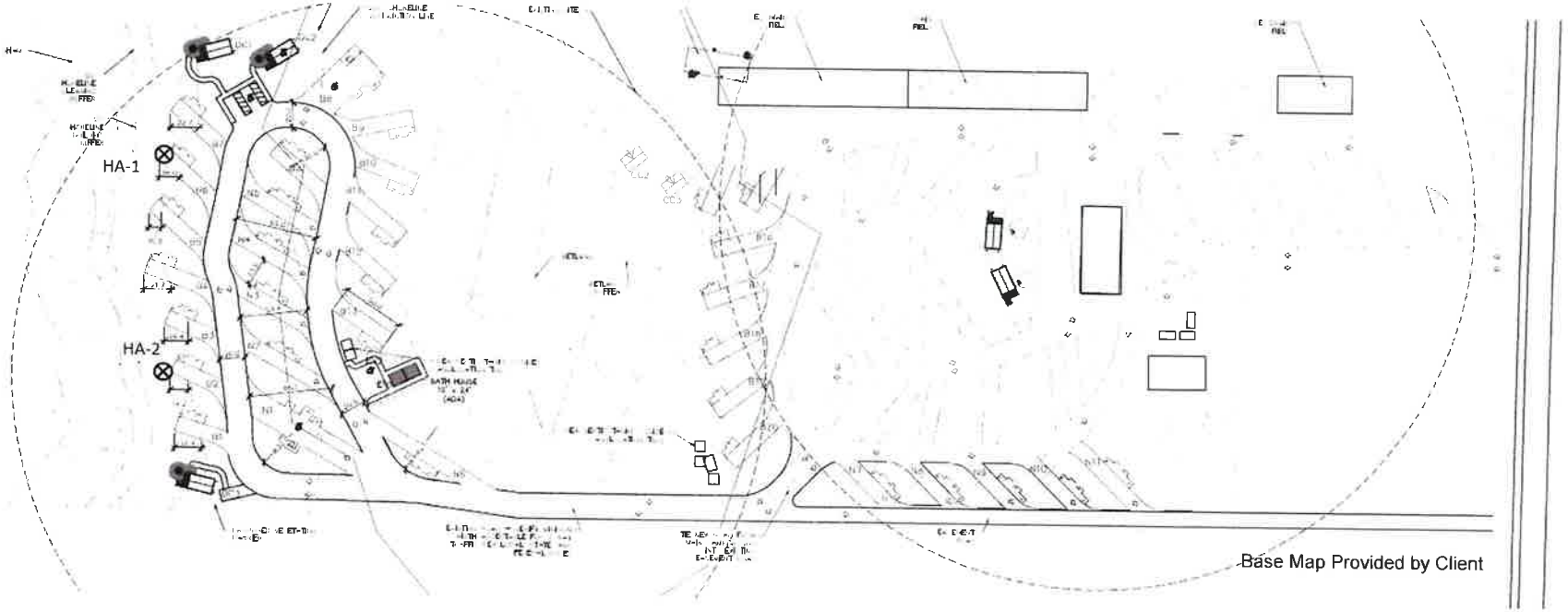
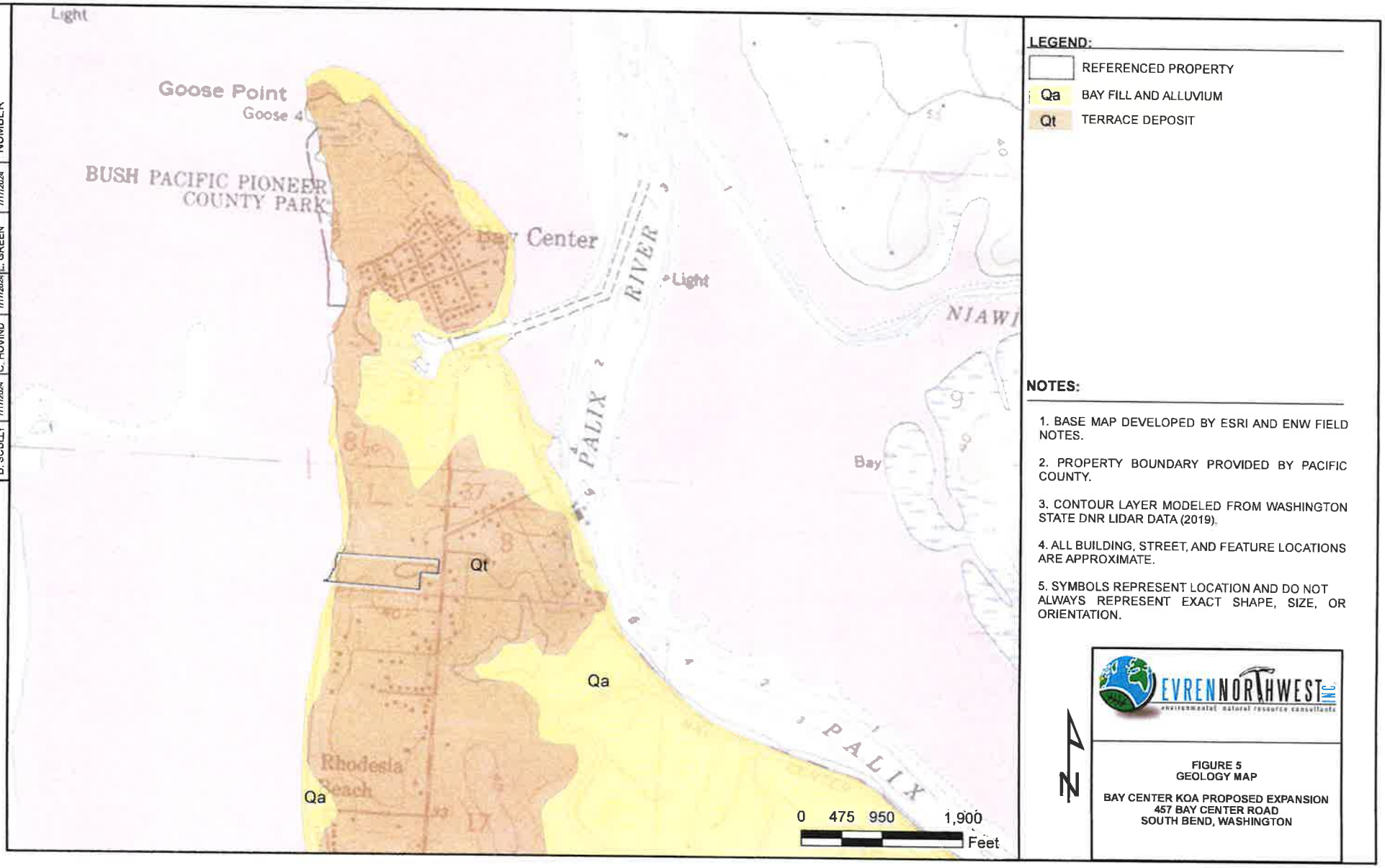
environmental natural resource consultants

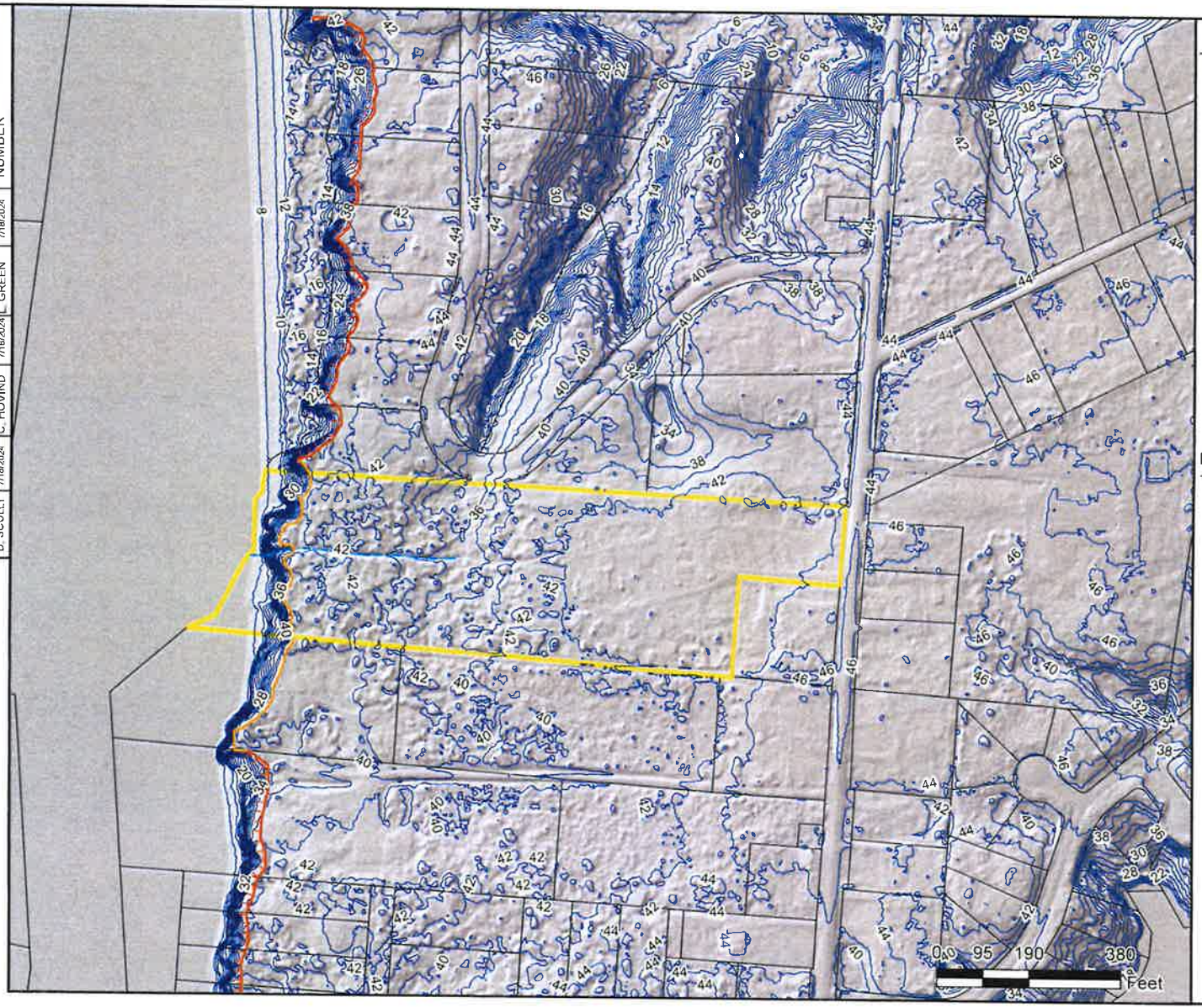
FIGURE 3
EXISTING SITE MAP

BAY CENTER KOA PROPOSED EXPANSION
457 BAY CENTER ROAD
SOUTH BEND, WASHINGTON



EVREN NORTHWEST	Date Drawn: 7/22/2024 Prepared By: KOA Checked By: CLH Approved By: LDG	KOA Proposed Expansion 457 Bay Center Road South Bend, Washington	**Proposed Development Plan**	Project No. 1941-24001-01 Figure No. **4**


Light
Goose Point
Goose 4
BUSH PACIFIC PIONEER COUNTY PARK
Bay Center
RIVER
Light
NIAWI
PALIX
Bay
Qt
Qa
Rhodesia Beach
Qa
PALIX
0 475 950 1,900
Feet
LEGEND:
REFERENCED PROPERTY
Qa BAY FILL AND ALLUVIUM
Qt TERRACE DEPOSIT
NOTES:
1. BASE MAP DEVELOPED BY ESRI AND ENW FIELD NOTES.
2. PROPERTY BOUNDARY PROVIDED BY PACIFIC COUNTY.
3. CONTOUR LAYER MODELED FROM WASHINGTON STATE DNR LIDAR DATA (2019).
4. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
5. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.
N
EVREN NORTHWEST INC
environmental natural resource consultants
FIGURE 5
GEOLOGY MAP
BAY CENTER KOA PROPOSED EXPANSION
457 BAY CENTER ROAD
SOUTH BEND, WASHINGTON
DRAWN BY D. SCULLY 7/17/2024
CHECKED BY C. HOVIND 7/17/2024
APPROVED BY L. GREEN 7/17/2024
DRAWING NUMBER 1941-24001-01



DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
D. SCULLY 7/18/2024	C. HOVIND 7/18/2024	L. GREEN 7/18/2024	1941-24001-01

LEGEND:

- REFERENCED PROPERTY
- TAX LOT
- CONTOUR, 2 FEET
- SCARP (INFERRED)
- TOP OF BLUFF
- EPHEMERAL STREAM

NOTES:

1. BASE MAP DEVELOPED BY ESRI AND ENW FIELD NOTES.
2. TAX LOT LINE LAYER PROVIDED BY PACIFIC COUNTY.
3. CONTOUR AND HILLSHADE LAYER MODELED FROM WASHINGTON STATE DNR LIDAR DATA (2019).
4. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
5. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR

N

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environmental natural resource consultants

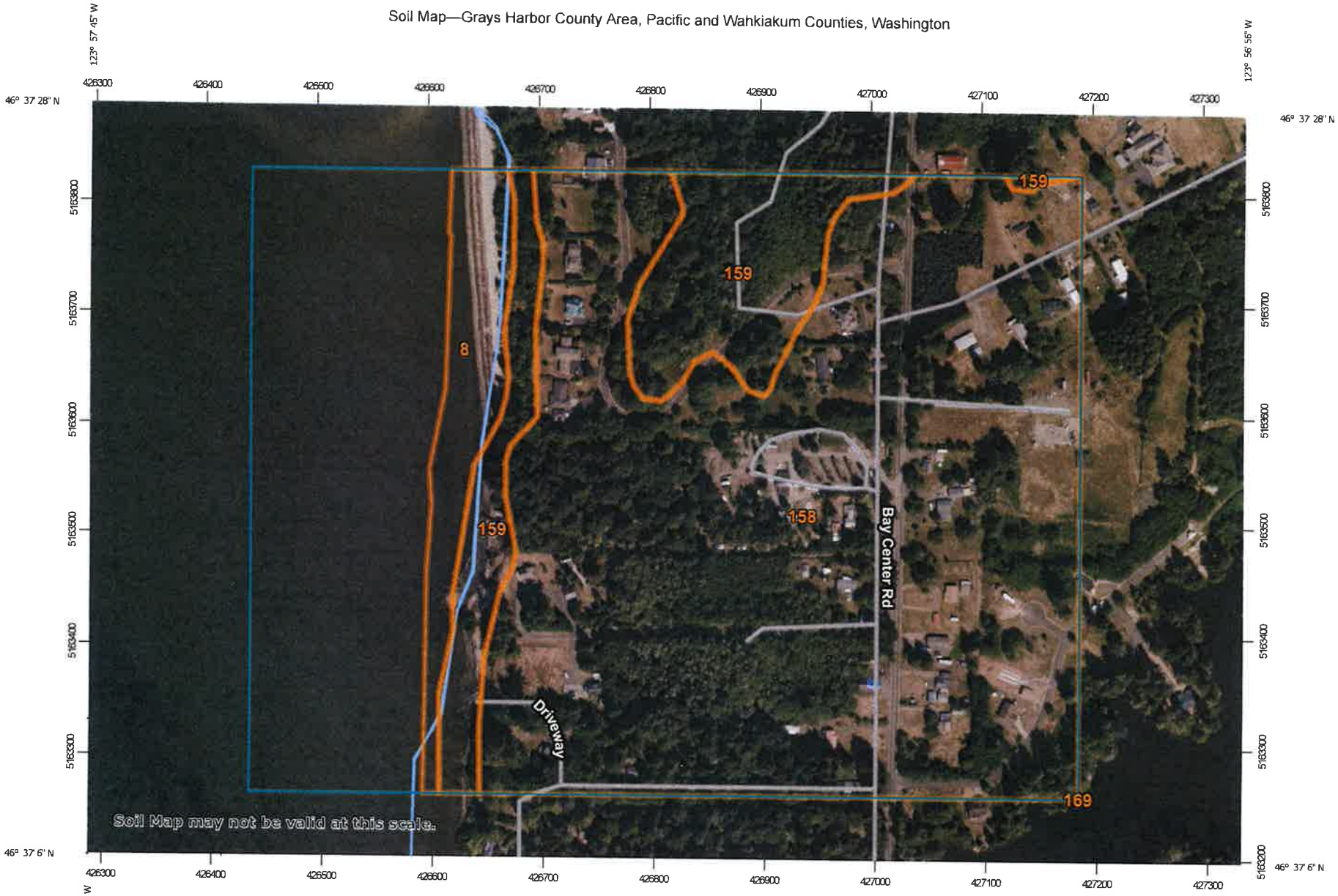
FIGURE 6
LIDAR MAP

BAY CENTER KOA PROPOSED EXPANSION
457 BAY CENTER ROAD
SOUTH BEND, WASHINGTON

APPENDIX A

WEB SOIL SURVEY

Soil Map—Grays Harbor County Area, Pacific and Wahkiakum Counties, Washington



Map Scale: 1:4,770 if printed on A landscape (11" x 8.5") sheet.

N

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Grays Harbor County Area, Pacific and Wahkiakum Counties, Washington
Survey Area Data: Version 22, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

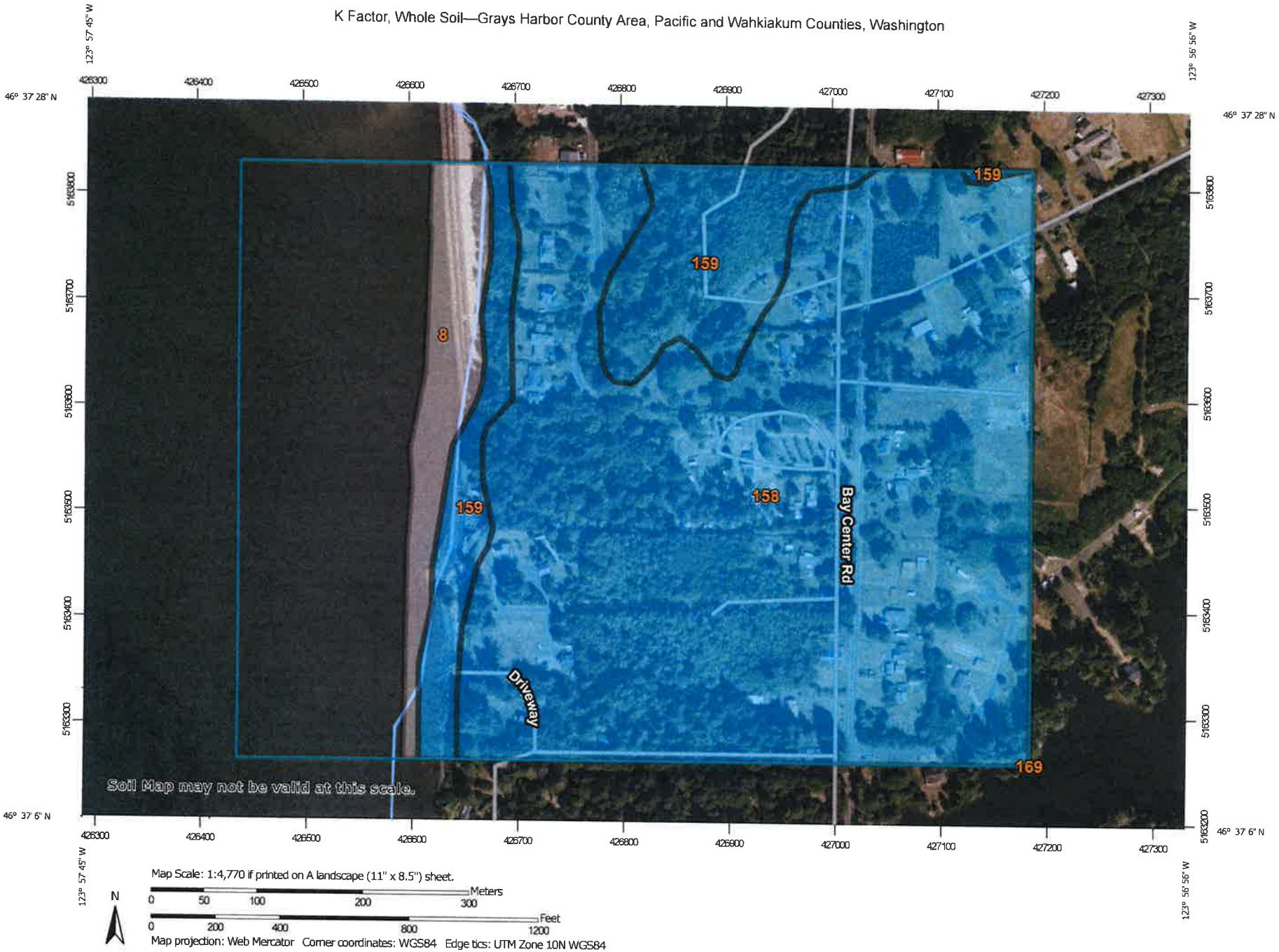
Date(s) aerial images were photographed: Sep 8, 2022—Sep 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Beaches	5.3	5.0%
158	Willapa silt loam, cool, 1 to 8 percent slopes	64.2	61.4%
159	Willapa silt loam, cool, 8 to 30 percent slopes	11.8	11.3%
169	Water	0.0	0.0%
Totals for Area of Interest		**104.7**	**100.0%**

K Factor, Whole Soil—Grays Harbor County Area, Pacific and Wahkiakum Counties, Washington



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Grays Harbor County Area, Pacific and Wahkiakum Counties, Washington
Survey Area Data: Version 22, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 8, 2022—Sep 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Beaches		5.3	5.0%
158	Willapa silt loam, cool, 1 to 8 percent slopes	.37	64.2	61.4%
159	Willapa silt loam, cool, 8 to 30 percent slopes	.37	11.8	11.3%
169	Water		0.0	0.0%
Totals for Area of Interest			**104.7**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

APPENDIX B

HAND AUGER BORING LOGS

EVREN Northwest, Inc.

Boring Log No. HA-1
KOA Proposed Expansion

Location: 457 Bay Center Road, South Bend, Washington			**WO#: 1941-24001-01**
Method: Hand Auger			**Ground EL: N/A**
Drill Rig:		**Hammer weight (lb):**	**Hole depth (ft): 5**
Sampler:	**Drop (in):**	**G.W.T. @ Drilling (ft): N/A**	**Sampled by: DMS**
Driller: ENW		**Drill Date: 7/9/2024**	**Logged by: DMS**

Depth	Strata	GWT	No.	Type	Blows Per 6"	USCS	Soil Description	■ SPT. blow/ft ○ Moisture % (0 20 40 60)	Notes
0		GWT not encountered				TP	Organic Rich Topsoil (TP) Dark brown, moist, some silt, fine-grained sand, and root.		
1						ML	Sandy Silt (ML) Brown, moist, medium stiff, no plasticity, few fine-grained sand, trace roots.		
2						CL	Sandy Clay (CL) Gray mottled to brown, moist, medium stiff to stiff, low to moderate plasticity, some fine-grained sand and silt.		
3									
4									
5							Hand auger completed at depth of 5 feet bgs.		
6									
7									

Remarks:

EVREN Northwest, Inc.

Boring Log No. HA-2
KOA Proposed Expansion

Location: 457 Bay Center Road, South Bend, Washington			**WO#: 1941-24001-01**
Method: Hand Auger			**Ground EL: N/A**
Drill Rig:		**Hammer weight (lb):**	**Hole depth (ft): 4**
Sampler:	**Drop (in):**	**G.W.T. @ Drilling (ft): N/A**	**Sampled by: DMS**
Driller: ENW		**Drill Date: 7/9/2024**	**Logged by: DMS**

Depth	Strata	GWT	No.	Type	Blows Per 6"	USCS	Soil Description	■ SPT. blow/ft ○ Moisture % (0 20 40 60)	Notes
0		GWT not encountered				TP	Organic Rich Topsoil (TP) Dark brown, moist, some silt, fine-grained sand, and root.		
1						ML	Sandy Silt (ML) Brown, moist, medium stiff, no plasticity, few fine-grained sand, trace roots.		
2									
3						CL	Sandy Clay (CL) Gray mottled to brown, moist, medium stiff to stiff, low to moderate plasticity, some fine-grained sand and silt.		
4							Hand auger completed at depth of 4 feet bgs.		
5									
6									
7									

Remarks:

APPENDIX C
SITE PHOTOGRAPHS

Hand Auger HA-2, maximum depth = 4 ft, very stiff CLAY.

Property beachfront, facing southeast. Erosional features on bluffs visible.

Stairs from beachfront to KOA campground. Facing Northeast.

Sliding and erosion noted at beachfront south of the subject site.

EVREN NORTHWEST environmental natural resource consultants	Bay Center KOA Expansion 457 Bay Center Road Bay Center, Washington 98586	**Site Photographs**	Project No. 1941-24001-01 Appendix **C**

Beachfront view facing south. Erosion at bluffs. Geologic layer consisting of weathered clays underlain by shells and sandstone.

Beachfront view facing north. Erosion at bluffs. Geologic layer consisting of weathered clays underlain by shells and sandstone.

Beachfront view facing north, Sand on beach, taken at low tide.

EVREN NORTHWEST INC environmental natural resource consultants	Bay Center KOA Expansion 457 Bay Center Road Bay Center, Washington 98586	**Site Photographs**	Project No. 1941-24001-01 Appendix **C**

Investigating geologic layers on beachfront. Sandstone layer at base more erosion resistant than shell and clay layers above.

Shallow sliding and beachfront erosion between 441 Bay Center Rd and 4 Beach St.

Beachfront revetment south of KOA at 441 Bay Center Rd

Beachfront revetment constructed south of KOA at 4 Beach St.

EVREN NORTHWEST INC environmental natural resource consultants	Bay Center KOA Expansion 457 Bay Center Road Bay Center, Washington 98586	**Site Photographs**	Project No. 1941-24001-01 Appendix **C**

January 4th,2024
Pacific County
Department of Community Development

To whom this may concern,

Upon approval of the conditional use permit for Tax Parcel ID Number 13100834109, commercial property of Bay Center KOA Campground, we are hereby submitting a contingency plan for extreme erosion of the said property near Willapa Bay shore line.

If erosion occurs within 15 feet from the western edge of the expansion we will conduct the following:

1. Remove all non permanent structures including but not limited to guest RV units.
2. Remove all underground utilities including sewer lines, underground power lines, and water lines.
3. Remove any and all above ground improvements including picnic tables, fire rings, power pedestals, parking gravel and any other improvements made.
4. Sites within this area will be deemed unsuitable for camping and overnight stays.
5. At such time, if deemed necessary we will conduct a geotech report.
6. We will not hold Pacific County or Personal or any other governmental agencies liable for loss of business, damages or property.

Joel P Fodor

January 4th, 2024

Name 4 Time LLC DPA# 131008341109

Re-Route Sheet

Resubmitted of Revised wetland delineation

Department Review	Date Re-Routed	Action	Action Date	Signature	Comments/ Notes
Planning	2/27/24	(A)	6/4	ZS	Updated after onsite meeting with DOE on 3/6 - boundaries + ratings confirmed
LADO					
Building					
Health					
Other					

Fees Received

Date Paid	Amount	Receipt No.

Notes

Parcel # 13100834109

Wetland Delineation Report

Vicinity Map
Source: Pacific County Map Sifter

A Plus Design & Consulting, LLC
Wastewater and Critical Area Consultants

Phone/Text: 360.244.5843 email: leonard@aplussepticdesigns.com

Table of Contents

1. Introduction

A+ Design and Consulting has been hired to identify and delineate any wetlands located on the subject property (Parcel # 13100834109) which is within Section 8, Township 13, and Range 10, of Willamette Meridian in Pacific County Washington. This report summarizes observations and field data used to define the current wetland boundary, rating, and buffer.

2. Feature Summary

A Plus Design and Consulting, LLC staff visited the subject property on November 9th, 2022. The subject property and the 300' vicinity were assessed for the presence of critical areas, as defined in Ord. 180. Wetland A & B were located, and a summary of the delineation is provided in Table 1. The wetlands identified contain indicators of wetland hydrology, hydric soils, and a predominance of hydrophytic vegetation which satisfies the criteria set forth in the U.S. Army Corps of Engineers' (USACE) *Wetlands Delineation Manual* (1987) and the *USACE's Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (*version 2.0, 2010). Resources utilized include the Washington State Wetland Rating System (October 2014), Ordinance 180 Critical Areas and Resource Lands & Ordinance.

Table 1 Wetland Delineation and Rating Report Summary

Feature	Cowardin Classes[1] (NWI)	HGM Class	Wetland Category	Habitat Score	Buffer Width
Wetland A	Forested	Depressional	IV	N/A	50'-Ord. 180 (High Intensity)
Wetland B	Forested	Depressional	IV	N/A	N/A-Ord. 180 (>1,000 sq ft)

1. Classification based on Cowardin et.al. (1979)

3. Background

3.1 Existing Conditions

The subject property is in Bay Center Washington located at the Bay Center KOA. The project area is comprised of two lots totaling roughly 10 acres. The Willapa Bay is to the West side of the property and runs North, and South along the bluff. There is an existing and operating campground onsite. The underbrush of the site and wetlands has been moderately disturbed.

3.2 National Wetlands Inventory

The U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) was queried to determine if there are previously identified wetlands present on the subject property. Neither Wetland A nor B is present on the NWI map.

3.3 Priority Habitats & Wetlands of High Conservation Value

The Washington State Department of Fish and Wildlife's (WDFW) Priority Habitats and Species (PHS) database on-line Mapper was accessed to determine if state or federally listed species occur on the subject property (WDFW 2018a). The PHS database indicated that there are no PHS data points within the wetland units. Wetland A & B are not listed as a Wetlands of High Conservation Value.

3.4 Soils Information

According to the Natural Resources Conservation Services (NRCS) Web Soil Survey (NCRS 2018), the soils on the subject property area were mapped as 158 Willapa silt loam and 159 Willapa silt loam. 158 & 159 Willapa silt loam are moderately well drained. Used as wildlife habitat, recreation, timber production, homesite development. Typical vegetation can include Sitka spruce, western hemlock, vine maple, evergreen huckleberry, red huckleberry, western sword fern, salal, salmonberry (See Appendices Wetland Determination Data Forms for more specific soil information).

4. Methods

The Routine Determination Method was followed in accordance with the U.S. Army Corps of Engineers, Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (U.S. Army Engineer Research and Development Center 2010). The routine determination method examines three indicators to determine if wetlands exist in an area. These indicators are the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. Existence of all three indicators typically must be shown for an area to be classified as a wetland unless the wetland is rated on special characteristics, is atypical, or a Wetland of High Conservation Value. Wetlands are regulated as "Waters of the State" by the Washington Department of Ecology. This wetland was rated in accordance with the Washington State Wetland Rating System for Western Washington: 2014 Update. The office assessment included examining aerial photographs and various map sources. Maps were created to illustrate delineations, and land use and buffers. During the field assessment Test Plots were established to identify wetland presence & boundaries. These boundaries were in part established on changes in vegetation and topography.

5. Wetland Determination Results

These wetlands have been HGM (hydro-geo-morphic) classified as Depressional *(see Table 1)*. The existence of all three parameters (Hydric Soils, Wetland Hydrology, & Hydrophytic Vegetation) typically must be shown for an area to be classified as a wetland. All three indicators were found on the subject property within Test Plots 2, 3, 5 & 6. Wetland A is a relatively small isolated depressional wetland. Wetland B is a very small wetland that holds water occasionally.

5.1 Vegetation

"The Corps Manual defines hydrophytic vegetation as the assemblage of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to influence plant occurrence"-Regional Supplement to the Corps of Engineers Wetland Delineation Manual)-US Army Corp of Engineers. The frequency of hydrophytic vegetation occurrence in each plant strata was determined using the 50/20 Rule. Hydrophytic vegetation was determined to be present in all four Test Plots. Each plant species has a wetland classification assigned. "This list was developed by the U.S. Army Corps of Engineers, the Fish and Wildlife Service (FWS), the Environmental Protection Agency, and the Natural Resources Conservation Service using taxonomic and distribution data from the Biota of North America program (BONAP) and legacy information from the FWS, and is directed by the Corps of Engineers" (USDA, NRCS).(see Appendices Wetland Determination Data Forms for more specific information)

Obligate (*OBL*)- Species that occur with >99% probability in wetlands
Facultative Wetland (*FACW*)- Species that occur with 67 to 99% probability in wetlands
Facultative (*FAC*)- Species that occur with 34-66% probability in wetlands

Facultative Upland (*FACU*)- Species that occur from 1 to 33% probability in wetlands
Obligate Upland (*UPL*)- Species that occur less than 1% probability in wetlands

5.2 Hydric Soils

"Hydric soil indicators are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds under saturated and anaerobic conditions"-Field Indicators of Hydric Soils in the United States Natural Department of Resources. Hydric soils were present in Test Plots 2, 3, 5 & 6. (see "Appendices" for additional soil details)

5.3 Hydrology

"The Term "Wetland Hydrology" encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. Such characteristics are usually present in areas that are inundated or have soils that are saturated to the surface for sufficient duration to develop hydric soils and support vegetations typically adapted for life in periodically anaerobic soil conditions" -Corps of Engineers Wetlands Delineation Manual. These characteristics were found in Test Plots 2, 3, 5 & 6.

6. Limitations

This report is correct and complete to the best of our knowledge. Until it is reviewed and approved by Pacific County, Washington State Department of Ecology and/or the U.S. Army Corps of Engineers it should be considered as a Preliminary Jurisdictional Determination of Wetland A & B. This report in no way can be considered a survey of any of the locations and/or property lines contained within this report. Thank you for allowing A+ Design & Consulting, LLC to prepare your Wetland Delineation Report. Feel free to contact us if you have any questions or need additional information.

**After a meeting onsite 2/6/2024 with the Dept. of Ecology and Pacific County DCD representatives we concluded that the rating and boundary of Wetland A was correct with minor changes. On 2/9/2024 we met with The Dept. of Ecology via zoom to confirm the size of the contributing basin and the percentage of high intensity uses within it. We determined that the contributing basin contained ~23% of high intensity uses using Arc GIS topography maps and Google Earth (See Figure 6).*

Sincerely,

Leonard Taylor & Tyler Starks
Wetland Consultant
PO Box 751
Long Beach WA 98631
Phone/Text: 360-244-5843
Email: leonard@aplussepticdesigns.com

7. References

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1. U.S. Army Corps of Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington: 2014 Update.* (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.

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U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands

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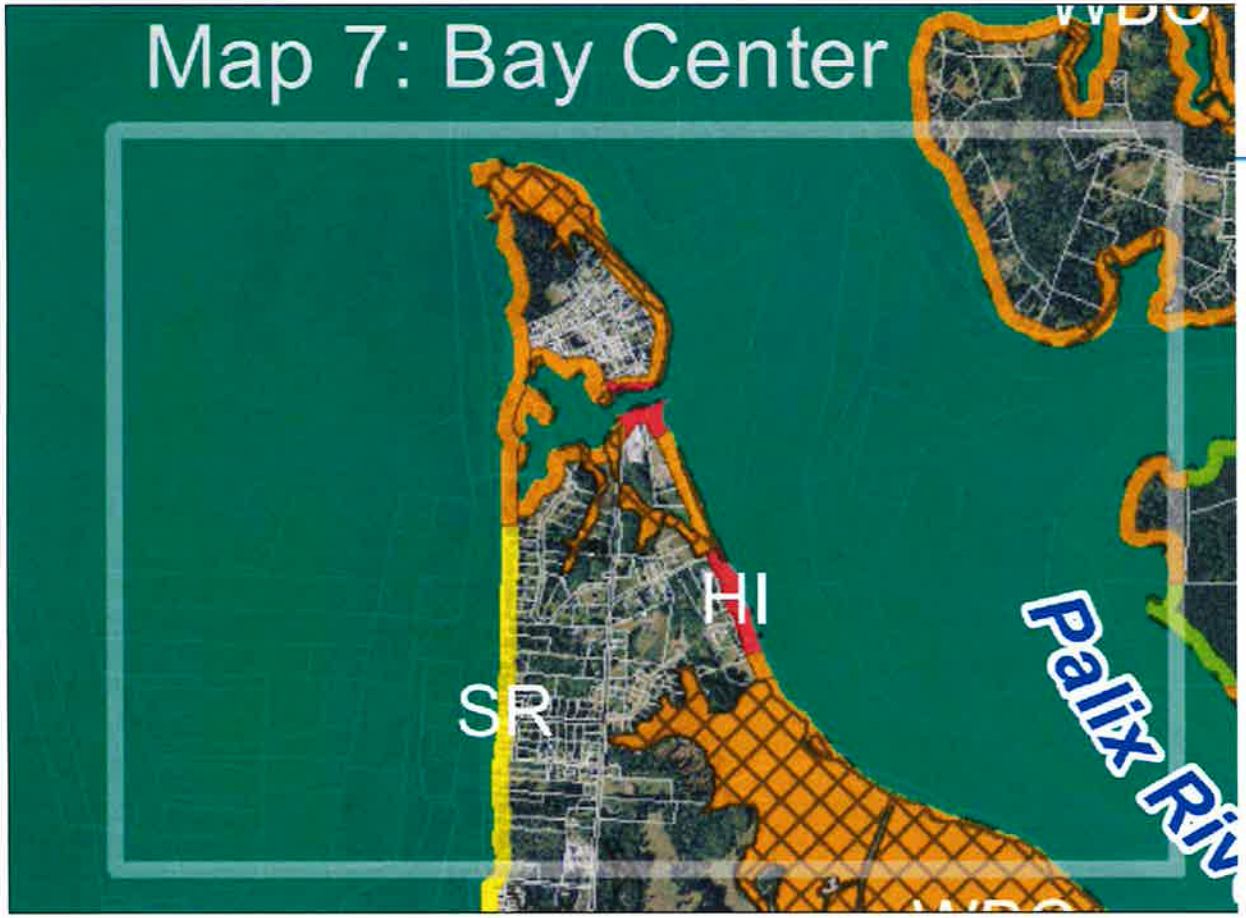
Parcel: 13100834109
Date:2/16/24
Drafted by:LT/TS

Figure 1: USFW National Wetland Inventory Map
https://www.fws.gov/wetlands/data/mapper.html

February 17, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine



PACIFIC COUNTY
Shoreline Master Program

MAP LEGEND

Shoreline Environment Designation

- Natural (N)
- High Intensity (HI)
- Shoreline Residential (SR)
- Rural Conservancy (RC)
- Willapa Bay Conservancy (WBC)
- Coastal Conservancy (CC)
- Freshwater Aquatic (FA)
- Willapa Bay Estuary (WBE)
- Coastal Ocean (CO)
- Potentially Associated Wetland
- SMP Stream
- 1968 Seashore Conservation Line
- 1980 Seashore Conservation Line
- 1889 Western Boundary of Upland Ownership (WBUO)
- County Boundary

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Figure 2: Pacific County SMP

N

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

Figure 3: NRCS Soils Map

https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

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N

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Beaches	0.0	0.3%
158	Willapa silt loam, cool, 1 to 8 percent slopes	9.6	93.3%
159	Willapa silt loam, cool, 8 to 30 percent slopes	0.7	6.4%
Totals for Area of Interest		**10.3**	**100.0%**

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Figure 4: Cowardin Plant Classes

Modified Google Earth Aerial Photo

N

0 15 30 60 120 180 240

1":60'

Legend

Wetland Boundary.....
Emergent.....
Scrub Shrub.....
Forested.....

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Figure 5: Hydroperiods & 150' Offset

Modified Google Earth Aerial Photo

N

0 5 10 20 40 60 80

1":20'

Legend

Wetland Boundary.....

150' Offset.....

Permanently Flooded.....

Occasionally Flooded.....

Saturated Only.....

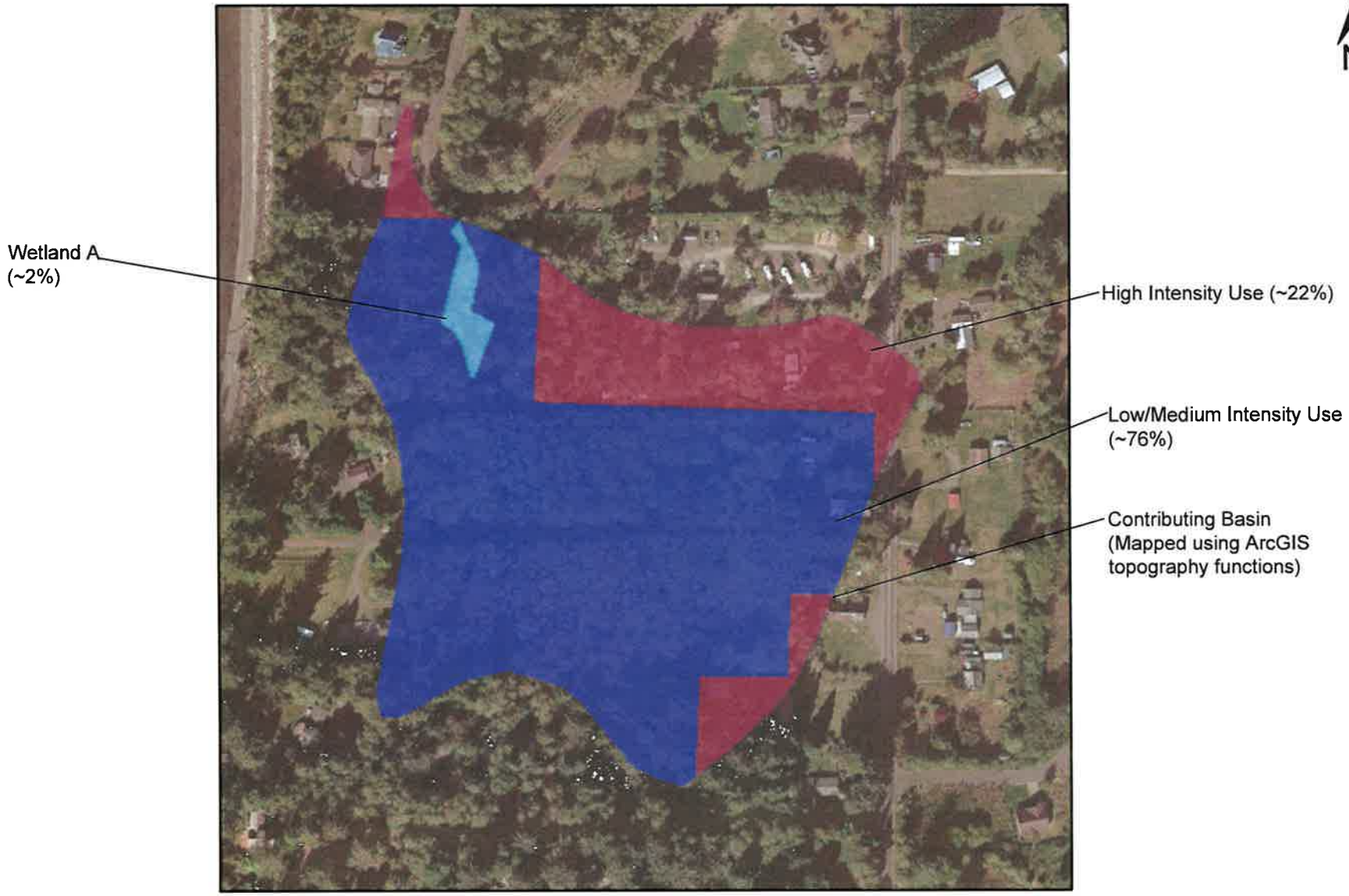

Figure 6: Contributing Basin
Source: Google Earth & ARC GIS

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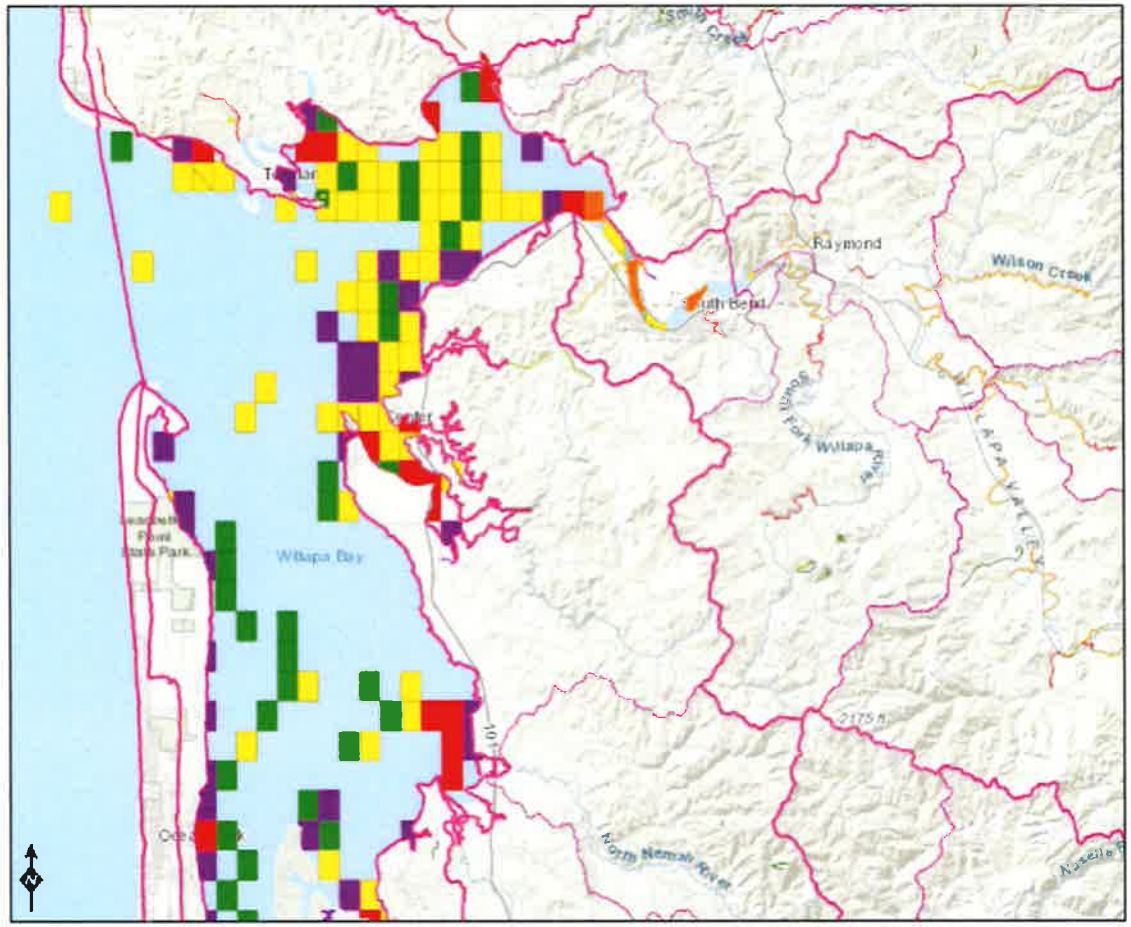
November 16, 2022

Water Quality Atlas



Assessed Water/Sediment

Water
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Subbasins (8 digit HUCs)
- HUC boundary

Subbasins (10 digit HUCs)
- HUC boundary

Subbasins (12 digit HUCs)
- HUC boundary

DEPARTMENT OF ECOLOGY
State of Washington

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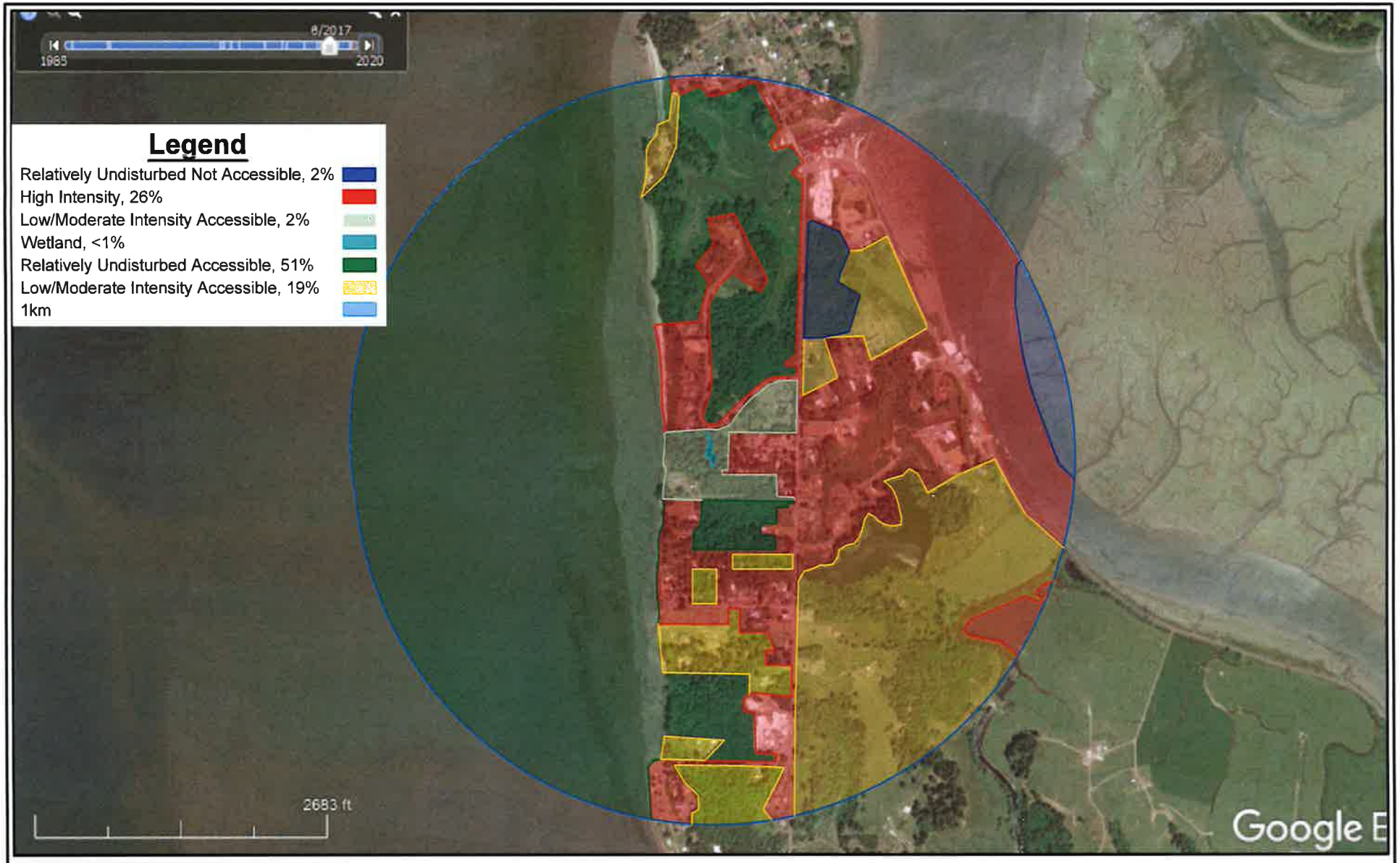
Figure 7: 303d Map & TMDL
https://www.ecy.wa.gov/programs/wq/303d/currentassessmt.html

N



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N

Figure 8: 1km Land Use Map
Modified Google Earth Aerial Photo

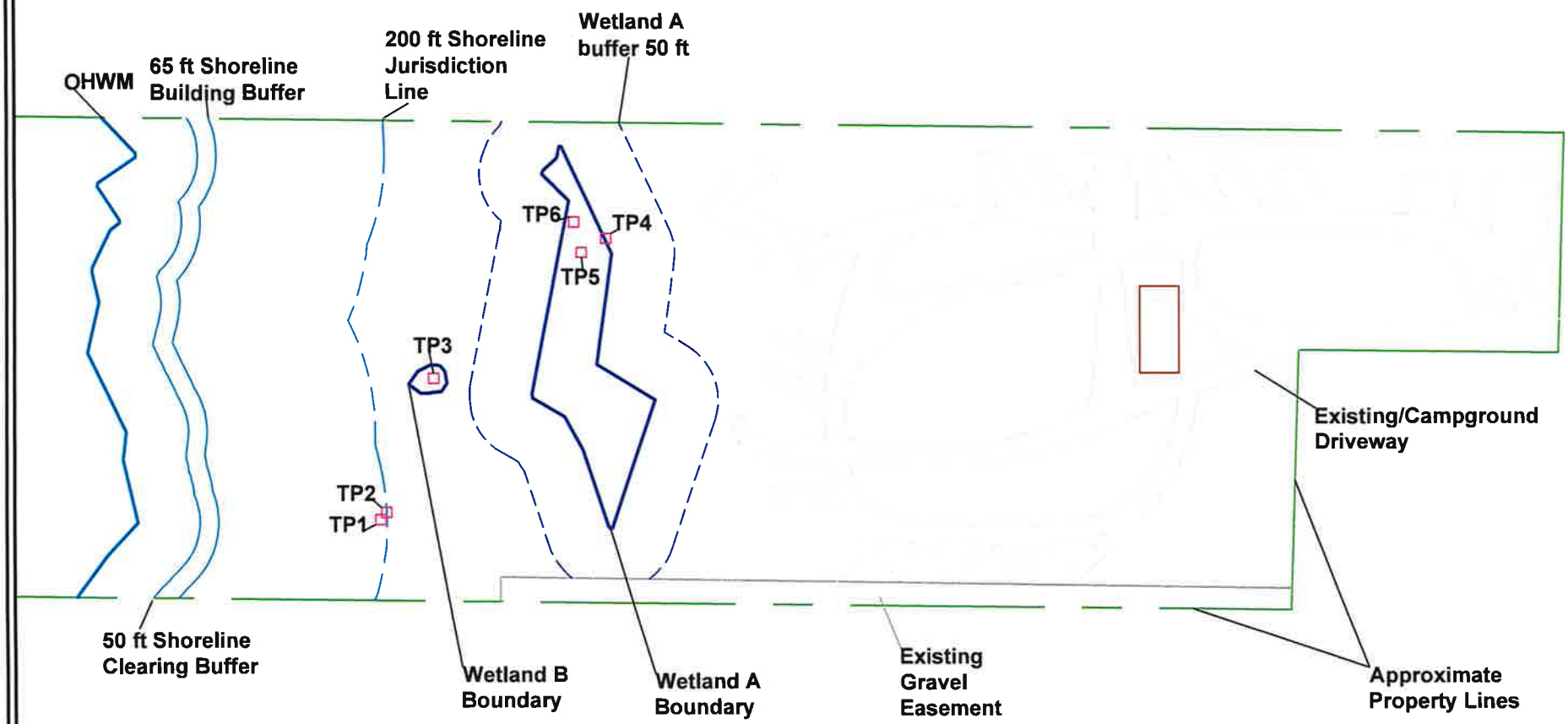

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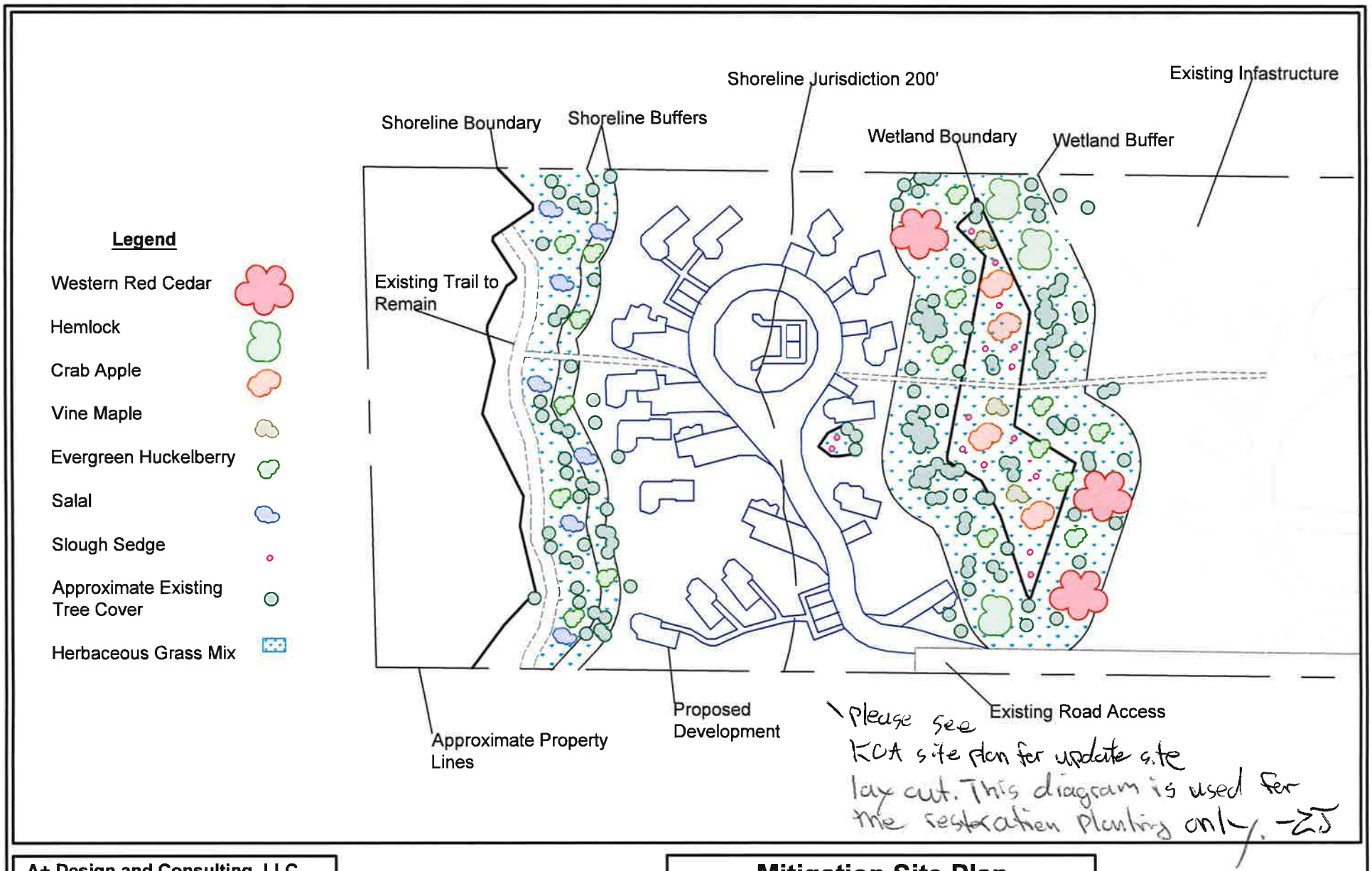
Figure 9: Wetland Delineation Map

0 100 120 240 360 480

1":120'

N



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N

Mitigation Site Plan

0 25 50 100 200 300 400

1":100'

8. Appendices

Wetland name or number A

RATING SUMMARY – Western Washington

Additional site visit on 2/6/24 with DoE and PCDCD.

Name of wetland (or ID #): Wetland A Date of site visit: 11/09/2022

Rated by Leonard Taylor & Tyler Starks Trained by Ecology? x Yes ___No Date of training 10/17/18 12/3/21

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___Y __x_N

NOTE: Form is not complete without the figures requested *(figures can be combined).*
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY IV (based on functions x or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 23 - 27

_____**Category II** – Total score = 20 - 22

_____**Category III** – Total score = 16 - 19

__✓__**Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H M (L)	H M (L)	H M (L)	
Landscape Potential	H (M) L	H M (L)	(H) M L	
Value	H (M) L	H M (L)	(H) M L	TOTAL
Score Based on Ratings	5	3	7	15

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number A

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   NO – go to 3 **YES** – The wetland class is **Flats**
   *If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   NO – go to 4 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   ___The wetland is on a slope (*slope can be very gradual*),
   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
   ___The water leaves the wetland **without being impounded**.

   NO – go to 5 **YES** – The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ___The overbank flooding occurs at least once every 2 years.

Wetland name or number A

NO – go to 6 **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions).* Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	5

Rating of Site Potential If score is: ___ **12-16 = H** ___ **6-11 = M** ✓ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ **3 or 4 = H** ✓ **1 or 2 = M** ___ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	1

Rating of Value If score is: ___ **2-4 = H** ✓ **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	0
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above	5

Rating of Site Potential If score is: ___ **12-16 = H** ___ **6-11 = M** ✓ **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	0

Rating of Landscape Potential If score is: ___ **3 = H** ___ **1 or 2 = M** ✓ **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____ points = 0 There are no problems with flooding downstream of the wetland. points = 0	0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	0

Rating of Value If score is: ___ **2-4 = H** ___ **1 = M** ✓ **0 = L** *Record the rating on the first page*

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

____Aquatic bed	4 structures or more: points = 4
____Emergent	3 structures: points = 2
____Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
✓ Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

✓ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

____Permanently flooded or inundated	4 or more types present: points = 3
____Seasonally flooded or inundated	3 types present: points = 2
✓ Occasionally flooded or inundated	2 types present: points = 1
✓ Saturated only	1 type present: points = 0
____Permanently flowing stream or river in, or adjacent to, the wetland	
____Seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

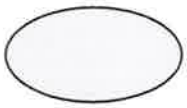
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

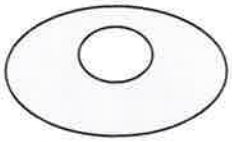
1

H 1.4. Interspersion of habitats

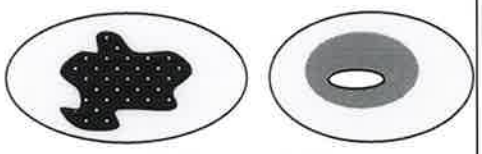
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



None = 0 points



Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3points

0

Wetland name or number A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ____Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ____Standing snags (dbh > 4 in) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* __✓__Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	1
Total for H 1 Add the points in the boxes above	4

Rating of Site Potential If score is:___**15-18 = H** ___**7-14 = M** ✓**0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 51 + [(% moderate and low intensity land uses)/2] 1 = 52 % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	3
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 53 + [(% moderate and low intensity land uses)/2] 10.5 = 63.5 % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	3
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	0
Total for H 2 Add the points in the boxes above	6

Rating of Landscape Potential If score is:✓**4-6 = H** ___**1-3 = M** ___**< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	2

Rating of Value If score is:✓**2 = H** ___**1 = M** ___**0 = L** *Record the rating on the first page*

Wetland name or number A

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

— **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

✓— **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

✓— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

✓— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 457 Bay Center City/County: Pacific County Sampling Date: 11/9/2022

Applicant/Owner: Fodor, Joel State: WA Sampling Point: TP1

Investigator(s): Leonard Taylor & Tyler Starks & Justice Schenk Section, Township, Range: 8 / 13 / 10

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): LRR-A Lat: 46°37'15.83"N Long: 123°57'25.16"W Datum: _____

Soil Map Unit Name: 158-Willapa silt loam, 159-Willapa silt loam, 8-Beach NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	80	Y	FACU
2. Rhamnus purshiana	15	N	FAC
3. Thuja plicata	5	N	FAC
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Ilex aquifolium	5	Y	FACU
2. Rubus laciniatus	10	Y	FACU
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 6 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation has been disturbed.

SOIL

Sampling Point: TP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
+1-0								
1-6	10 YR 2/1							
6-16	10 Y 3/2				d	m		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 4

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): Surface

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 457 Bay Center City/County: Pacific County Sampling Date: 11/9/2022

Applicant/Owner: Fodor, Joel State: WA Sampling Point: TP2

Investigator(s): Leonard Taylor & Tyler Starks & Justice Schenk Section, Township, Range: 8 / 13 / 10

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): LRR-A Lat: 46°37'16.90"N Long: 123°57'24.63"W Datum: _____

Soil Map Unit Name: 158-Willapa silt loam, 159-Willapa silt loam, 8-Beach NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	80	Y	FACU
2. Rhamnus purshiana	15	N	FAC
3. Thuja plicata	5	N	FAC
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 6 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation has been disturbed.

SOIL

Sampling Point: TP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
+1-0								
1-6	10 YR 2/1							
6-16	10 Y 3/2				d	m		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 457 Bay Center City/County: Pacific County Sampling Date: 11/9/2022

Applicant/Owner: Fodor, Joel State: WA Sampling Point: TP3

Investigator(s): Leonard Taylor & Tyler Starks & Justice Schenk Section, Township, Range: 8 / 13 / 10

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): LRR-A Lat: 46°37'16.90"N Long: 123°57'24.63"W Datum: _____

Soil Map Unit Name: 158-Willapa silt loam, 159-Willapa silt loam, 8-Beach NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	30	Y	FAC
2. Tsuga heterophylla	20	Y	FACU
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 6 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation has been disturbed.

SOIL

Sampling Point: TP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
+1-0								
1-6	10 YR 2/1							
6-18	10 Y 3/1				d	m		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 457 Bay Center City/County: Pacific County Sampling Date: 11/9/2022

Applicant/Owner: Fodor, Joel State: WA Sampling Point: TP4

Investigator(s): Leonard Taylor & Tyler Starks & Justice Schenk Section, Township, Range: 8 / 13 / 10

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): LRR-A Lat: 46°37'17.99"N Long: 123°57'22.65"W Datum: _____

Soil Map Unit Name: 158-Willapa silt loam, 159-Willapa silt loam, 8-Beach NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

No hydrology indicators present or hydric soil indicators, vegetaition was not applicable.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 6 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation has been disturbed.

SOIL

Sampling Point: TP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
+1-0								
1-16	2.5 Y 3/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 457 Bay Center City/County: Pacific County Sampling Date: 11/9/2022

Applicant/Owner: Fodor, Joel State: WA Sampling Point: TP5

Investigator(s): Leonard Taylor & Tyler Starks & Justice Schenk Section, Township, Range: 8 / 13 / 10

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): LRR-A Lat: 46°37'18.12"N Long: 123°57'23.02"W Datum: _____

Soil Map Unit Name: 158-Willapa silt loam, 159-Willapa silt loam, 8-Beach NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	30	Y	FAC
2.			
3.			
4.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 6 ft)			
1. Carex obnupta	80	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation has been disturbed.

SOIL

Sampling Point: TP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
+1-0								
1-16	5 YR 2.5/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ✓ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 7

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 457 Bay Center City/County: Pacific County Sampling Date: 11/9/2022

Applicant/Owner: Fodor, Joel State: WA Sampling Point: TP6

Investigator(s): Leonard Taylor & Tyler Starks & Justice Schenk Section, Township, Range: 8 / 13 / 10

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): LRR-A Lat: 46°37'17.88"N Long: 123°57'22.93"W Datum: _____

Soil Map Unit Name: 158-Willapa silt loam, 159-Willapa silt loam, 8-Beach NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	50	Y	FAC
2.			
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 6 ft)			
1. Carex obnupta	80	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation has been disturbed.

SOIL

Sampling Point: TP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
+1-0								
1-5	10 YR 2/1							
5-10	5 YR 3/3							
10-16	10 YR 2/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ✓ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
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- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 5

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Name 4TIME LLC (Bay Center KOA) DPA# 13100834109

previously 13100834106

Re-Route Sheet

Resubmitted of SSDP Type III & SEPA Checklist

Department Review	Date Re-Routed	Action	Action Date	Signature	Comments/ Notes
Planning P2300818 SSDP P2300819 SEPA	10/18/23	H	12/5	ZB	See email
LADO					
Building					
Health					
Other					

Fees Received

Date Paid	Amount	Receipt No.

Notes

Name: 4Time LLC Parcel No.: 13100834 1106 (Previous)

Description: CARL - Clearing - expanding RV park - after the fact (Current 13100834 1109)

License Application No.: _____

Department Review	Date Routed	Action	Action Date	Signature	Comments/Notes
Planning P22000785	9/27	(H)	10/17	ZS	SMP extends 300ft from ordinary high water mark. No WL in inventory, ref. WL on site. WL del.
Roads					Code case C22001604
LADO/ Floodplain					
Building					Electronic Plan Log Complete? Yes ☐ Workflow Complete? Yes ☐ Scanned: Yes ☐ No ☐
Health					

App/Tech	75	Septic Site Rvw		Zoning		Special Use	
State B/C		Septic Eval		CARL	210	Variance	
Building		Septic Install		Road Appr		Reasonable Use	
Plan Check		Septic Repair		Shoreline		Short Plat	
Manu Home		Design Review		Floodplain		BLA	
MHT		Winter Hold		LADO		Public Notice	
Fire/Life Safety		Well		Wetland Delin		Revision Fee	
Fireworks		Plan Review		Cond Use			
Penalty Fee	427.50	License		SEPA			

Rolled set of building plans? Yes ☐ No ☐ Added to Electronic Bldg. Plan Log? Yes ☐ No ☐

Fees Received

Date Receipted	Amount
9/27/22	$712.50

Balance Due: _____ **Date Issued:** _____ **Issued to:** _____

Notes:

Development Permit Application

Pacific County Department of Community Development
Internet Address: www.co.pacific.wa.us

OFFICE USE ONLY	
PERMIT FEES:	712.50
Issued Date:	
Issued By:	

RECEIVED
SEP 26 2022
Dept. of Community Development
Pacific County, South Bend, WA

PROPERTY OWNER INFORMATION ☒ Contact Person	
Name:	Joel Fodor
Mailing Address:	457 Bay Center Rd
City/State/Zip:	Bay Center WA 98527
Phone: 951-318-8563	Phone:
Email:	BayCenterJoel@gmail.com

APPLICANT INFORMATION ☒ Contact Person	
Name:	Joel Fodor
Mailing Address:	457 Bay Center Rd
City/State/Zip:	Bay Center WA 98527
Phone: 951-318-8563	Phone:
Email:	BayCenterJoel@gmail.com

DESCRIPTION OF WORK

Campground Expansion

JOB SITE INFORMATION AND LOCATION

Job Site Address: 457 Bay Center Rd	Tax Parcel ID No.: 13100 83411 06-New 109
Legal Description:	Township/Range/Section / /
Directions to Site: 101 to Dike Rd to Moore Rd look for KOA sign on Left	

Legal Description and Tax Parcel Number can be found on your tax statement, the Pacific County web site address listed above or by calling the Assessor's office at 360-642-9301 or 360-875-9301. **Applications cannot be processed without this information.**

Note: If your property is in a current use program (timber, farm, agricultural, or open space), contact the Assessor before applying, as taxes may be due.

All permits shall be picked up within 30 days of notification by the Department of Community Development that the permit is ready for issuance. Failure to pick up the outstanding permit(s) and pay all outstanding fees within the specified timeframe shall result in the forfeiture of all permit documentation and all application fees paid to date on that project. Any subsequent permitting on the same parcel by the same property owner requires the submittal of new permit application materials and the payment of all new fees at the time of application.

I authorize employees and officials of Pacific County and/or the Flood Control Zone District No. 1 of Pacific County the right to enter and remain on the property in question to determine whether a permit should be issued and whether special conditions should be placed on any issued permit. I have the legal authority to grant such access to the property in question.

I also acknowledge that if a permit is issued for land development activities, no terms of the permit can be violated without further approval by the permitting entity. I understand that the granting of a permit does not authorize anyone to violate in any way any federal, state, or local law/regulation pertaining to development activities associated with a permit.

I hereby certify under penalty of perjury under the laws of the State of Washington that the following is true and correct:

1. **I have read and examined this development application, as well as the County site-plan checklist and have documented all applicable requirements on the site plan.**
2. **The information provided in this application contains no misstatement of fact.**
3. **I am the owner(s), the authorized agent(s) of the owner(s) of the above referenced property, or I am currently a licensed contractor or specialty contractor under Chapter 18.27 RCW or I am exempt from the requirements of the Chapter 18.27 RCW.**
4. **I understand this permit is subject to all other local, state, and federal regulations.**

Note: This application will not be processed unless the above certification is endorsed by an authorized agent of the owner(s) of the property in question and/or the owner (s) themselves. If Pacific County and/or the Flood Control Zone District No.1 of Pacific County has reason to believe that erroneous information has been supplied by an authorized agent of the owner(s) of the property in question and/or by the owner(s) themselves, processing of the application may be suspended.

Printed Name: Joel Fodor

Authorized Signature: Joel Fodor Date: 9-26-22

SOUTH BEND OFFICE
P.O. Box 68
South Bend, WA 98586
(360) 875-9356 FAX (360) 875-9304

LONG BEACH OFFICE
7013 Sandridge Rd.
Long Beach, WA 98631
(360) 642-9382 FAX (360) 642-9387

Revised 02/27/2015

A. Background Find help answering background questions

1. **Name of proposed project, if applicable:**
   Bay Center KOA Expansion
2. **Name of applicant:**
   Joel Fodor
3. **Address and phone number of applicant and contact person:**
   457 Bay Center Rd
   Bay Center WA 98527
4. **Date checklist prepared:**
   9-26-23
5. **Agency requesting checklist:** See revised
6. **Proposed timing or schedule (including phasing, if applicable):**
   Hoping to complete by 7-1-24
7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**
   NO
8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**
   Wet lands survey has been completed by A plus Design
9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**
10. **List any government approvals or permits that will be needed for your proposal, if known.**
11.

Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

To expand Bay Center KOA campground to the West of the existing campground. Rough size of the expansion is 400' x 300'

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

This project is Located at 457 Bay Center rd Baycenter WA 98527. Its at the West end of the campground.

B. Environmental Elements

1. Earth Find help answering earth questions

a. General description of the site:

Partally wooded land that sits west of existing Campground and east of Willapa Bay.

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

b. What is the steepest slope on the site (approximate percent slope)?

2%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Clay, Top Soil

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

At the shoreline, yes But where the expansion would take place, NO.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Roughly 2 acres.
Fill dirt & Stone for Road

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

No

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

5% A few cabins each are less than 400 sq ft

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

let foliage grow naturally around RV & Cabin sites

2. Air Find help answering air questions

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

There will be a few machines during excavation and finish work

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

NO

c. Proposed measures to reduce or control emissions or other impacts to air, if any.

Run the machines as little as possible

3. Water Find help answering water questions

a. Surface Water: Find help answering surface water questions

1. **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Willipa Bay to the west, Seasonal wet lands on the east side.

2. **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

yes (plans attached

3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

Nothing will be added or removed from surface water or wetlands area.

4. **Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

NO

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

NO

b. Ground Water: Find help answering ground water questions

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.**

NO

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Septic Drain field Serving Roughly 25 RV Site

c. Water Runoff (including stormwater):

a) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

There is a culvert that runs under Ranta Rd.

b) **Could waste materials enter ground or surface waters? If so, generally describe.**

NO

c) **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

NO

d) **Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any.**

NO

4. Plants Find help answering plants questions

a. Check the types of vegetation found on the site:

- ☑ deciduous tree: alder, maple, aspen, other
- ☑ evergreen tree: fir, cedar, pine, other
- ☐ shrubs
- ☐ grass
- ☐ pasture
- ☐ crop or grain
- ☐ orchards, vineyards, or other permanent crops.
- ☐ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ☐ water plants: water lily, eelgrass, milfoil, other
- ☐ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Alder & Fir/pine 30 - 40 trees

c. List threatened and endangered species known to be on or near the site.

None Known

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

Ferns & Native grasses to seperate & Define sites

e. List all noxious weeds and invasive species known to be on or near the site.

Not sure

5. Animals Find help answering animal questions

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Sea gulls, Deer, Racoon, Crow/Black bird

Examples include:

- Birds: hawk, heron, eagle, songbirds, other:
- Mammals: deer, bear, elk, beaver, other:
- Fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened and endangered species known to be on or near the site.

None Known

c. Is the site part of a migration route? If so, explain.

No

d. Proposed measures to preserve or enhance wildlife, if any.

Make area as un-touched and natural as possible once build is done inorded to show the beauty.

e. List any invasive animal species known to be on or near the site.

None Known

6. Energy and Natural Resources Find help answering energy and natural resource questions

1. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.** Diesel & gas for construction eqt.
   PUD Electricity for RV sites
2. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.** NO
3. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.** Lots of RV's come w/ solar panels from the factory. Clearing trees would help save PUD power

7. Environmental Health Find help with answering environmental health questions

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.

NO

1. **Describe any known or possible contamination at the site from present or past uses.**
   None
2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**
   None
3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.** None
4. **Describe special emergency services that might be required.** None
5. **Proposed measures to reduce or control environmental health hazards, if any.**
   None

b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?** By access of Easement road: Tractor, Pickup Truck, golf carts, Kids, dogs...
2. **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?** This is a campground so Check out / check in hours are typically 8:30-5:00pm. People laughing, Kids playing
3. **Proposed measures to reduce or control noise impacts, if any.** This is a family campground so we do not tolerate Loud guests and/or speeding.

8. Land and Shoreline Use Find help answering land and shoreline use questions

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.** Currently the land is vacent, wooded land. I would like to show more people the beauty of this area.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

No

1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

NO

c. **Describe any structures on the site.**

None Now. after completed there will be Cabins, RV sites & Bath house

d. **Will any structures be demolished? If so, what?**

NO

e. **What is the current zoning classification of the site?**

Mixed use Commertial

f. **What is the current comprehensive plan designation of the site?**

See Attached

g. If applicable, what is the current shoreline master program designation of the site?

—

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

NO

i. Approximately how many people would reside or work in the completed project?

Looking to add 16-18 sites that would be for overnight & weekend guests

j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any.

None

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

Wait for County approval before starting

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any.

None

9. Housing Find help answering housing questions

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

16-18 camp sites

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

c. Proposed measures to reduce or control housing impacts, if any.

~

10. Aesthetics Find help answering aesthetics questions

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

RV & Cabins 13'2" Metal, wood, Fiberglass

b. What views in the immediate vicinity would be altered or obstructed?

Views would only be improved

c. Proposed measures to reduce or control aesthetic impacts, if any.

Keep as natural as possible

11. Light and Glare Find help answering light and glare questions

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any.

None

12. Recreation Find help answering recreation questions

a. What designated and informal recreational opportunities are in the immediate vicinity?

Hiking, Clamming, Walking on the Beach, Bird Watching

b. Would the proposed project displace any existing recreational uses? If so, describe.

No, only enhance it

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any.

—

13. Historic and Cultural Preservation Find help answering historic and cultural preservation questions

a. **Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

NO

b. **Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

NO

c. **Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

I have looked at a historic Map and there is nothing in the area.

d. **Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

None

14. Transportation Find help with answering transportation questions

a. **Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**

access to proposed area would be through Existing campground

b. **Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

NO

c. **Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

Stone/Rock will be added within the campground
Private

d. **Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

NO

e. **How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

Not sure

f. **Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

NO

g. **Proposed measures to reduce or control transportation impacts, if any.**

None

15. Public Services Find help answering public service questions

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

There would be more camping guests so yes, maybe in an emergency

b. **Proposed measures to reduce or control direct impacts on public services, if any.**

Continued Safety & Security around the Campground

16. Utilities Find help answering utilities questions

a. **Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:**

None

b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.** Electricity, Water, Sewer (Septic) Construction: Tree trimming, Logging, trenching

C. Signature Find help about who should sign

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

X

Type name of signee: Click or tap here to enter text.

Position and agency/organization: Click or tap here to enter text.

Date submitted: Click or tap to enter a date.

Name 4 Time LLC DPA# 13100834105 + 104

Re-Route Sheet

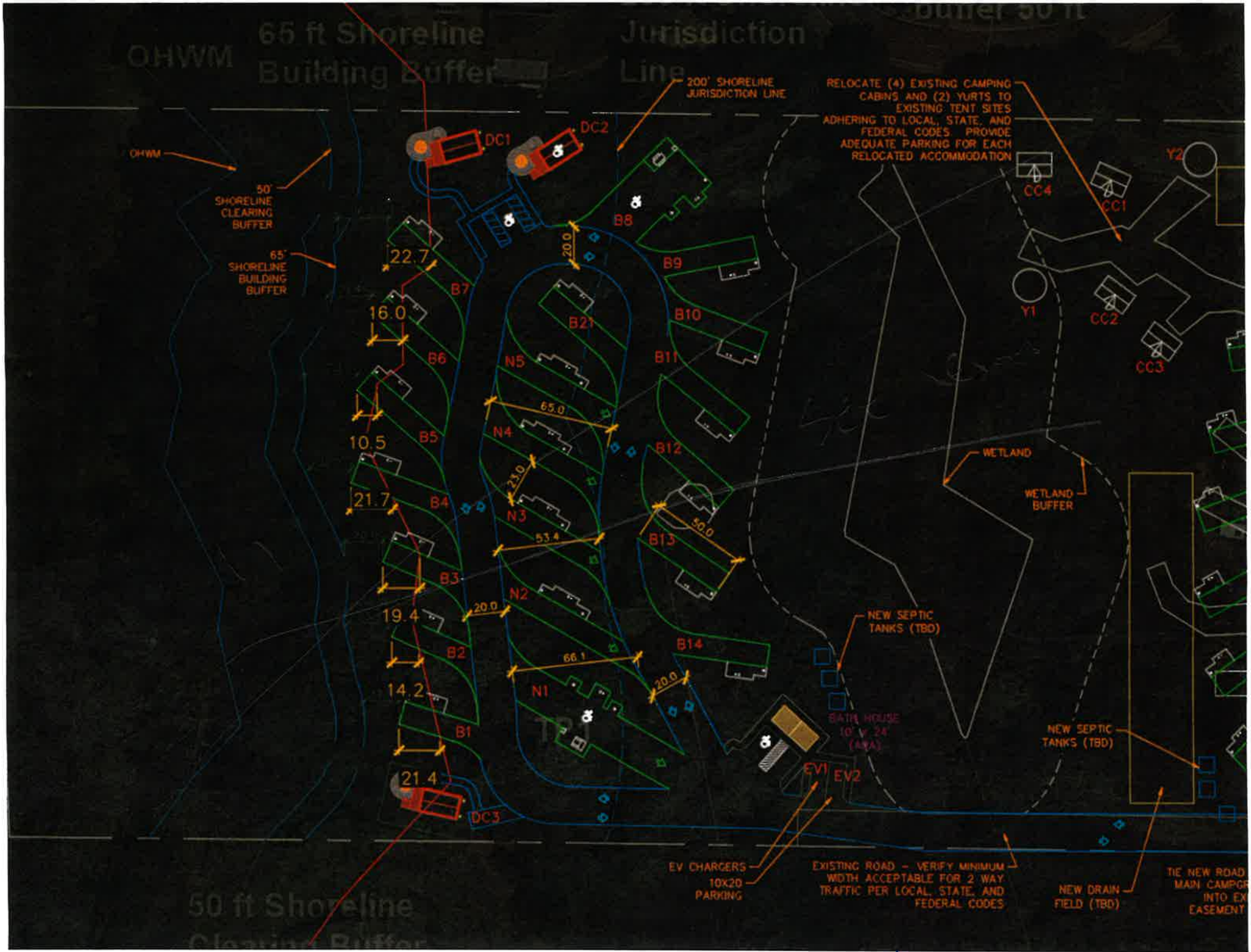
Resubmitted of Wetland Delineation + campground site plan

Department Review	Date Re-Routed	Action	Action Date	Signature	Comments/ Notes
Planning	3/7/23	(H)	4/3	JD	
LADO					
Building					
Health					
Other					

Fees Received

Date Paid	Amount	Receipt No.

Notes


65 ft Shoreline Building Buffer
OHWM
Jurisdiction Line
200' SHORELINE JURISDICTION LINE
RELOCATE (4) EXISTING CAMPING CABINS AND (2) YURTS TO EXISTING TENT SITES ADHERING TO LOCAL, STATE, AND FEDERAL CODES PROVIDE ADEQUATE PARKING FOR EACH RELOCATED ACCOMMODATION
OHWM
50' SHORELINE CLEARING BUFFER
65' SHORELINE BUILDING BUFFER
DC1
DC2
DC3
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B21
N1
N2
N3
N4
N5
22.7
16.0
10.5
21.7
19.4
14.2
21.4
20.0
65.0
23.0
53.4
50.0
66.1
CC1
CC2
CC3
CC4
Y1
Y2
WETLAND
WETLAND BUFFER
NEW SEPTIC TANKS (TBD)
BATH HOUSE 10' x 24' (TYP.)
EV1
EV2
EV CHARGERS
10X20 PARKING
EXISTING ROAD - VERIFY MINIMUM WIDTH ACCEPTABLE FOR 2 WAY TRAFFIC PER LOCAL, STATE, AND FEDERAL CODES
NEW DRAIN FIELD (TBD)
50 ft Shoreline Clearing Buffer
see revised

Name 4Time LLC - Bay Center KOA DPA# 13100834109

Re-Route Sheet

Resubmitted of Restoration Plan

Department Review	Date Re-Routed	Action	Action Date	Signature	Comments/ Notes
Planning	10/30/23	A	12/5	ZS	Must be started before expansion occurs
LADO					
Building					
Health					
Other					

Fees Received

Date Paid	Amount	Receipt No.

Notes

Parcel # 13100834109

Restoration Plan

Vicinity Map
Source: Modified Google Earth Screenshot

A Plus Design & Consulting, LLC
Wastewater and Critical Area Consultants

Phone/Text: 360.244.5843 email: leonard@aplussepticdesigns.com

Table of Contents

1. Restoration Plan

1.1 Proposed Project

Joel Fodor has hired A Plus Design and Consulting to identify any critical areas or shorelines at the property located at 457 Bay Center Rd, WA. The proposed project is to reestablish tree canopy, shrub, and herbaceous cover. This was due to unpermitted clearing of mainly the understory. By establishing additional plantings, it will bolster the existing under story and create a more cohesive vegetated wetland and buffers. There will be no direct impact or indirect impact to the shorelines.

1.2 Impact Assessment

Location of Impact	Amount of Impact	Ratio of Mitigation	Actual Mitigated Sq Ft.	Mitigation Methods Used
Stream & Shoreline Buffer Impact	57456 ft²	1:1(Min)	13 Trees 23 Shrubs 15 Emergent 71251sqft Herbaceous Seed	On Site Planting Restoration

1.2.1 Water Regime

The water regimes consist of the stream runoff but is primarily affected by the low energy action of the Willapa Bay. Localized saturation and occasional ponding within the wetland boundary.

1.2.2 Soils

According to the Natural Resources Conservation Services (NCRS) Web Soil Survey (NCRS 2018), the soils within the area of the subject property and compensatory site were mapped by NRCS as 158 & 159 Willapa silt loam.

1.2.3 Vegetation

Vegetation within the buffers and wetland are moderate and consist primarily of existing tree cover and shrubs.

1.2.4 Wildlife

No significant impacts to wildlife are expected permanently or during the road construction phase. There are no Priority Habitats listed in or adjacent to any of the wetlands on the subject property nor is it listed as a Wetland of High Conservation Value. A formal wildlife inventory was not conducted though it is assumed wildlife found within these Wetlands and associated buffers are typical local wildlife.

1.3 Project Design

The primary goal of this restoration plan is to compensate for the impacts to the functions that the wetland, shoreline, and buffers provide. The functions impacted were primarily hydrologic and habitat functions impacted by clearing the understory. An additional goal of this mitigation plan is to enhance and restore some of the degraded functions of the buffer in its current state. The current state of the buffer is primarily existing trees, a small amount of shrub cover and emergent layer. The planting of trees, shrubs and grasses will provide both hydrologic and habitat functions. The plants were chosen specifically for the area to ensure survivability and already exist onsite.

1.4 Site Preparation

To facilitate development, minimal site preparation is required. An access road already exists and the area in which the development is proposed is generally level. Consultation with a landscape architect or plant nursery may be required regarding timing of planting to ensure survivability.

1.5 Planting Requirements

To compensate for any native vegetation loss, trees will be planted at minimum on 9-foot centers, shrubs 4 foot on center and the emergent plants at least 2 feet on center. Native herbaceous seed will be used in-between the proposed enhancement area. Timing of the restoration will be in conjunction with advice from nurseries providing the plants. A list of nurseries will be provided to the client.

1.6 Performance Standards

The goal of this mitigation plan is to compensate for the impact to the buffer of the Willapa Bay and Wetland and its buffer. The existing buffer and compensatory area will be held to the performance standards as closely as possible. These performance standards are listed below.

Standard 1: *Construction shall take place outside of the growing season and breeding season of local wildlife.*

Standard 2: *At Two years the compensatory area should be vegetated by recruited, native, seed bank vegetation should be 40%. There should be no Scotch Broom, Gorse, or Himalayan Blackberry in proposed area, eradicate if necessary.*

Standard 3: *At Three years the compensatory area should be vegetated by recruited, native, seed bank, and surviving plantings. Vegetation survival and cover should be 60%. There should be no Scotch Broom, Gorse, or Himalayan Blackberry in proposed area, eradicate if necessary.*

Standard 4: *At Four years the compensatory area should be vegetated by recruited, native, seed bank surviving plantings. Vegetation survival and cover should be 80%. There should be no Scotch Broom, Gorse, or Himalayan Blackberry in proposed area, eradicate if necessary.*

Standard 5: *At the Five years compensatory area should be 100% vegetated by native vegetation. All plantings that did not survive will be replanted. There should be no Scotch Broom, Gorse, or Himalayan Blackberry in proposed area, eradicate if necessary.*

Standard 6: *During the monitoring period there should be no more than 5% non-native vegetation.*

1.7 Monitoring Reports

Monitoring of the compensatory should occur at the frequency designated within Pacific County Code Ordinance 180 *Critical Areas and Resource Lands.* These monitoring reports should reflect and be pertinent to the performance standards *and goals for the compensatory area.* Reports should include document current conditions, problems, and success of any changes or contingency plans over the monitoring period. Monitoring reports should include:

- *Project Location*
- *The Species and number of individual plantings to remain in accordance with the original planting requirements of the compensatory area.*
- *The Species and amount of any non-surviving plantings.*
- *Description of success and/or failure to meet performance standards as described in Section 1.7 of this document.*
- *Pictures of the compensatory area and the surrounding area to indicate success and/or failure to meet the performance standards.*
- *A summarization of any changes made to, intervention, intentional and/or unintentional disturbance, and maintenance efforts of the compensatory area.*

1.8 Site Protection and Maintenance

All surfaces and yard will be kept free of debris, trash, and other waste. No other protection should be necessary. The Stream & Shoreline buffer can be marked during construction to ensure no further encroachment, other than what has been mitigated occurs. Silt Fencing will be installed during construction to prevent any debris from getting into the stream or shoreline.

1.9 Maintenance and Contingency Plans

Maintenance required for the compensatory area should be minimal. This may include:

- *Protecting new plantings from drought and grazing.*
- *Maintain all Stream/Shoreline buffers*
- *If the vegetation performance standards are not met by the fifth year the owner of the subject property should replant species native to the Stream/Shoreline buffer to meet the Performance Standards*
- *Following monitoring procedures in accordance with Pacific County Code Ordinance 180 Critical Areas and Resource Lands.*
- *Invasive species should be controlled.*

No other contingency plan should be necessary and property owners will bear the cost of creation and maintenance of buffer area.

2. Limitations

This report is correct and complete to the best of our knowledge. Until it is reviewed and approved by Pacific County, Washington State Department of Ecology and/or the U.S. Army Corps of Engineers it should be considered as a Preliminary Jurisdictional Determination. This report in no way can be considered a survey of any of the locations and/or property lines contained within this report.

Thank you for allowing A Plus Design & Consulting, LLC to prepare your mitigation plan. Feel free to contact us if you have any questions or need additional information.

Sincerely,

Leonard Taylor & Tyler Starks
Wetland Consultant
PO Box 751
Long Beach WA 98631
Phone/Text: 360-244-5843
Email: leonard@aplussepticdesigns.com

3. References

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4. Figures

Legend

- Western Red Cedar
- Hemlock
- Crab Apple
- Vine Maple
- Evergreen Huckelberry
- Salal
- Slough Sedge
- Approximate Existing Tree Cover
- Herbaceous Grass Mix

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leonard@aplussepticdesigns.com
(360)244-5843
Client: Fodor, Joel
Parcel: 13100834105 & 106
Date:11/22/22
Drafted by:LT/TS

N

Mitigation Site Plan

0 25 50 100 200 300 400

1":100'