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MEMORANDUM

DATE: September 7, 2016
TO: Jeffrey Stump and Chief Warren Brainard, Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians (CTCLUSI); John MacDonald, Oregon Department of Transportation (ODOT)
FROM: Kirstin Greene and Anais Mathez, Cogan Owens Greene; Jim Rapp, Parametrix
CC: Bonnie Gee Yosick, Bonnie Gee Yosick, LLC; Reah Flisakowski, DKS Associates; Crystal Shoji, Shoji Planning
RE: Coos Head Area Master Plan (CHAMP)

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DRAFT Technical Memorandum #2: Opportunities and Constraints

INTRODUCTION

This Technical Memorandum ("TM") #2 summarizes the opportunities and constraints for meeting and implementing the vision of the Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians (CTCLUSI) for the Coos Head Area ("CHA" or Study Area), reflected in the 2015 update to the *Coos Head Land Use Concept Plan: A Vision for Seven Generations*. This memo reflects the refinement and affirmation of the CTCLUSI vision for the CHA through the Coos Head Area Master Plan ("CHAMP") process. It builds upon TM #1: Existing and Planned Conditions to describe the opportunities and constraints for implementing the programmatic uses in the CTCLUSI vision, prior to committee and public review and development of plan alternatives.

In this memo, we review the CTCLUSI vision by summarizing the programmatic uses for the Coos Head site ("Project Area") within the CHA, and outlining the development assumptions for assessing opportunities and constraints. Then, we describe opportunities for the CHA through the lens of potentially suitable land uses and intensity of uses. Constraints to implementing this vision are also identified. For each element, we identify potential tools that either help optimize opportunities or overcome any constraints. This memo concludes with a description of next steps in the CHAMP process, including alternatives and preferred strategy development. The information in this memo is organized into the following sections:

1 VISION AND NEEDS

As noted in TM #1: Existing and Planned Conditions, the CTCLUSI have been developing and clarifying a vision to provide economic benefit for their Tribal community, celebrate the natural environment and tell their story for several decades.

In 2008, the Tribes completed the *Coos Head Land use Concept Plan: A Vision for Seven Generations* for the site, identifying a vision and set of goals for guiding future planning and development. In 2015, the Tribes adopted the *Coos Head Phase 2: Alternatives Development Project*, building upon the 2008 Plan and laying the groundwork for the development of the CHAMP. Based on considerations from the 2008 Plan, the 2015 Plan created further development objectives that are pertinent to programming of uses on the site. For reference, see Exhibit 1: The CTCLUSI Vision, Goals and Objectives for Coos Head for a summary of these goals and objectives, as reviewed in TM #1.

Exhibit 1. The CTCLUSI Vision, Goals and Objectives for Coos Head

The 2008 *Coos Head Land use Concept Plan: A Vision for Seven Generations* identified 10 goals for developing the concept plan and to guide future planning and development. Those goals include:

1. Designate portions of Coos Head for Tribal Member Use (TMU) only.
2. Designate portions of Coos Head for Economic Development Use (EDU).
3. Provide mixed-use areas for TMU and EDU overlapping circles.
4. Provide a list of potential uses for the site.
5. Identify development priorities for all Circles of Use.
6. Utilize sustainable development practices to meet today's needs without compromising the site for future generations.
7. Acquire the Coos Head site in permanent Trust status for the Tribes.
8. Provide Infrastructure for future use and development of the site.
9. Provide for review of alternative sites in Tribal ownership when development is proposed.
10. Maintain a current and relevant vision and continue to plan for Coos Head as the site develops.

The 2015 *Coos Head Phase 2: Alternatives Development Project* used the following considerations from the 2008 Plan to guide the process for developing alternatives uses for site:

- Tourist commercial uses will be enhanced by the higher elevations and views of the beaches and ocean.
- Tribal members would like an open gathering area or meadow.
- Tribal member use areas should have a variety of features.
- Views of Gregory Point and up the coast to Lower Umpqua and Siuslaw Tribal member homelands should be accessible from Tribal member use areas.
- Recreation areas, meeting areas and covered areas will benefit both economic development uses and Tribal member use
- Impacted forest areas with non-native vegetation and hazardous materials impacts may be most suitable for heavier industrial uses, and these uses could be accessed from the east.
- The area along the bluff's edge is not suitable for development, but a pathway could be incorporated.
- The area that is being maintained by the U.S. Navy should be screened from other uses on the site.
- The portion of the site that has the Naval facility would be the most suitable area for any administrative offices that are moved to the site because of existing infrastructure such as roads and utilities, flat land, and potential for rehabilitation of existing buildings.

Since undertaking this CHAMP planning process, no differences with the current CTCLUSI vision, goals and objectives have been expressed by the Technical Advisory Committee (TAC), or Community Advisory Committee (CAC) or in stakeholder interviews. Accordingly, the following programmatic uses remain, conceptualized in the following way:

1. **Tribal Housing**: Eight units of 1-2 bedroom townhome-style housing.
2. **Conference and Retreat Center:** A large conference facility will take advantage of view corridors and provides overnight guest retreat facilities, including 50-60 rooms and detached cabins.
3. **Interpretive Museum:** A separate building from the Conference and Retreat Center, the interpretive museum will showcase the Tribe's cultural heritage and Coos Head's natural resources.
4. **Trails**: An ADA-accessible walking trail and bike path will loop along the bluff of the Coos Head site, avoiding the US Navy site holding. The trail potentially joins a future trail system that connects to Oregon Institute of Marine Biology (OIMB) through forested lands, becomes part of the Oregon Coast Trail and/or provides access to Bastendorff Beach.
5. **Roads:** Roads will be improved and brought up to standards based on expected development activity. A new main entry point to the CHA will be created off Coos Head Loop Road.
6. **Utilities**: Water, sewer and storm drainage will be upgraded to provide adequate capacity based on expected development activity.

CHAMP Development Programming

Considering these desired programmatic uses, consulting team members made market assumptions to assess size and intensity of development programming, specifically for the Conference and Retreat Center and the Interpretive Museum. This was done by summarizing a potential development scenario for an Interpretive Center from the Bal'diyaka Plan, which closely aligns with the CHAMP concepts for a Conference and Retreat Center and Interpretive Museum. The Bal'diyaka Plan was developed in 1992 and proposed a multi-faceted, nature-based, cultural heritage center on Coos Head. In addition to special events and programming in an auditorium and educational discovery room, other elements of the Bal'diyaka Interpretive Center include parking areas, an ethno-botanical interpretive trail and a re-created coastal Indian village along the cliffs. The following development assumptions for a similar CHAMP concept is based on the market analysis conducted for that scenario in the Bal'diyaka Plan.

Scenario 1 of the Bal'diyaka Plan estimates annual visitors of approximately 140,700 from all sources, including roughly 6,730 visitors from within Coos County, 62,620 from elsewhere in Oregon, 69,350 from outside Oregon, and 2,000 in school group attendance (*Table 1: Bal'diyaka Interpretive Center Attendance Forecast*).

Table 1. Bal'diyaka Interpretive Center Annual Attendance Forecast

Scenario One Number	
School Group Attendance	2,000
Coos County	6,730
Oregon	62,620
Out of state	69,350
Total	140,700

Source: Master Plan for Bal'diyaka Interpretive Center, Table 5, Dean Runyan Associates.

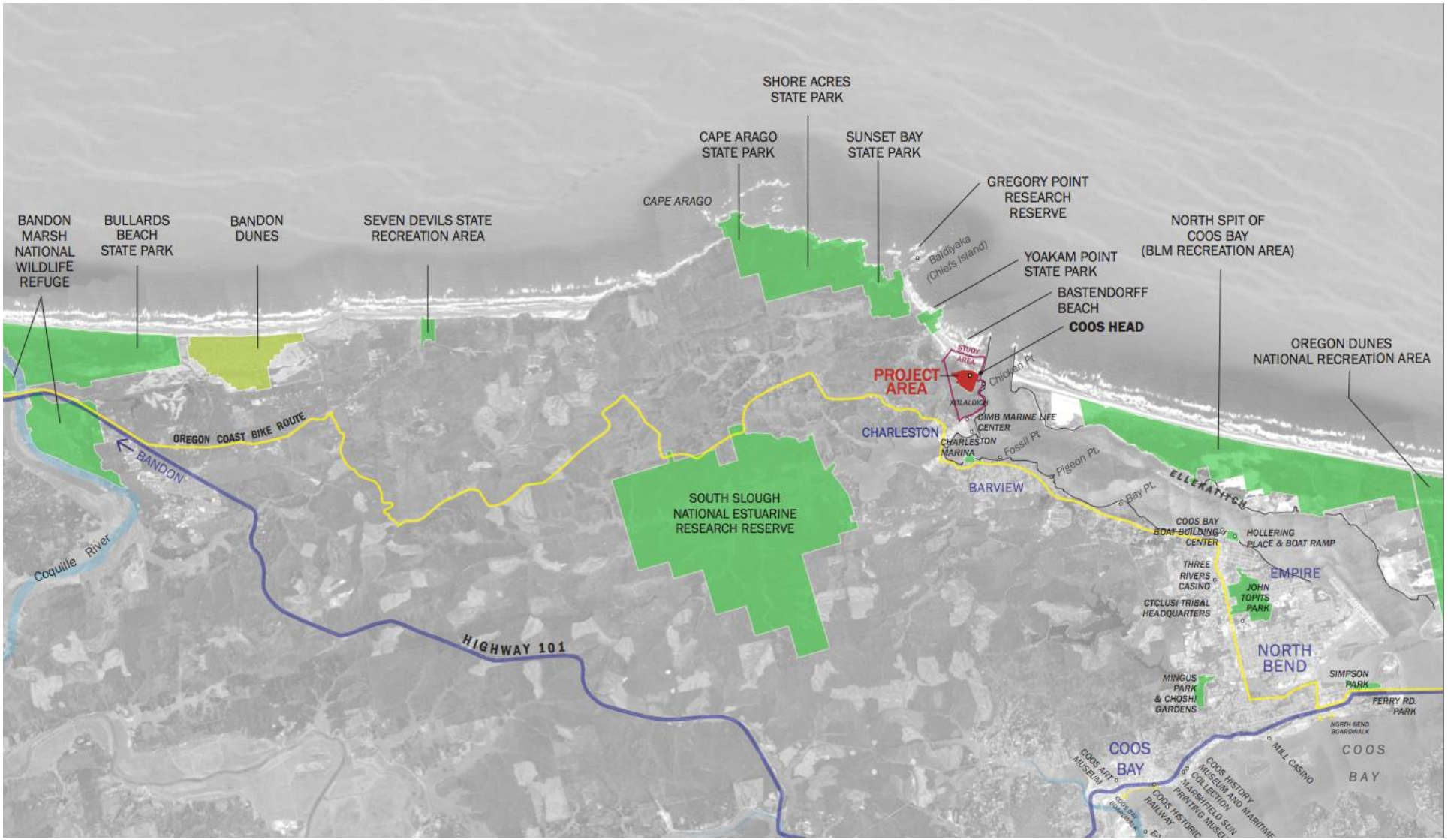
While the planning, environmental review, design, permitting, other approvals, public involvement, and construction may be implemented in the near term, it may require up to 20 years to achieve these levels of visitors. The Bal'diyaka Plan also provides a second, more aggressive scenario in which the Interpretive Center is fully established and achieves a higher market penetration on par with the High Desert Museum and other established, successful regional attractions, achieving up to 266,000 annual visitors. With strong management, marketing, and coordination with other regional attractions, these levels of visitors could certainly be possible beyond the 20-year planning horizon.

As with most tourist-based facilities, these visitors would be concentrated during the summer months, with possibly up to 20 percent of those visitors occurring in each of July and August. In fact, the Dean Runyan analysis of comparable attractions shows the Coos County Museum as receiving over half (55.6 percent) of its visitors during the peak-period of June through September.[1]

Any development would benefit from cross-marketing and coordination with nearby attractions. For example, nearby Sunset Bay State Park receives approximately 1.4 million day-use visitors annually and about 70,000 overnight campers. Nearby Shore Acres and Cape Arago State Parks bring additional visitors to the area as well.

[1] Dean Runyan Associates, Master Plan for Bal'diyaka Interpretive Center, Table 3.

Though the Bal'diyaka Plan does not include lodging, some niche lodging might be possible for the area. A feasibility study conducted in 1988 for Coos Head Eco-Tourism facilities conducted by the Portico Group concluded that at the time of the study, the market would not support development of overnight lodging. However, stakeholder interviews and recent anecdotal evidence suggest that niche lodging could do well in the area if it were appropriately scaled, marketed, and differentiated. While this proposition may warrant further study, Coos Head is geographically situated among several key destinations with impressive annual visitorship. The regional assets that will contribute and shape the development potential of Coos Head are illustrated on the next page in *Map A: CHAMP Regional Assets*. This includes nearby state parks, the Oregon Coast Bike Route, museums and amenities that are experiencing increasing levels of visitorship over time. The strength of the area's cultural heritage is also a key driver; *Map A* references the Hollering Place and Tunnel Point by *Ellekatitch* and *Xitlxaldich*, respectively, as the Coos Indians called it.



Map A. CHAMP: Regional Assets

2 OPPORTUNITIES

The following elements have been identified as opportunities within the CHA to meet the CTCLUSI vision for the site. *Map B: CHAMP Opportunities and Constraints*, illustrates some of these opportunities, in addition to constraints as described in the following section. Where applicable, the number icons correspond to those in *Map B.*

A. Incorporation of CTCLUSI cultural components and design elements

1 2 3 5

- The CHA is a revered place of great cultural and ecological importance in CTCLUSI culture and stories. Future site improvements must honor this significance through careful and methodical consultation with tribal historians and elders to ensure that sensitive areas are respected. Design of future facilities at the site can seek to incorporate native themes but must do so carefully, with CTLUSI input. Developing facilities that are modern yet sensitive to culturally appropriate architectural style is cited as important for promoting the Bal'diyaka concept of a living interpretive center public education. With guidance from the Tribes, facility design may incorporate sustainable and long-term use features, components of green design and best management practices for low impact development (including landscaping, lighting, windbreaks, grey water reuse, solar panels, etc.) Building upon the aesthetic assets on site, including the trees, natural features and cultural history, will maximize the ecological and social value in redevelopment in addition to economic value.

B. Reuse/Preservation of buildings, gateways, landscaping and other site amenities

3 8

The Project Area includes several leftover structures remaining from the US Navy's operations, described in detail in TM#1. These do not offer much potential for reuse, other than temporary storage. The Tribes have built a newer home as a site's caretaker residence, on Coos Head Road, at the main gateway to the site. Other site features such as asphalt roads, a tennis court and concrete foundations may be demolished, and could offer potential salvage material for future site construction. An existing baseball field is the only notable remnant of the US Navy facility's landscaping. The site benefits from existing infrastructure including water, sewer, communication facilities and roads. In addition, the Tribes have recently completed an environmental cleanup of the site.

1 2 4 5

C. *Open Spaces and natural areas*

The Project Area, being currently unused due to the ownership transfer from the US government to the CTCLUSI, is slowly reverting to a more natural state, with Scotch Broom taking over open areas and forest growing thicker at the site's edges. The Project Area is bordered to the west by Bastendorff Beach, a BLM park with rudimentary parking facilities and informal trails. Camping is available at Bastendorff County Park and Sunset Bay State Park. To the east, the site is bordered by dense forests of spruce and fir, known in the local native language as Xitlakaldich. Potential future trails may traverse this forest to connect Coos Head with Charleston and OIMB, subject to the Tribes' interest in allowing off-road trail access. Stakeholder input has emphasized the creation of open space for Tribal members to be able to enjoy traditional practices and culture. In addition, other passive recreational activities such as disc golf have been cited as uses that would fit in well with the forested assets on the site.

4

D. *Waterfront access for viewing, fishing and boating*

Coos Head is 120' - 150' above the ocean shore, at its highest point. Accordingly, there are no direct opportunities for boat launching. However, the site is adjacent to Bastendorff Beach, and the active Charleston Marina, 0.5 miles east of the Project Area, offers a variety of boat launch facilities. A number of fishing guides operate from this marina, attesting to the rich offshore sea life. Stakeholder input has advised that the site should connect to and support the area's fishing communities, and any planned development should maximize access to the ocean and the benefits of its resources.

1 2

E. *Visual linkages and visual corridors*

Positioned atop the bluff, the site is graced with outstanding filtered views to the ocean through trees from the site's west edge and northwest across the mouth of Coos Bay from the cliffs of Coos Head. Views north across Coos Bay are also available from the Coast Guard facility on Coos Head and from the wooded bluffs to the east. Incidentally, a large, temporary, roughly 30' high gravel mound on the site offers even better views to the ocean, supporting the potential value of multi-story structures.

6

F. *Partnerships to create an "Oregon Coast Trail," a new multimodal path from Charleston to CHA*

The Oregon Coast Trail is a 382-mile-long designation by Oregon Parks and Recreation (OPRD) that uses beaches, state parks and other public

lands, easements granted by private properties, US 101, and county and city streets. In various planning documents, potential sections of the Oregon Coast Trail are shown crossing through the Project Area and/or the Study Area and adjacent lands:

- As identified in OPRD's 2010 *Connections Strategy Plan for the Oregon Coast Trail*, Coos Head is highlighted as a possible route to formally extend a built multiuse section of the Oregon Coast Trail to connect Bastendorff Beach with the Oregon Institute of Marine Biology (OIMB) and the community of Charleston.
- The Bureau of Land Management's (BLM) 2011 *Bastendorff Beach Cooperative Management Plan* shows this section of the Coast Trail as starting in Charleston, then following Coos Head/Coos Head Loop Road on the opposite (south) side of the Project Area, and looping past the southwest side of Bastendorff Beach before continuing on to Shore Acres. The *Management Plan* also notes that CTCLUSI is willing to work on locating the Coast Trail across some part of Project Area in a manner consistent with Trail user through access and future redevelopment of the CHA.
- The CTCLUSI's 2008 *Coos Head Land Use Concept Plan* Illustrates a conceptual Coast Trail alignment that follows the high bluff on the north and west side of the Project Area above the Coos Bay Estuary and Bastendorff Beach.

5 6 7

G. Linking the CHA with other local areas, including Charleston and Bastendorff Beach

The CHA's unique and dynamic location is frequently cited as the site's greatest strength, having the capacity to rival Sunset Bay and Shore Acres as a significant regional asset. Future development of the CHA has the opportunity to link the site with other local areas and regional destinations, including the University of Oregon Institute of Marine Biology (OIMB) and new Marine Life Center located adjacent to the Charleston Marina.

Within the context of possible future trail opportunities as part of this process, CTCLUSI should support and encourage the ODOT and Coos County to prioritize the development of wider shoulders and/or bike lanes and sidewalks along Cape Arago Highway and county roads presently designated as part of the Oregon Coast Trail and the Oregon Coast Bike Route.

Future users of the Oregon Coast Trail can access the Project Area, and attractions such as the Coast Guard's Chicken Point Lookout and Bastendorff Beach, through connector or spur trails; or additional sidewalks/bike lanes, and shoulder widening, along county roads. The major key opportunities are:

- Connector trail through the existing southeast entrance to the CHA from the BLM-identified Oregon Coast Trail route. This trail would connect to the system of internal bicycle and pedestrian improvements established as part of site re-development.
- Connector trail from the proposed new northeast entrance to the CHA. This trail could run between the northeast edge of the Project Area and the "Additional Project Area" (Chicken Point) and end at a new overlook above the small portion of the Project Area that is at beach-level adjacent to Bastendorff Beach with views of the Coos Bay Estuary and South Jetty. This connector trail could be integrated into the internal circulation system benefitting Tribal-members and visitors to site amenities. The State standard for multiuse trails is10 feet to 12 feet width, but as these are connector trails an 8 foot width would suffice.
- Improved sidewalks, bike lanes, and/or shoulders along the existing roadway to the Coast Guard's Chicken Point Lookout. Access to this lookout could also be provided with a spur trail off of the "NE Entrance" connector trail.
- To the extent that topography and erosion concerns allow, stairways and ramps down the face of the bluff near the "Cove" that provide for more direct access for able-bodied visitors and Tribal-members. Such ramps could well exceed the 5% to 8% grade maximum as ADA-compliant structures would not be required, assuming that ADA-compliant access was provided as part of the Oregon Coast Trail.

H. Potential partnership with the Bureau of Land Management (BLM) to allow CTCLUSI to manage Bastendorff Beach (and associated improvements)

4

Direct physical access from Bastendorff Beach to most of the Project Area is greatly constrained by topography (see *Map C: Natural and Existing Conditions* and *Map D: Topography and Slopes*). The spur roadway to Bastendorff Beach parking lot and South Jetty runs along the base of the bluff atop which most of the Project Area is located. This beach access road terminates in a parking lot at the Coos Bay South Jetty. This roadway and parking lot is the current point of direct physical access to the small portion of the Project Area that is at beach-level (the "Cove").

BLM's 2011 *Bastendorff Beach Cooperative Management Plan* provides a framework for a cooperative land management strategy within the multi-jurisdictional Bastendorff Beach area.[2] The BLM is currently developing a

[2] OPRD manages the Beach from to extreme low tide to mean high tide (wet sand). BLM manages from mean high tide to the statutory vegetation line (dry sand).

new management plan for the area for recreational use. The *Management Plan* notes that the BLM has agreed to work with CTCLUSI to accommodate their interest in acquiring the remaining BLM-managed parcels on Coos Head. CTCLUSI is also currently advancing legislation through the US Congress for the transfer of the remaining BLM-managed Coos Head lands to the Tribe.

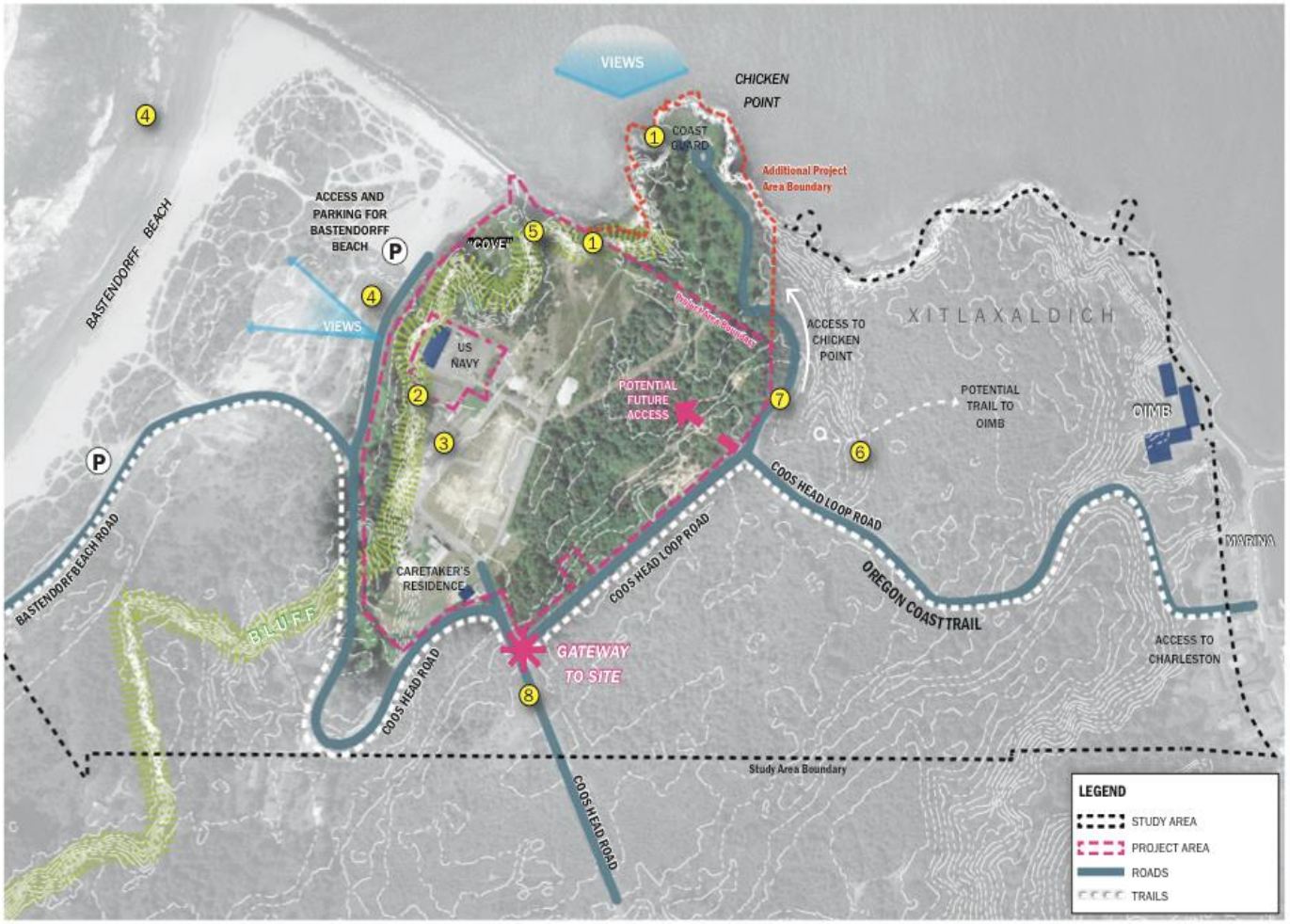
Partnerships between the BLM, Tribes and OIMB can help protect and enhance the environmental services provided by the assets on the site, including the forested areas, geology, proximate beaches, and native plants including the Spruce Trees, Salal and Oregon Coastal Huckleberries. For example, erosion control and onsite stormwater management could be assets if coordinated and designed correctly. The use of leading environmental technologies for stormwater and site management can be facilitated through the development of an area Memorandum of Understanding (MOU) that would describe area stakeholders' shared intent.

Open views of Coos Bay & Chicken Pt

Filtered views from site

Former Navy Building reuse potential

Potential partnership with BLM for Bastendorff Beach improvements. Beach is within tsunami indundation and flood zone



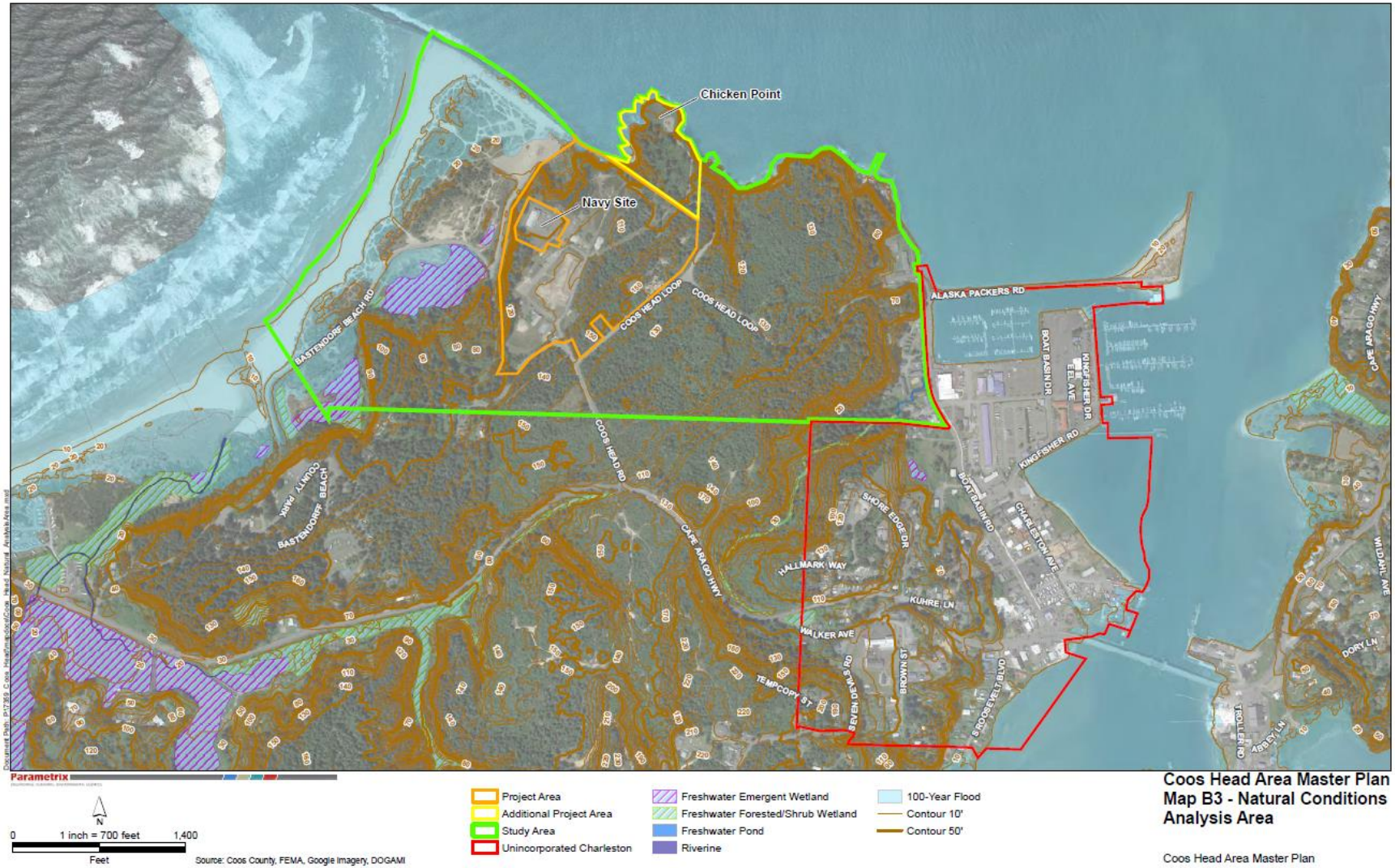
Steep topography between Coos Head and the Cove at Bastendorff Beach

Potential trail to OIMB

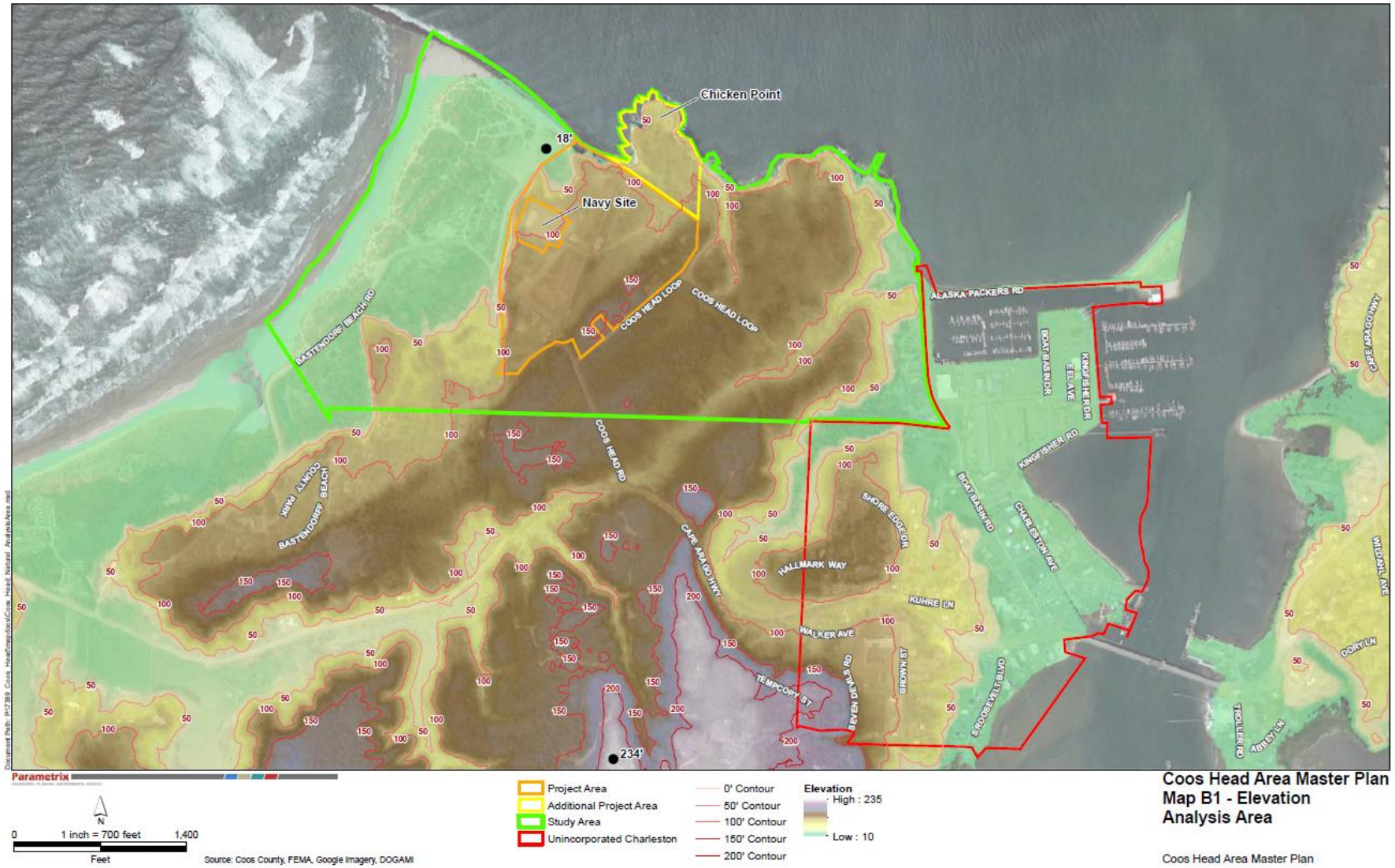
Gravel roads in study area vicinity

Main gateway to site from south

Map B. CHAMP: Opportunities and Constraints



Map C. CHAMP: Natural and Existing Conditions



Map D. CHAMP: Topography and Slope

3 CONSTRAINTS

The CHAMP scope of work identifies the following elements as constraints to implementing the programmatic uses for the CHA, as identified in the CTCLUSI vision for the site. *Map B: CHAMP Opportunities and Constraints*, illustrates some of these constraints, in addition to the opportunities described in the previous section. Where applicable, number icons correspond to those in *Map B*.

A. Topography, including steep or unstable slopes

5

Department of Oregon Geology and Mineral Industries (DOGAMI) landslide inventory maps shows no historic or recent landslides within the Project Area or Study Area. However, with a likely Cascadia earthquake in the coming decades, the steep bluffs along Bastendorff Beach are mapped as having "moderate" landslide potential, as are the highpoints of the ridge along the southeast side of the Project Area. The moderate landslide potential of the Bastendorff Beach bluff is one issue with the development of ADA-compliant or even able-bodied access from the top of the bluff down to the Beach.

Topographic Information for the entire Study Area is shown on *Map D*.

- Maximum elevation across the entire Study Area is approximately 150 feet, consisting of four small points of land atop the ridge along the southeast edge of the Project Area.
- The lowest elevation, excepting Beach, "Cove" and shoreline areas, is along the north and west-facing bluff that looks out over the Pacific Ocean and Coos Bay Estuary. This elevation is approximately 50 feet.
- The small dry "Cove" on the northwest side of the Project Area near to the South Jetty is approximately 20 feet in elevation.

B. Known hazardous materials sites (limited to sites within CHA still requiring mitigation)

3

Currently, several structures dating from Coos Head's former status as a US Military property remain on the site. Except for a newly constructed caretaker's residence located at the main South entrance, all remaining buildings are decommissioned and scheduled for demolition as part of ongoing environmental cleanup efforts. A "no further action" letter from the Department of Environmental Quality (DEQ) is expected in Fall 2016.

The CTCLUSI have led a ten year process of environment cleanup. All known hazardous materials have been removed or mitigated. A review of Oregon Department of Environmental Quality (ODEQ) records did not reveal any additional hazardous material site or complaints within the

Study Area. Hazardous materials mitigation sites or avoidance is therefore not expected to constrain site re-development.

4

C. *Environmental issues requiring avoidance or mitigation*

Given the relatively intense development and use of the site during its decades as a US Military facility much of the CHA has been significantly altered from its natural state. That being said, some environmental issues, such as erosion, will constrain development and need to be addressed as part of detailed site permitting and development.

Statewide Planning Goal 5: *Natural Resources, Scenic and Historic Areas, and Open Spaces* requires local governments to adopt programs that will protect such resources. The following Goal 5 resources are not documented or designated within the Project Area or Study Area: Riparian Corridors, Federal Wild and Scenic Rivers, State Scenic Waterways, Approved Oregon Recreation Trails, Natural Areas, Wilderness Areas, Mineral and Aggregate Resources, or Energy Sources.

The Oregon Water Resources Department (OWRD) does document the Project Area as a groundwater "place of use" indicating that at some point groundwater sourced elsewhere was used on the site. There are however no State-permitted Project Area or Study Area groundwater wells documented in OWRD records.

The current Coos County Comprehensive Plan includes policies for Mineral and Aggregate Resources, Fish and Wildlife Habitats (six specific bird species are identified, see "Endangered Species" below), Natural Areas and Wilderness, Water Resources, Unique Scenic Resources, Natural Hazards, Dunes, and Ocean and Coastal Lake Shorelines.

Any re-development of the CHA should revisit or assess these resources for applicability. The lack of references to any resource in State or county plans does not necessarily mean that such resources are not present. For example, there is significant invasion of non-native plant species in the CHA, such as Scotch Broom, that should be controlled.

<u>Estuary Management</u>

Coos County has adopted an extensive set of Coos Bay estuary management regulations that are embedded in its Comprehensive Plan. Three of the Shoreland Management Units are applied within the Coos Head site (see *Map* C). The County's Estuary Management Plan describes a management objective for each unit, as well as allowed and "special conditions" uses and activities. Re-development of the CHA should comply with these management unit objectives and regulations.

- **Water-Dependent Development Shorelands (WD):** Areas managed for water-dependent uses with some of these areas are suited for water-related development. Water-related and other uses are restricted to specific instances prescribed in unit management objectives. Water-Dependent Development Shoreland areas are always located outside of urban growth boundaries (UGB), and satisfy needs that cannot be met within the UGB.
    - *Bastendorff Beach, Water-Dependent Development Shorelands (WD), Unit CB 68B-WD:* This BLM-managed beach is within the Study Area and includes the beach and foredune areas within 1,100 feet of the Coos Bay South Jetty. The rest of the BLM-managed beach within the Study Area is zoned Forest. The County's Estuary Plan states that the management object of Unit 68B-WD is to "allow uses and activities associated with jetty construction and maintenance, including road access and construction, unloading and storage facilities, and water-dependent recreational uses."
- **Conservation Shorelands (CS)**: Areas managed for uses and activities that directly depend on natural resources (such as farm and forest lands). While it is not intended that these areas remain in their natural condition, uses and activities occurring in these areas should be compatible with the natural resources of the areas. Conservation Shorelands include commercial forestlands, areas subject to severe flooding or other hazards, scenic recreation areas, specified public shorelines, and important habitat areas.
    - *Chicken Point, Conservation Shoreland Areas (CS), Unit CB 68A-CS:* This BLM-managed area (named "Coast Guard Facility" in the County Plan) corresponds to the tract that is illustrated on CHAMP mapping as "Additional Project Area", though the northern point of the parcel (Tract 37) is withdrawn for Coast Guard use. The County's Estuary Plan states that the management object of Unit 68A-CS is to "maintain the riparian habitat and scenic qualities of this steep rugged bluff which overlooks the mouth of the estuary".
- **Development Shorelands (D)**: Areas in this unit are managed to maintain a mix of compatible uses, including non-dependent and non-related uses. Development areas include areas presently suitable for commercial, industrial, or recreational development. Development Shoreland areas are always located outside of the Urban Growth Boundary (UGB) and satisfy needs that cannot be met within a UGB.
    - *Shoreland between Chicken Point and Charleston, Development Shorelands (D), Unit CB 67-D:* This area is owned

by the State of Oregon (University of Oregon). The County's Estuary Plan states that the management object of Unit CB 67-D is to "maintain the existing uses and the riparian and scenic values of the steeper slopes in the area".

Wetlands and Non-wetland Waters

There are no documented wetlands within the Project Area, nor any non-wetland waters. Marine wetlands are present below the Coos Head bluff at the entrance to Coos Bay, and there are some wetlands behind Bastendorff Beach dunes, particularly at the west end of the Study Area.

Wetlands should not therefore be a constraint, although if Bastendorff Beach becomes part of any CHAMP/CTCLUSI re-development plan, the preservation and mitigation of beach wetlands may be a consideration.

Endangered Species Act and Oregon-listed Species

According to a US Fish and Wildlife Service database, there are potentially five non-marine federally listed or proposed endangered or threatened species that may occur in the CHA. Bird species include Marbled Murrelet, Western Snowy Plover, and Northern Spotted Owl, one plant species - Western Lily - and one mammal - Fisher. This is based on general criteria and historic habitat, not actual documentation. For instance, Bastendorff Beach currently has no Western Snowy Plover populations due to heavy recreational use and dune habitat alterations. Another six endangered or threatened marine bird or turtle species could also be present along the ocean shore.

State of Oregon listed species are not documented in a form that can be tied specifically to the CHA. The Coos County Comprehensive Plan identifies six bird species of concern, and specifically lists probable habitat areas by tax lot information for Bald Eagle, Great Blue Heron, and Band-tailed Pigeon. None of the identified areas are on Coos Head.

Any re-development of the CHA should revisit or assess these and other animal and plant species for applicability. The lack of references or specifics to any species in State or county plans does not necessarily mean that such species are not present.

4

D. Tsunami inundation/flood zones

Tribal staff and leaders indicate that Coos Head and the Project Area was where Tribal members historically sought refuge from flood and tsunami events.

Based on a review of the Oregon Department of Geology and Mineral Industries (DOGAMI) mapping, the entire Project and Study Area, except for a small beach-elevation subarea at the base of the bluff along Bastendorff Beach (referred to as the "Cove" on *Map B*), is outside of all tsunami inundation zones. However, the entire Oregon coast is also subject to a likely Cascadia earthquake in the coming decades. Site re-development could provide tsunami information and designating evacuation routes, especially since visitors who are neither tribal nor local residents may not be familiar with local conditions.

There are no flood areas within the Project Area, although much of the Bastendorff Beach dune areas are subject to flooding, noted on *Map B*.

Storm Water Management

Storm water management within the Project Area and along roadways accessing the site is provided through sheet flows, open ditch drainage, and cross culverts as is the conventional practice in rural areas.

Future site development, or improvements to Study Area roads accessing the re-developed Project Area, could require alterations and upgrades to the storm water management system. New systems that provide for natural storm water flow management and treatment and that sustain or improve water quality would be consistent with the values that CTCLUSI has ascribed to re-development of the CHA.

6 7 8

E. Transportation systems limitations, including potential ROW constraints

Transportation systems limitations for the Study Area include a lack of accommodations for pedestrian and bicycle users, unmet mobility targets and unmet street design standards.

Most streets within the Study Area have not been improved to urban standards and lack accommodation for pedestrian and bicycle users. Those walking or biking in the study area typically have to walk or bike along the edge of a street. With the posted speeds ranging up to 45 miles per hour and the roadways at times having steep grades and sharp curves, these conditions are generally not conducive to comfortable shared walking and biking travel conditions.

The Cape Arago Highway/ Boat Basin Road intersection exceeds the adopted mobility target for the intersection. The side street at this intersection (Boat Basin Road) generally experiences high delay due to steady volumes on the uncontrolled roadway (Cape Arago Highway). This approach typically requires more time for an acceptable gap in traffic to

make a left turn onto the mainline, therefore, the delay of the side street is high and capacity is reduced. This condition is expected to worsen with additional traffic in the study area associated with the CHA development.

Most streets in the Study Area do not comply with the applicable street design standards. Some streets may need to be improved to accommodate future travel, including pedestrian and bicycle accommodations. The design standards may be modified for select streets where it would better fit the vision for the study area. These standards would differ from the Coos County Transportation Systems Plan (TSP), and would require an amendment to the County's street design standards included in the TSP.

F. Potential land use conflicts and legal or policy requirements or guidelines

Currently, the Project Area is zoned as Forest, and the Additional Project Area zoned as a Conservation Shoreland Area. Existing land uses within the CHA also include Commercial, Water-Dependent Development Shorelands and Development Shorelands (see Map *E: CHAMP Existing and Built Conditions* for zoning and property lines).

Due to potential development programming being considered for the CHA, the site will need to be rezoned. Possible new zones for the properties within the CHA, including any nonconforming uses grandfathered within the Forest designation, include mixed recreational, commercial zone and controlled development. Additional actions to overcome any further land use conflicts include expanding the Urban Unincorporated Boundary of Charleston for public services, and propose associated amendments to the Coos County Comprehensive Plan.

Stakeholder input has noted the regulatory challenge of addressing illegal camping, primarily in wooded areas surrounding the site as well as Bastendorff Beach. The University of Oregon and OIMB have taken great strides to clear out and police their forested areas. The BLM is going through permitting of a new 24-hour rule that should limit extended overnight camping on site. Any upgrades to lighting also should help.

G. Utilities

Wastewater

Wastewater collection from the Project Area is provided by the Charleston Sanitary District. A new 6-inch sewer main has recently been built. This new main extends from a new sanitary sewer lift station near the Project Area's US Navy inholding to the planned new northeast entrance to the site at the Coos Head Loop/Chicken Point Loop Road intersection. The 6-inch line then continues along Coos Head Loop to connect to an

existing Sanitary District sewer main on Boat Basin Road in the community of Charleston. This sewer line crosses through BLM-managed lands. Sanitary District officials indicate that this considered a private line to serve current activities on the Project Area site. The line does not have sufficient capacity to accommodate expected future development of the Project Area as understood by the District. Interior to the Project Area, a series of sewer laterals as shown on *Map E* serve the other areas within the site.

BLM staff have stated if any new sewer lines crossed BLM-managed lands in order to connect and expand service to the Project Area that the manager of the line (either CTCLUSI or Charleston Sanitary) would need to apply for a grant of right-of-way grant from BLM.

Wastewater treatment is provided by the City of Coos Bay. The City has a new wastewater treatment plant under construction that will have an 8.0 million gallon per day capacity. This plant was designed to meet area growth over the next 20 years, including development in Charleston and the CHA.

Water

Drinking water is supplied to the Project Area by the Coos Bay-North Bend Water Board. Recent improvements replaced deteriorated water lines within the site. See *Map E* for existing water mains and lines within and leading to the Project Area.

These internal water system improvements connect to an existing Water Board-owned 12-inch diameter water main at the Project Area's current southeast entrance. The Project Area is also served by a 6-inch diameter looped main that goes from the north end of Boat Basin Road in Charleston up Coos Head Road (named Coos Head Lookout Road on Water Board maps) to the current southeast entrance to the site.

BLM staff indicated that the agency does not have any records of water lines crossing through BLM-managed lands to serve the Project Area.

Water Board staff indicated that an upgrade of the 6-inch main to a 12-inch diameter along the line's Coos Head Lookout Road section (Boat Basin Road to Project Area's current southeast entrance) could provide more water to the Project Area. The water line is metered at this southeast entrance. Water Board staff indicated the cost to upgrade to 12" would fall between $0.75 million and $1.0 million.

The need for additional water service capacity will be driven by the types of development that are ultimately selected for the site by the Tribes.

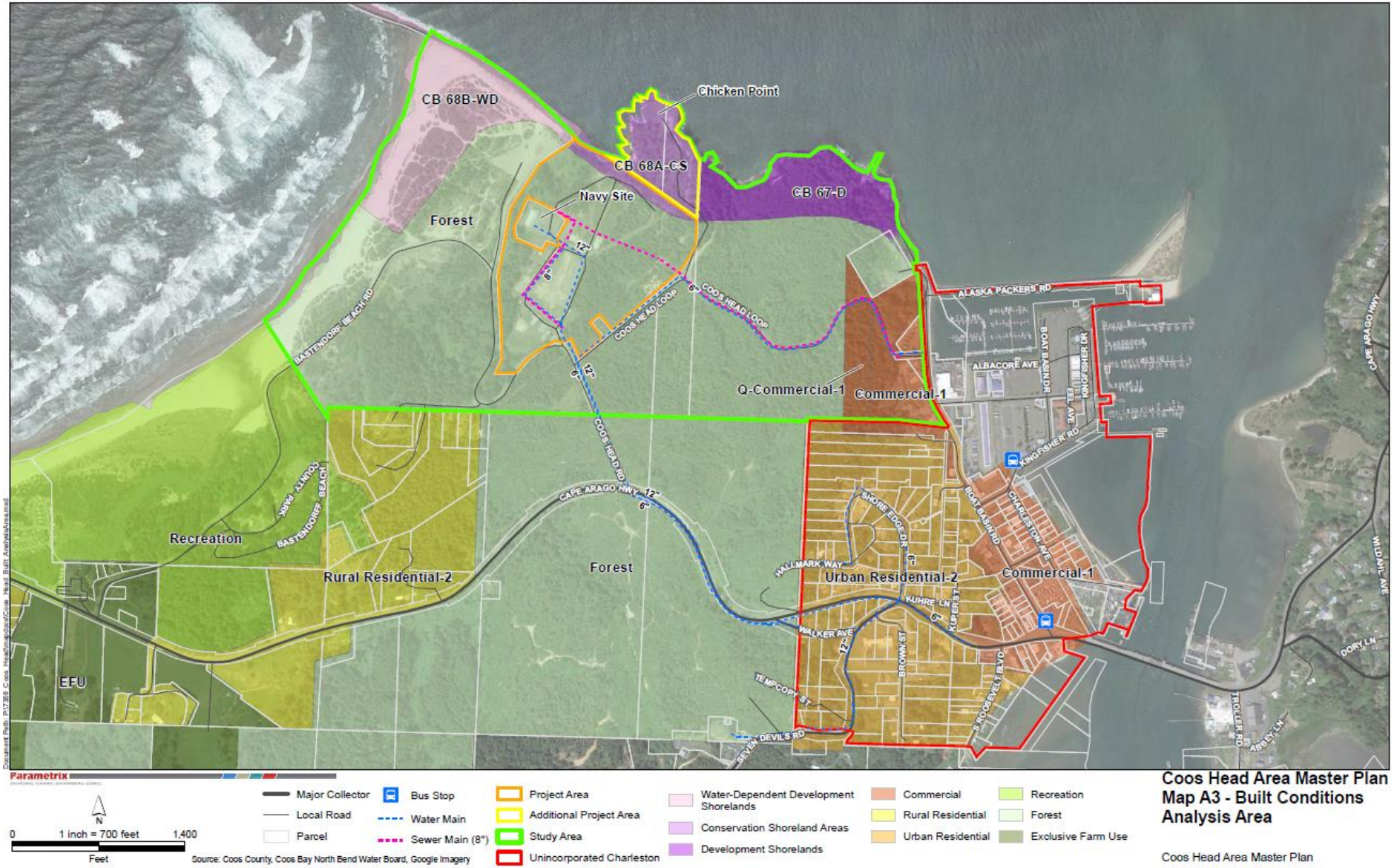
Natural Gas

Natural gas is provided in the Coos Bay-area by Northwest Natural, an investor-owned utility. According to a search of the NW Natural website, natural gas service is not available at Coos Head.

Depending on the types of uses and development selected by the Tribes for the CHA, natural gas may be a highly desirable source of power and heating. If such discussions have not already or recently been held, it would be useful for CTCLUSI to meet with Pacific Power to understand the possibilities and costs of extending natural gas to the site.

Electrical Power

Electrical power is provided in the Coos Bay-area by Pacific Power, an investor-owned utility. Depending on future site development, a new electrical power local distribution system within the Project Area will have to be re-established. Presently, electric power to the Project Area's southeast entrance has a 25kV capacity. This is considered a medium voltage service suitable for electrical power distribution in both urban and rural areas. Based on all Project Area concepts discussed to date, the current 24kV electrical service to the site is likely to be sufficient. According to BLM, Pacific Power buried the overhead line leading to the southeast entrance in 2013. If any new power lines are planned, they will need to be authorized through BLM's right-of-way granting process to the extent that lands in the surrounding Study Area are still under BLM-management at the time of development.



Map E. CHAMP Existing and Built Conditions

4 NEXT STEPS

We will use comments and feedback gathered at TAC and CAC meetings #2 and Public Meeting #1 to refine the CHAMP development programming. Opportunities and constraints discussed in this memo will be revised based on input received in this phase, and this guidance will help inform the development of built environment alternatives for the CHA this fall.