
CLATSOP PLAINS COMMUNITY PLAN



2040

ORDINANCE 24-06
ADOPTED FEBRUARY 28, 2024

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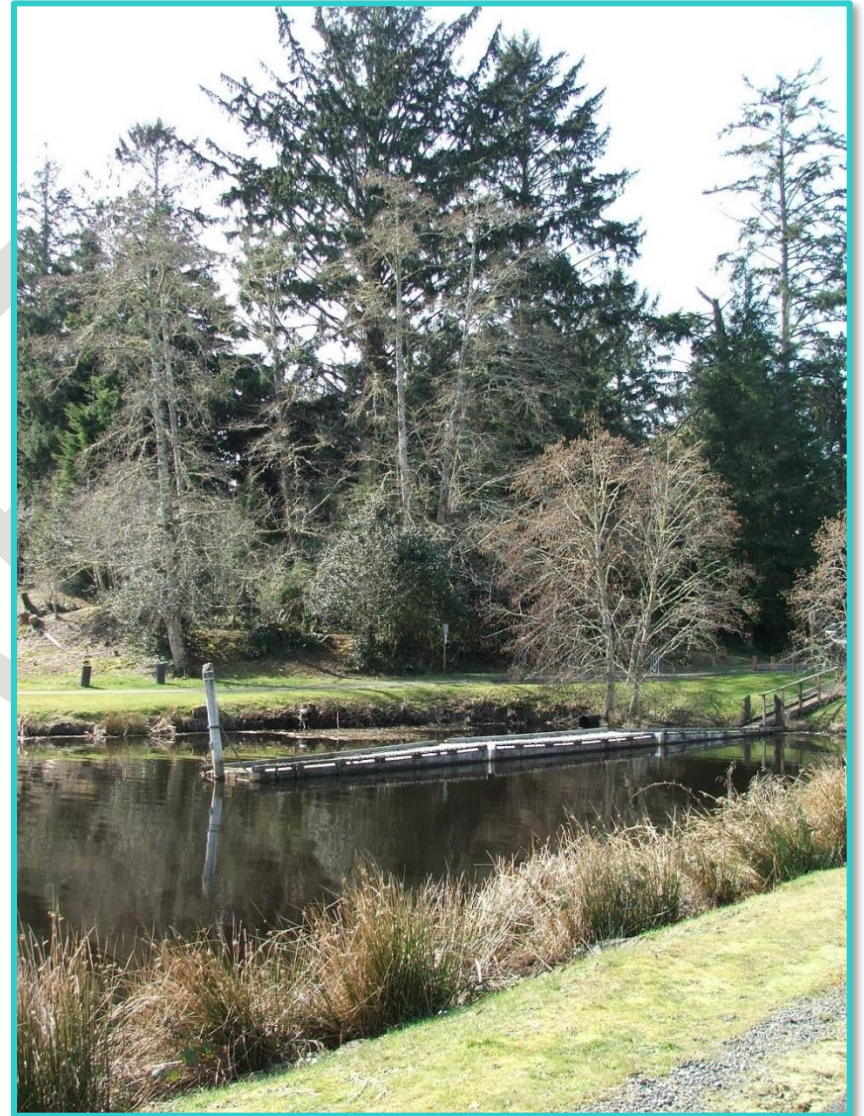


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INTRODUCTION

Overview

The Clatsop Plains planning area encompasses approximately 16,307 acres in the northwest section of Clatsop County along the coast. This planning area, for the most part, relates toward the ocean, with the various beaches and rolling dunes; and toward the several lakes in the planning area. The Clatsop Plains is essentially bisected by U.S. Highway 101. This highway is a major line for north-south movement down the Oregon Coast as well as a corridor of travel between the two population centers in the plains – Warrenton and Seaside. The 2020 Decennial Census estimated the population of the rural northwest part of Clatsop County, which includes the Clatsop Plains Planning Area as 3,393. This is an increase of 33% from 2010.

Planning Area Demographics

Size: 16,307 acres

Population: ~3,393

e911 Address Points: 1,750

(source: 2020 Decennial Census)

Landscape Units

The basic idea of the landscape unit is that it reflects a set of characteristics which, when taken together, constitutes a natural process. The soils, hydrology, wildlife, vegetation, and land forms are interrelated as a functional unit. The



landscape units provide a framework for development that is based on the land's capability. Each piece of land is in a landscape unit. The landscape units which occur in the Clatsop Plains planning area are:

- **Coastal Beach and Dunes:** The County has taken an exception to Goal 18: Beaches and Dunes restricting development on an active dune in the Surf Pines residential area. Continued development in this area must minimize environmental effects. Developments or activities in this area must be reviewed for possible environmental impacts, including:
 1. whether or not the area is subject to flood hazards or storm waves,
 2. de-vegetation of dune areas that might result in wind erosion and damage to nearby properties,
 3. possible drawdown of the groundwater, and
 4. possible pollution of the groundwater.
- **Alluvial Lowlands:** Examples in the Clatsop Plains are the lowlands along the Skipanon and Necanicum Rivers.
- **Alluvial Terraces:** Alluvial terraces are present above the Skipanon River and in the area east of the Necanicum River.
- **Coastal Range Foothills:** The Coast Range foothills in the Clatsop Plains consist of the western slopes of the Clatsop Ridge. The ridge divides the Lewis and Clark River drainage on the east from the Skipanon River drainage and the Clatsop Plains on the west. These foothills are minor hills on the edges of the Coast Range Mountains. They range in elevation from 50 to 500 feet, are generally composed of sedimentary rock, and tend to have rounded ridge tops.
- **Estuary Wetlands**
- **Freshwater Wetlands**
- **Waterbodies**
- **Shorelands:** Statewide Planning Goal 17: Coastal Shorelands established the coastal shorelands planning area to include lands west of the Oregon Coast Highway U.S. 101 and 500 feet from the shoreline of coastal lakes.
- **Estuarine Resources:** There are two estuary systems within the Clatsop Plains:

Zachary C. Townsend, Ph.D.
Clinical Ecology MS
600 Exchange St., Ste. 300
Annapolis, OR 97402
(503) 325-8562
August 22, 2002

This map was produced using Clatsop County GIS data. The data is maintained by Clatsop County to support its governmental activities. Clatsop County is not responsible for any map errors, possible misuse, or misinterpretation.

MAP 2

Clatsop Plains

Northeast

Highway 101

Highway 101 Business

Youngs Bay Road

Tucker Creek

Lohan Lane

Lewis and Clark River

Lewis & Clark-Olney-Wallooskee

Highway 30

Highway 202

Saddle Mountain Road

Seaside Rural

Highway 26

0 5 Miles

Legend:

- Clatsop Plains Planning Area
- Dunes
- Coastal Beach
- Headlands and Points
- Marine Terrace
- Alluvial Lowlands
- Alluvial Terrace
- Coast Range Foothills
- Basaltic Highlands
- Sedimentary Highlands

Fort Stevens State Park / Mouth of the Columbia

This subarea consists of the northern part of Fort Stevens State Park and includes Clatsop Spit, the bay behind the spit known as Trestle Bay and the adjacent shorelands southeast to the City of Warrenton urban growth boundary. This area does not overlap with other management units and contains waters, wetlands and shorelands.

Erosion problems along Jetty Sands and on Clatsop Spit just south of the South Jetty, use of the area by four-wheel vehicles, removal of beach logs, the possibility of ocean waves breaching the spit south of the jetty, and biological restoration are ongoing issues of concern. Per information from the U.S. Army Corps of Engineers, the mouth of the Columbia River's jetty system was constructed between 1885 and 1939. The system consists of three rubble-mound jetties: North Jetty, South Jetty and Jetty A. Constructed on massive tidal shoals and totaling 9.7 miles in length, the jetties minimize navigation channel maintenance and make passage safer for vessels transiting between the Pacific Ocean and the Columbia River. Both north and south jetties recently required critical repairs to ensure their continued function until the implementation of the Mouth of the Columbia River Jetty System Major Rehabilitation Project, which provides a long term repair and maintenance plan for the jetty system. This plan is incorporated into the *MCR Jetties Major Rehabilitation Evaluation Report*. The last critical repairs occurred to North Jetty in 2015, South Jetty in 2007 and Jetty A in 1962. In 2021, the observation tower at Lot "C" at Fort Stevens was closed during rehabilitation of the South Jetty. That work is expected to be completed in 2023.

The jetties are regularly pounded by Pacific Ocean waves between 10 and 20 feet high with winter storms bringing extreme waves in excess of 30 feet. Over the years, many areas of each jetty were severely damaged by these waves. Increased storm activity and the loss of the shoaling sand upon which the jetties are built have taken a toll on the structural integrity of the jetties.

If a critical section of the jetties were breached during a large storm, sand could be deposited into the federal navigation channel potentially shutting down commercial shipping. Restoring the channel entrance would require expensive emergency repairs to the jetty and dredging to restore the channel to depth.

Necanicum Estuary

The Necanicum Estuary is located in the cities of Seaside and Gearhart and within unincorporated Clatsop County. This estuary is confined to the area of sands that have built up as a result of longshore drift and wind transport of Columbia River sediments. A seasonal high water table exists over much of the area surrounding the estuary. Water quality problems

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within the basin include low levels of dissolved oxygen and high levels of phosphorous content, both of which occur in the Neacoxie River. The Necanicum Estuary has been physically altered by humans through numerous fillings, riprapping and the extension of the sand spit.

In planning for the Necanicum Estuary, the cities of Seaside and Gearhart jointly worked together with the County to develop a coordinated plan for the estuary in the 1980s. As with the Columbia Estuary Management Plan prepared by CREST, this plan has not been updated in several decades and it is recommended that Clatsop County do so as part of the update of Goals 16 (Estuarine Resources) and Goal 17 (Coastal Shorelands).

The Necanicum Estuary is classified as a Conservation Estuary. Conservation estuaries shall be managed for long-term uses of renewable resources that do not require major alterations of the estuary.

Purpose of the Clatsop Plains Community Plan

While the land surface area of the County remains constant over time, inevitably the population has and will continue to grow. There will be greater demand and need for more land for commercial, industrial and urban or suburban type development. The choices made in the use of land have consequences and impacts that may reverberate for generations. For example, the decision to commit land to a subdivision precludes the use of that land for many other purposes for decades to come.

With this awareness, the Clatsop County Comprehensive Plan was developed for the purpose of providing a guide to development and conservation of Clatsop County's land resources. It is a generalized long-range policy guide and land use map that provides the basis for decisions on the physical, social and economic development of Clatsop County.

The Plan also coordinates the various factors which influence community development such as sewer and water, transportation, housing, commerce, industry, schools, land use, recreation, and natural resources. It establishes goals and policies which recognize and plan for the interrelationships and interactions of these factors. The Clatsop Plains Community Plan builds upon the work of the countywide Comprehensive Plan by identifying trends and issues specific to the planning area and developing policies to address those concerns. For example, Clatsop County has taken an exception to the Statewide Planning Goal 3: Agricultural Lands and to a portion of Statewide Planning Goal 18: Beaches and Dunes in the Clatsop Plains Planning Area. An exception is when the governing body, in this case the Board of County Commissioners, decides it cannot apply a Statewide Planning Goal requirement for a specific situation. A list of all exception areas is available at the Clatsop County Community Development Department.

The Clatsop County Comprehensive Plan and the attendant community plans are a statement of public goals, policies, objectives and

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standards, developed in accord with Goal 1 and public input, that are intended to be used in making specific decisions about present and future land use, along with various maps. To determine whether a specific land use proposal is appropriate, a decision must be made concerning the applicability of each goal, policy or standard to the proposed project. A proposed development must be consistent with both the county's Comprehensive Plan, applicable community plan, and development standards in order to achieve the vision outlined in these foundational documents.

Review and Update

The original Clatsop Plains Community Plan was adopted on November 21, 1979 (Ordinance 79-10). Since its original adoption, the Clatsop Plains Community Plan has been amended several times:

- **Ordinance 82-03:** Prohibiting clustering of development in Surf Pines
- **Ordinance 82-32:** Amendments to include findings on the Clatsop Plains groundwater protection plan
- **Ordinance 83-17:** Amendments to address comments from the Department of Land Conservation and Development (DLCD)
- **Ordinance 84-09:** Amendments to address comments from DLCD
- **Ordinance 84-10:** Amendments to address comments from DLCD
- **Ordinance 03-08:** Amendments related to revised policies in Goal 7: Areas Subject to Natural Hazards and Goal 18: Beaches and Dunes
- **Ordinance 12-11:** Amendments documenting a Goal 11 Exception (Public Facilities and Services) to allow the City of Warrenton to extend sewer services to Shoreline Estates Subdivision near Cullaby Lake. The exception was required to address a public health issued related to the Shoreline Sanitary District's sewer plant.
- **Ordinance 14-03:** Incorporate new policies developed during the North Clatsop Plains Sub-Area Plan the County prepared in partnership with state and local community partners. The plan included a series of policy actions intended to maximize the compatibility of future land uses and activities with Camp Rilea's operations, sensitive natural and ecological resources, and the existing, rural open space and character of the North Clatsop Plains and its coastal communities. The document also presented a comprehensive approach to improving and protecting water quality and trail connectivity for multiple users, and minimizing the potential for traffic congestion near the Camp Rilea entrance at Highway 101.

In addition to the amendments noted above, the Clatsop Plains Community Plan is designed to work in coordination with other sub-area plans that have been created either by Clatsop County or other agencies within the planning area. These sub-area plans include:

- Fort Stevens Master Plan (2001)

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- Fort Stevens State Park Historic Fort Area – Site Development Plan (2001)
- Oregon Solutions Clatsop Plains Elk Project Declaration of Cooperation (2021)

History of the Clatsop Plains Planning Area

First Peoples

Chinook ikanum (stories) tell of the origin of the Clatsop Plains land form. Its extensive freshwater lakes and marshes provided a habitat for various species of waterfowl and large herds of deer and elk. Its proximity to the rich salmon runs in the Columbia and other small and large tributaries to the Columbia, such as the Skipanon (formerly known as the Skippernewan) provided the local Clatsop people with enough resources to provide for their sustenance and trading requirements.

The Chinookan name “Clatsop” refers to dried and pounded salmon. This was a primary food source and trade item for this area’s First People. The strategic location near the mouth of the Columbia River (Iyagay’l imal or "Great River") positioned Clatsop Chinook in the middle of an extensive trade network that stretched up the Columbia River to the Rocky Mountains and beyond, as well as the great distances along the Pacific sea coast. A revered male Clatsop elder named Cullaby, whose name now marks a large lake in the central area of the Clatsop Plains, helped maintain a village site, now long gone, on this lake that feeds the Skipanon River.

Despite bombardment by the Hudson’s Bay Company of one of their most important villages, Neahkeluc (now underneath the former U. S. Coast Guard Station of Point Adams), and treaty negotiations that attempted to remove them from their aboriginal lands, the Clatsop People continue to reside in Clatsop County today. Most are enrolled in the Chinook Indian Nation (CIN) that is comprised of the five westernmost Chinookan-speaking tribes. The CIN includes the Clatsop and Kathlamet of Oregon and the Lower Chinook, Wahkiakum, and Willapa of what is now Washington State. In 2019, the CIN purchased 10 acres along Tansy Creek, the site of a historically-located Chinook village. In 2020, the North Coast Land Conservancy (NCLC) transferred ownership of historical tribal lands at Neawanna Point Habitat Reserve to the Clatsop-Nehalem Confederated Tribes. Federal recognition of the Clatsop and Nehalem tribes was terminated by Congress in 1954. The Chinook Indian Nation is now organized as a 501(c)(3) nonprofit organization. The NCLC has been in conversations with tribal members for about three years to explore options for how the Conservancy might help the CIN acquire property in their traditional homelands.

In 2021, the Board of Clatsop County Commissioners voted to approve a resolution supporting federal recognition of the Chinook Indian Nation. To date, this federal recognition has not been granted and the two local federally-recognized tribes are the Confederated Tribes of the Grande Ronde and the Confederated Tribes of Siletz Indians.

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European Settlement

The geographic location and the physical environment of the Clatsop Plains provided the setting for one of the earliest pioneer settlements in Oregon. The rolling hills, combined with the absence of thick timber, made the area ideal for agricultural development.

Lewis and Clark chose to make their encampment on the edge of the Clatsop Plains on the Netul (now Lewis and Clark) River. They were ill-prepared for the extremes of the Northwest coastal winter and their journals recite gloomy tales about the cold and damp winter of 1805-1806. The same accounts, however, also mentioned an abundance of game that provided for their needs during the long winter and as supplies for their return trip to the East the following spring.

As Euro-American pioneers began to trickle into the Oregon country in the 1830's and early 1840's, Clatsop Plains became one of the first areas of settlement. Solomon Smith was the first Euro-American settler to realize the advantage of the rolling meadows for agriculture. His strategic marriage to a Clatsop woman, Celiast, furthered his successful life on the Plains. By 1843, the news of rich farmlands in Oregon brought an influx of new settlers into the Willamette Valley. Solomon Smith and others encouraged several of these families to settle on Clatsop Plains rather than the Willamette Valley.

One of the most significant Euro-American historical events to occur on the Clatsop Plains was the establishment of the Pioneer Presbyterian Church. As the congregation grew, it became impractical to meet in private homes and the first building was erected in 1850. A severe windstorm destroyed the original building in 1872 and a new church was immediately constructed. By 1926, the second church was dilapidated and beyond repair, so a fundraising project was started to build a new structure. Construction of that structure was completed in 1930.

As new towns and cities came into being, Clatsop County residents felt they needed military protection. In 1852, an Executive Order was given to build a fort west of Hammond and to name it Fort Stevens in honor of General I. I. Stevens, who had been the territorial governor of the Washington Territory. The fortification was started in 1863 and completed in 1864, being the first coast defense installation at the entrance to the Columbia River.

During the 1920s, the Astoria Golf and Country Club was established, taking advantage of the rolling hills and soil that Solomon Smith found so attractive many years earlier. During this time, the Roosevelt Coast Military Highway from Astoria to California was also completed. This road is now called the Oregon Coast Highway U.S. 101. In 1927, Camp Clatsop, now Camp Rilea, was constructed. The ongoing use of this military installation continues to shape land use planning efforts in the Clatsop Plains planning

area.

For many decades, the Clatsop Plains was primarily an agricultural area. Development has mostly occurred around the small lakes, the Skipanon River and streams in the area, such as the Neacoxie, and in the towns of Warrenton, Hammond, and Gearhart. In 1905, a ditch was constructed that changed the flow of the Neacoxie River into the Skipanon River. The ditching, which opened up more land for grazing, impacted Clatsop Chinook transportation routes. In recent decades, the surge in real estate prices and the increased demand for upper-middle-housing, including vacation homes, has resulted in increased sales of agricultural land as grazing areas and farms are converted to residential use.

CRITICAL HAZARD AREAS

The intent of this section is to identify those hazards specific to the Clatsop Plains, and to establish a procedure whereby proposed uses of these areas can be examined in order to protect life and property. Maps 4 and 5 show the locations of geologic and flood hazards in the Clatsop Plains.

BEACH ACCRETION AND EROSION

Beaches are the key resource in the formation of sand dunes by wind action and the development of sand spits by littoral drift. Vegetation, wetness of sand, and sand supply are also critical in the formation of dunes, which are also the same forces which erode them. While accretion continues to occur in the Clatsop Plains Planning Area, this process could be reversed during the 20-year planning horizon by storms or sea level rise.

Wind and ocean shoreline erosion show up on the beach by wearing away of the foredune. The major hazards associated with these types of erosion are to structures or buildings. These may be damaged by removal of material from under the foundations, sand blasting, or by burial. As new homes are constructed in areas near the dunes and shorelines, erosion control measures during construction are required. Revegetation plans are also required. However, these are sometimes not implemented despite permitting requirements. Additionally, homeowners may choose to re-landscape properties with invasive or inappropriate plants once a Certificate of Occupancy for the home has been issued. Continued education for property owners regarding the importance of dune vegetation maintenance should be undertaken by Clatsop County.

MASS MOVEMENT

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Potential mass movement areas within this planning area exist in the Coastal Foothills. All of these areas are within a CONSERVATION or FOREST LANDS designation, which only allow low intensity resource-based uses.

COMPRESSIBLE SOILS

Most of the soils with high groundwater levels also experience problems due to the compressible properties of the soil. Within the Clatsop Plains, a high percentage of lands with compressible soils are designated for farm or forest use or are zoned Lake and Wetlands, limiting the development potential of these properties.

FLOODING

Several areas of the Clatsop Plains are subject to a seasonal high water table. Areas along the beaches and estuaries are also subject to flooding from high storm tides or tsunamis.

EARTHQUAKE / CASCADIA SUBDUCTION EVENT

Clatsop County has not been the center point of any recorded earthquakes. The earthquake risk that faces the communities of the Oregon coast has only come to be more fully understood since the 1960s. Before then, the seismic risk of the Pacific Rim was associated with volcanoes, but earthquakes were not understood to be a natural hazard of high potential magnitude to which Oregon is very vulnerable. On April 13, 1949, a major earthquake (magnitude 6.8) originating near Olympia, Washington caused eight deaths and an estimated \$25 million in damage. In Oregon, widespread damage was observed, including injuries in Astoria. This event, along with the Alaska earthquake of 1964 and its resulting tsunami that impacted the Oregon coast, was a major catalyst for the scientists in the field of seismic study. Emerging tools led to the discovery of the Cascadia subduction zone and arrangement of plates in the Pacific Northwest, and to the development of methodologies to document the history of tsunamis that affirm the occurrence of high magnitude earthquakes in the historical record.

In 1989, the devastating Loma Prieta earthquake in the San Francisco Bay Area instigated awareness and action around the risks of earthquakes in Oregon. By 1991, the Oregon Seismic Safety Policy Advisory Commission (OSSPAC), or Earthquake Commission, was formed as a result of Senate Bill 96, spurring regional partnerships with other states and scientists, and support for seismic safety standards in State building codes.

Liquefaction

Liquefaction occurs when saturated soils substantially lose bearing capacity due to ground shaking, causing the soil to behave like a

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liquid. This in turn causes soils to lose their strength and their ability to support weight. The DOGAMI Natural Hazard Risk Report for Clatsop County conducted in 2018 built upon previous studies by the department and identified locations within the study area that are comparatively more vulnerable or at greater risk to Cascadia Subduction Zone (CSZ) Magnitude 9.0 earthquake hazard. With specific regard to the Clatsop Plains Planning Area, the study identified the following:

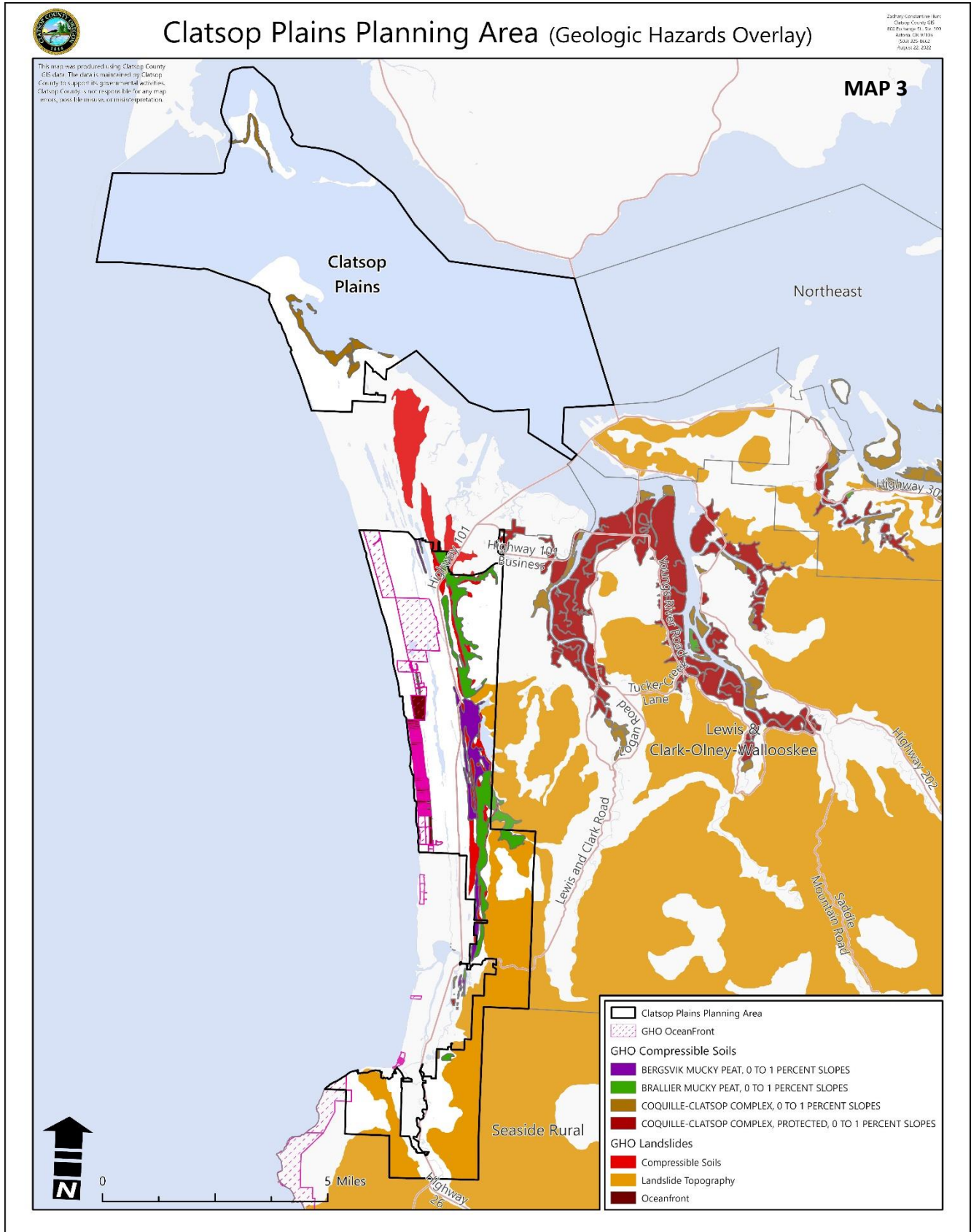
- Very high liquefaction soils are found throughout most of the populated coastal portions of Clatsop County
- Because of liquefaction and landslides, communities and structures on higher ground will likely be “islands” disconnected from other communities by severed transportation routes.

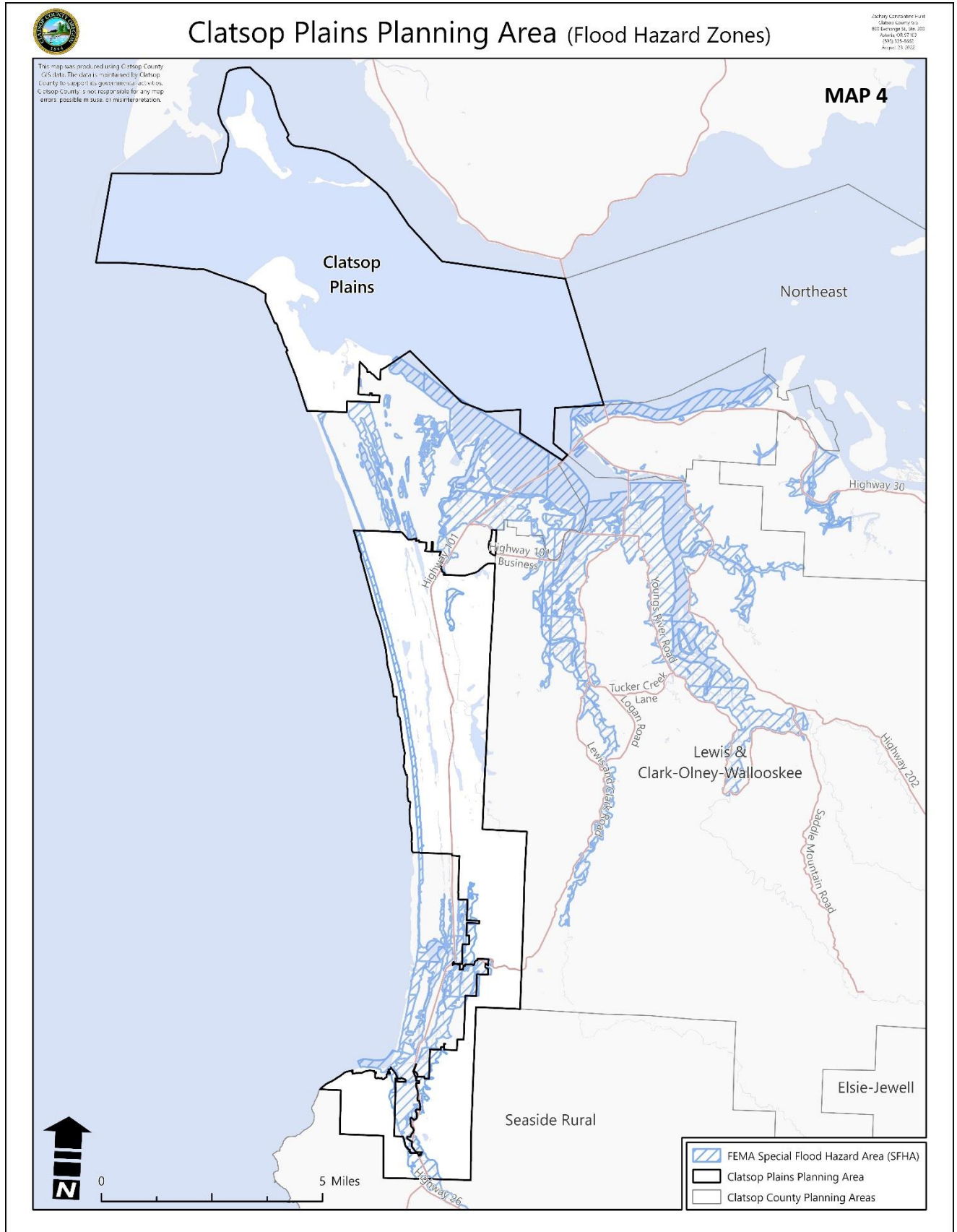
TSUNAMI

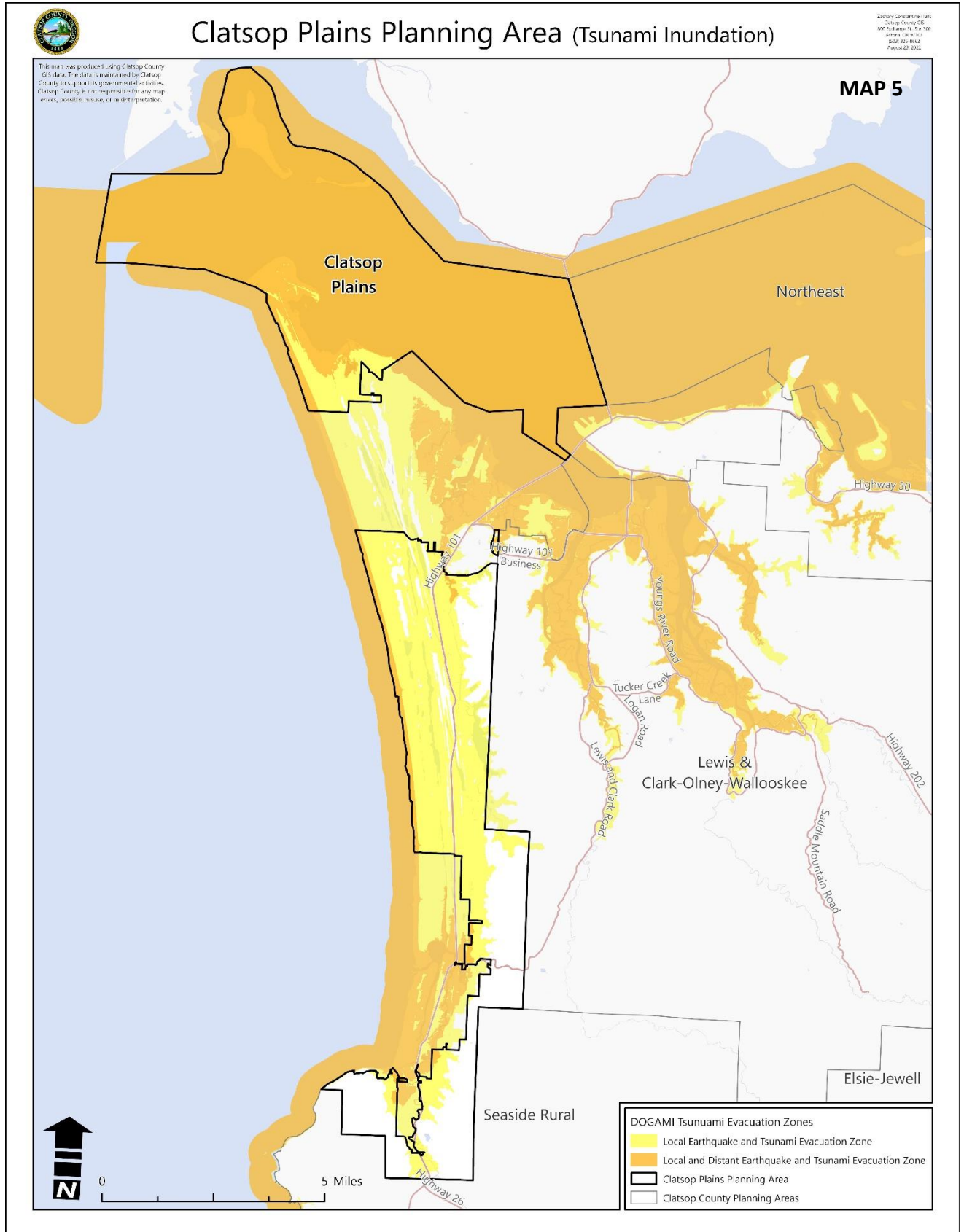
Tsunamis have historically been rare in Oregon. Since 1812, Oregon has experienced about a dozen tsunamis with wave heights greater than 3 feet; some of these were destructive. Within the Clatsop Plains Planning Area, the City of Seaside is the most vulnerable due to its low elevation and high number of residents and tourist population within the predicted inundation zone. Although many communities have evacuation maps and evacuation plans, many casualties are expected. The built environment in the inundation zone will be especially hard hit.

A Tsunami Hazard Overlay (THO) was drafted and proposed to the Board in 2015 (Ordinance 15-04). Based upon public comment and input, the Board at that time tabled the item indefinitely. The public comment received focused on the following concerns:

- General unintended consequences
- Restrictions on future development
- Stricter building code requirements
- Disclosure statement would affect property sales
- Increased costs for new homes
- Restrictions on the use of density credits
- Increased insurance rates
- Decline in property values







The purpose of the proposed THO was to:

- Reduce loss of life
- Reduce damage to private and public property
- Reduce social, emotional, and economic disruptions
- Increase the ability of the community to respond and recover

It should be noted that one of the critical facilities currently located within the tsunami inundation zone is the County's Emergency Operations Center at Camp Rilea.

A significant portion of new residential growth is centered in the Clatsop Plains and coastal areas of Clatsop County. This increase in development may also be reflected in a corresponding increase in loss of life and/or property damage when a tsunami occurs.

Adoption of the THO is a recommended mitigation action in the adopted Multi-Jurisdictional Natural Hazards Mitigation Plan.

Tsunami Evacuation Facilities Improvement Plan (TEFIP)

On June 8, 2022, the County adopted a Tsunami Evacuation Facilities Improvement Plan (TEFIP). This plan will augment existing efforts by the Emergency Management Division of Clatsop County, which in past years has installed "You are Here" signs at a majority of beach access points. An emphasis will be placed on identifying trails and paths that can provide year-round recreational opportunities while also functioning as evacuation routes in the event of a disaster.

PUBLIC FACILITIES AND SERVICES

PUBLIC FACILITIES AND SERVICES

Sewer Systems

Within the planning area, sewer systems operate in the Cities of Warrenton and Seaside. Camp Rilea in the unincorporated Clatsop Plains area has a small sewer system.

The City of Warrenton operates a 1.2 million gallon per day sequencing batch reactor wastewater treatment plant located at 105 NE 5th Street. The plant staff also operate a septage hauler dump station at the facility open to private haulers to dispose of residential septic waste. The wastewater collection system is made up of 56 miles of pipe and 38 pump stations. In 2019, the City of Warrenton began reducing hours at its septage receiving station and limiting the types of septage that would be accepted. As a result, septage

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haulers have had to utilize plants in Washington State and Tillamook County to dispose of waste from Clatsop County. In order to assist with providing capacity, Clatsop County in 2021 entered into an agreement with Jacobs Engineering to conduct an Organic Materials Recovery and Bioenergy Feasibility Study. In 2021, the City of Warrenton also approved hiring of a consultant firm to develop a master plan for the wastewater treatment facilities. The current plan, which was finalized in 2002 had estimated that the treatment facilities would reach capacity by 2022.

The City of Seaside has been providing wastewater treatment to the community since 1939. The existing treatment plant began operation in 1986 and was upgraded in 2001 by the addition of a high-intensity, ultraviolet light disinfection system to replace the City's chlorine gas canister system. The plant provides secondary treatment of the City's wastewater with a design capacity of 2.25 million gallons per day (MGD) with a maximum capacity of 6.75 MGD. Currently, the City is averaging a flow of 1 million gallons per day. The City utilizes bio-solids for land application on a city-owned farm and on leased pasture lands. The City of Seaside utilizes a series of collection basins, which drain to a central collection point. A total of 25 pump stations are then used to convey the wastewater through force mains to the plants. The system consists of 30 miles of gravity sewer main, nine miles of force main, and over 600 manholes. In January 2021, improvements to the system were completed, which included a 5-million gallon reservoir and pump station in Seaside's East Hills. This project was constructed in conjunction with the relocation of the middle and high school facilities.

Both the Cities of Warrenton and Seaside have policies of not expanding the sewer system to unincorporated private property.

To meet the expansion of the National Guard training program, a sewage lagoon system has been constructed on the southeast boundary of Camp Rilea. The system is designed for a population equivalent of 300 people year round. The permit for these lagoons, which are not permitted to discharge to surface waters, was renewed by the Oregon Department of Environmental Quality in 2021.

The Shoreline Sanitary District has served residences in the Shoreline Estates subdivision surrounding Cullaby Lake since 1969. In 2012, in response to water quality issues raised by Oregon DEQ, the County amended the Clatsop Plains Community Plan and Goal 11: Public Facilities and Services to allow the sanitary district to construct a sewer pipeline outside the Rural Service Area in order to connect to the City of Warrenton's sewer system.

Water Systems

Within the Clatsop Plains area, there are six water systems:

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- City of Warrenton
- City of Gearhart
- Camp Rilea
- Sunset Lake RV Park
- City of Seaside
- Stanley Acres

The City of Warrenton operates a 6 million gallon per day (MGD) continuous microfiltration water treatment plant located on Lewis and Clark Road. The City uses surface water collected from four dams on the Lewis and Clark River and its tributaries. Additionally, the City has a 17.5 million gallon reservoir for raw water and two 3.5 million gallon reservoir tanks for treated water. The drinking water system is delivered through 100 miles of pipe to over 3,500 connections.

The City of Warrenton system furnishes water for a large area which includes, in addition to Warrenton, the City of Gearhart, Fort Stevens, Bio-Oregon, Astoria/Warrenton/Seaside KOA, Point Adams Park, Hampton Lumber, and the Sunset Beach area. The Warrenton water supply system parallels the coast on the west and east of U.S. 101 for the entire distance from Gearhart to Warrenton. The system has over 3,500 connections of which approximately 1,170 are in the unincorporated Clatsop Plains Planning Area. At the present time, Warrenton has instituted a moratorium on new water connections, or expansion of existing connections, in areas outside of its incorporated boundaries.

In addition to purchasing water from the City of Warrenton, the City of Gearhart also obtains water from eight wells located along Neacoxie Boulevard. Per Gearhart's *Water Master Plan*, projected population to be served by the water system in the year 2037 is 1,968. Planned improvements to the water system by 2037 include:

- Replacement of reservoir cathodic protection anodes
- Membrane replacement
- Meter replacement
- Construction of the Marion loop
- Construction of the Hillila loop
- Highway 101 pipe replacement
- Ridge Path pipe replacement
- Cottage Avenue pipe replacement

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- New pump for the water treatment plant

The City of Seaside provides water to Stanley Acres and the area to the south of Seaside. The main water supply is from a source on the south fork of the Necanicum River about eight miles southeast of the city. An auxiliary supply source is located on the Necanicum River below the reservoir. The water treatment plant can produce approximately 2,800 gallons of drinking water per minute, or 4.032 million gallons of water per day. On a buy peak summer weekend, the amount of water usage is approximately 2.5 million gallons per day. In January 2021, the City completed construction of a 5-million gallon reservoir and pump station in Seaside's East Hills. The reservoir will provide water to the new middle and high school buildings and to Pacific Ridge Elementary. The new pump facility will replace decommissioned pump stations in Sunset Hills and Whispering Pines.

Below are the water systems in the unincorporated Clatsop Plains.

TABLE 1: CLATSOP PLAINS PLANNING AREA - DRINKING WATER SYSTEMS					
System	Number of Connections	Estimated Total Population Served	Existing Source and Water Rights	System Size (Range of Connections)	Current Violations
Camp Rilea	75	136	Groundwater	Data Not Available	None
Gearhart Water Department	1,580	1,465	Groundwater Purchased surface water System interties with Warrenton and Seaside	Large: 300+ Connections	None
Seaside Water Department	3,746	6,400	Surface water	Large: 300+ Connections	None
Sunset Lake RV Park	100	170	Groundwater	Small: 1-299	Yes
Stanley Acres Water Association	112	315	Surface water Purchased surface water City of Seaside	Small: 1-299	None

TABLE 1: CLATSOP PLAINS PLANNING AREA - DRINKING WATER SYSTEMS					
System	Number of Connections	Estimated Total Population Served	Existing Source and Water Rights	System Size (Range of Connections)	Current Violations
Warrenton, City of	3,539	9,100	Surface water	Large: 300+ Connections	None

Source: Oregon Health Authority; City of Warrenton Water Master Plan, July 2018; City of Warrenton Public Works; City of Gearhart Annual Water Quality Report, 2020

Schools

There are two school districts within the planning area: Warrenton-Hammond School District #30 and Seaside School District #10. In 2018, voters approved a bond initiative to allow the Seaside middle and high schools, as well as District administrative offices to be relocated outside of the tsunami inundation zone. Those facilities were completed in 2020 and the previously-used school facilities have or will be sold.

In 2018, voters in the Warrenton-Hammond School District also approved a \$38.5 million bond to fund several facility construction and upgrade projects. The District has purchased 58 acres outside of the inundation zone and has constructed a new middle school at that location. The ultimate plan is to relocate all schools to this location, which would serve as a master campus.

TABLE 2: CLATSOP PLAINS PLANNING AREA – SCHOOL SYSTEMS						
System	Seaside School District #10				Warrenton-Hammond School District #30	
	Pacific Ridge Elementary	Seaside Middle School	Seaside High School	Cannon Beach Academy Charter School	Warrenton Grade School	Warrenton High School
Grades	K-5	6-8	9-12	K-5	K-8	9-12
Enrollment	654	374	427	45	690	254

Source: Oregon Department of Education At-A-Glance District Profiles 2020-21

Flood Control

The Skipanon Water Control District previously covered the Skipanon River area, Warrenton, and Cullaby Lake. The District provided flood protection, controlled the water level for recreation use at Cullaby Lake and helped to minimize shrinking and swelling of the peat soils. The District was dissolved in 2020 and its assets were transferred to the City of Warrenton and to Clatsop County.

Fire Protection

Fire protection in the unincorporated Clatsop Plains is provided by three Rural Fire Protection Districts (RFPD): Warrenton RFPD, Gearhart Fire Department, and Seaside Fire and Rescue. The cities' fire departments are primarily staffed by volunteers.

Seaside Fire and Rescue was established in 1904. It is an all hazards department that responds to:

- Emergency medical calls
- Structure and wildland fires
- Water rescue

The Department's paid fire staff include the Fire Chief, Division Chief of Prevention, Division Chief of Operations, and two firefighter positions. The department also provides mutual aid to the Hamlet, Cannon Beach, and Gearhart rural fire protection districts.

The Gearhart Volunteer Fire Department covers 28 square miles ranging from Cullaby Lake in the north, extending to the Gearhart City limits to the south. From milepost 8.5 on Lewis and Clark Road to the east and to the Pacific Ocean on the west. The department responds to approximately 500 incidents yearly, and has the capacity for 35 volunteers to serve on the roster. The department responds from two stations, Station "2899" located at 670 Pacific Way in downtown Gearhart and from the Hertig Station on Highway 101 and Westlake Lane. The department responds to all emergencies including, but not limited to:

- all fires
- emergency medical calls
- vehicle accidents
- natural disasters
- hazardous materials incidents
- requests for public assist
- search and rescue

- automatic/mutual support to departments throughout the county and statewide when needed

Warrenton RFPD currently operates a volunteer department governed by a five-member board. All fire protection services and hydrant maintenance is contracted with the City of Warrenton and that contract was renewed in 2021 for a five-year duration. Potential planned capital improvements in the 20-year planning horizon include the construction of a fire station outside of the tsunami inundation zone.

TRANSPORTATION

U. S. Highway 101 is the main north-south route through the Clatsop Plains Planning Area. This roadway, which stretches down the Oregon coast, connects the cities of Cannon Beach, Seaside, Gearhart, Warrenton, and Astoria. Prior to the pandemic, traffic volumes on Highway 101 were consistently increasing. In the months immediately following March 2020, traffic suddenly decreased as lockdowns and/or service curtailments were implemented. **Table 1** details Average Annual Daily Traffic (AADT) counts on selected segments of U.S. Highway 101 in and adjacent to the Clatsop Plains Planning Area. Traffic data for 2021 was not available at the time this plan was updated. It is likely, however, that 2021 traffic volumes will have increased to at least 2019 levels.

The Oregon Department of Transportation (ODOT) typically collects traffic counts on one third of State Highways every year and adjusts them to AADT. AADT is the total traffic for the year divided by 365 days (or 366 days in a leap year. Readers of this plan should note that the numbers in Table 1 are only averages and that special events or seasonal fluctuations may increase traffic volume on these road segments above the average established by ODOT.

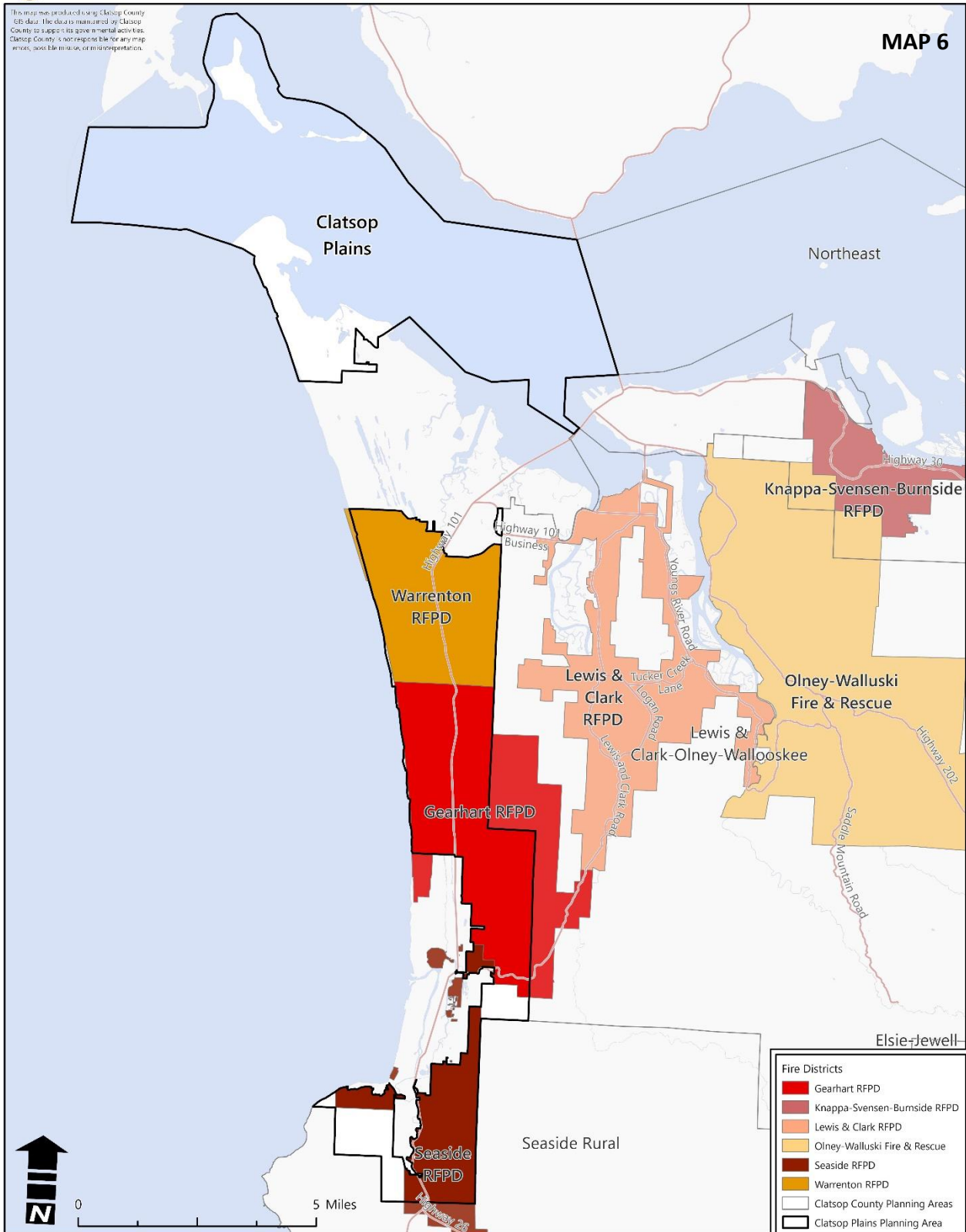


This map was produced using Clatsop County GIS data. The data is maintained by Clatsop County to support its governmental activities. Clatsop County is not responsible for any map errors, possible misuse, or misinterpretation.

Clatsop Plains Planning Area (Rural Fire Protection Districts)

Clatsop County GIS
Clatsop County GIS
1000 Exchange St., Ste. 100
Astoria, OR 97103
503.325-0012
August 23, 2022

MAP 6



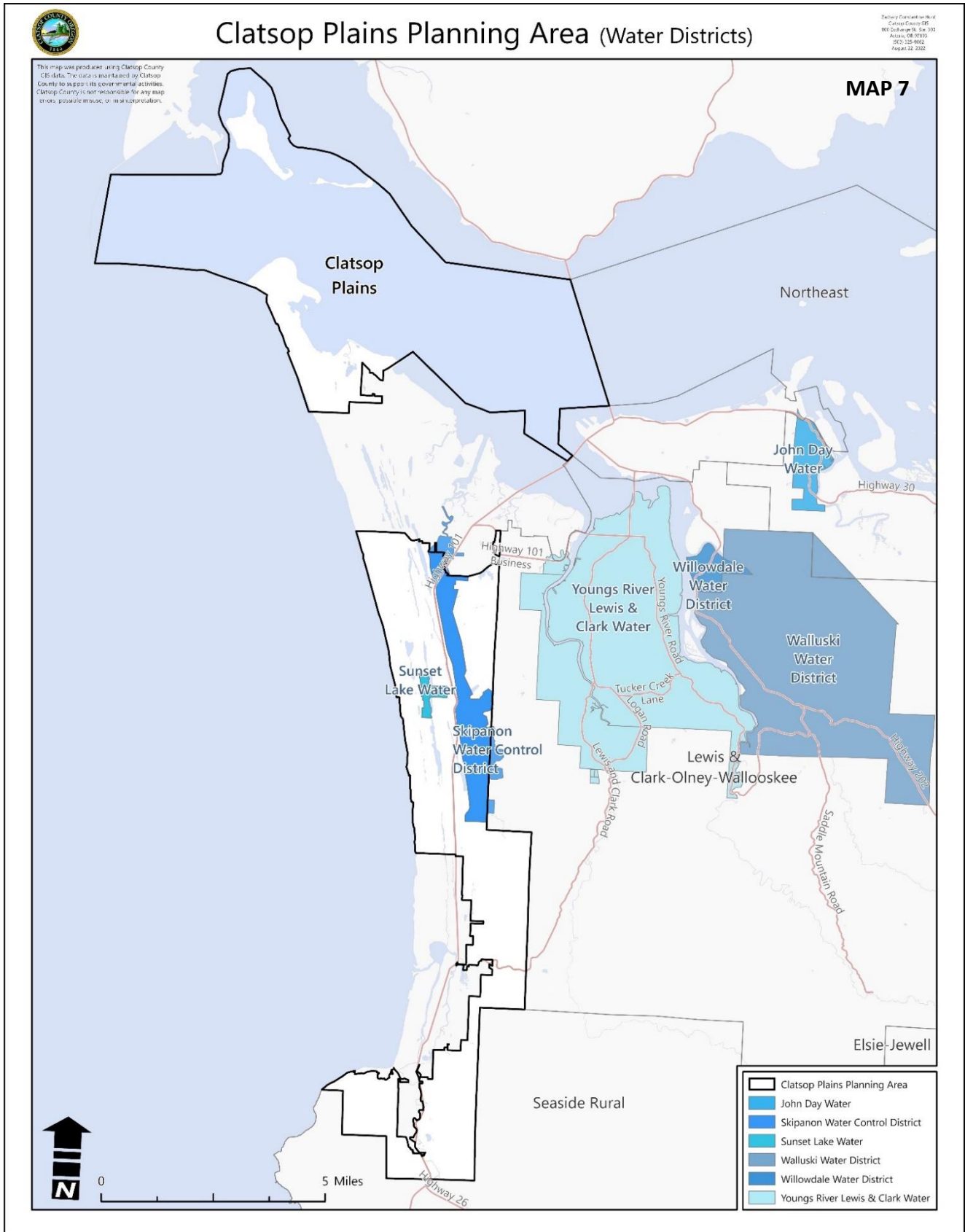




TABLE 3: U.S. HIGHWAY 101 TRAFFIC VOLUMES (2018-2020)			
ROAD SEGMENT	AADT*		
	2020	2019	2018
Astoria City Limits / Youngs Bay Bridge	18,856	20,900	20,500
Warrenton South City Limits	12,117	13,400	13,200
Gearhart – 0.02 Miles South of Pacific Way	15,666	17,400	17,000
Gearhart – Neawanna Creek Bridge	14,759	16,400	16,100
Seaside – 0.02 Miles North of Broadway	15,448	15,800	16,800
Seaside – 0.02 Miles South of Avenue U	12,186	13,500	13,300
0.10 Mile North of U.S. Highway 26	10,991	12,200	12,000
0.10 Mile South of U.S. Highway 26	8,586	9,500	9,300

*AADT: Average Annual Daily Trips

Source: Oregon Department of Transportation, State Highway Traffic Volumes

Highways

Roads within the County maintenance system are generally two lanes and uncongested. Most of the driving in the planning area, however, is done on U.S. Highway 101, which is the main connection between the cities of Astoria, Warrenton, Gearhart and Seaside. As discussed above, traffic on U.S. Highway 101 had generally been increasing until the start of the pandemic in early 2020. Since the initial lockdowns, traffic on the highway has again steadily increased and is expected to increase over the 20-year planning horizon.

A proliferation of access points to U.S. 101 and other roads can: (1) destroy the traffic function of the streets and highways, (2) create safety hazards, and (3) result in costly highway improvements at the expense of the public and individual property owners. Access controls along U.S. 101 can possibly provide the most cost-effective means of maintaining manageable highway capacity and should be implemented wherever feasible. Control of access will improve the capacity of the highway, and reduce accidents and congestion. As new housing construction has flourished on the west side of U.S. Highway 101, between the cities of Gearhart and Warrenton, access to and from the highway has become increasingly difficult. Traffic conflicts at the intersection of U.S. Highway 101 and Patriot Way, the entrance to Camp Rilea, have been addressed by the Oregon Department of Transportation (ODOT), which recently completed improvements to the intersection of Perkins Lane and Highway 101 to increase safety at this intersection.

Rail

Rail service in Clatsop County is provided by Burlington Northern Santa Fe Corporation and is limited to freight traffic. The line running from Seaside to Camp Rilea has been abandoned. Most of the railroad right-of-way has reverted back to the adjoining property owners.

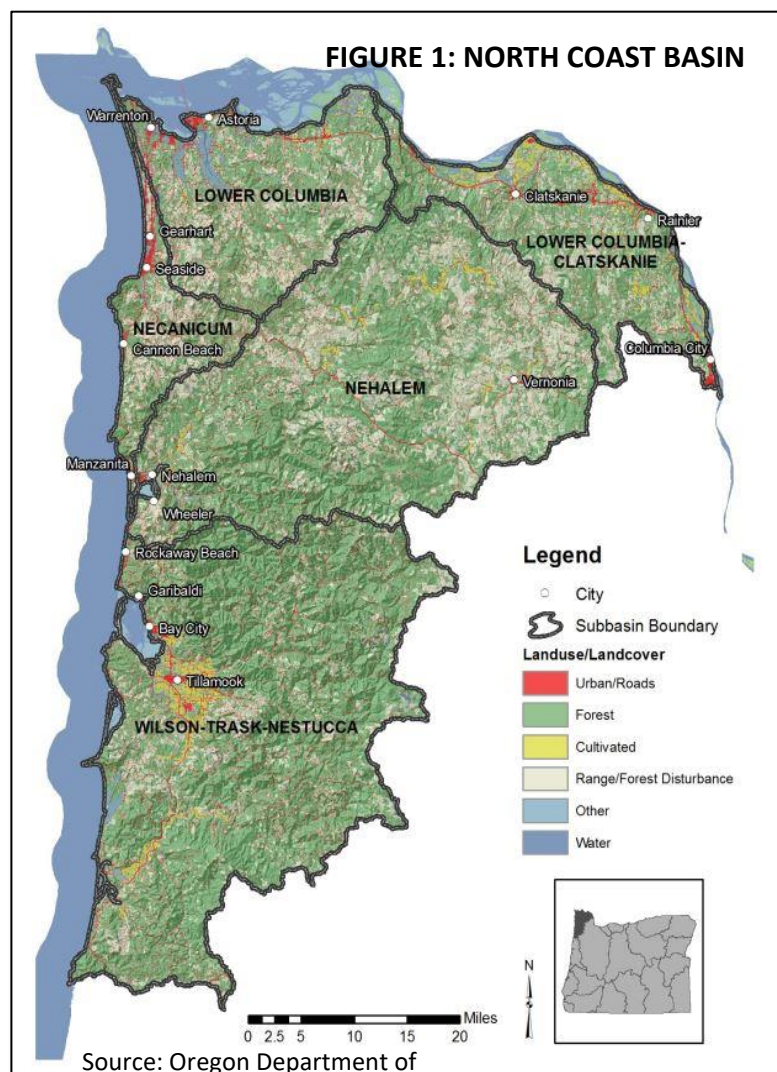
Air Transportation

The Seaside Airport, which was operated by the State of Oregon until 1990, is the only airport in the planning area. In 1990, the airport was deeded to the City of Seaside with the condition that it be kept open and operating as an airport for at least 20 years. Since 2003, the City has made over \$1 million worth of improvements at the airport, including upgraded drainage, taxiway and runway repairs and realignment, new beacon tower and rotating beacon, new runway lighting, obstruction removal and aviation easements, security fencing, and improved visitor parking. The single paved runway is suitable for most light single and some twin engine aircraft weighing less than 12,500 pounds. There are no instrument approaches and fewer than 10 aircraft are based at the field. In 2019, the Federal Aviation Administration (FAA) reclassified all airports in the National Plan of Integrated Airport Systems (NPIAS) and deemed Seaside to be “unclassified”. This means that the airport is no longer eligible for regular FAA airport improvement funding.

WATER QUANTITY AND QUALITY

Per information from the Oregon Department of Environmental Quality (DEQ) the Clatsop Plains Planning Area is located within the North Coast Basin, which extends from the Columbia River to the southern Tillamook County line (**Figure 3**). The basin consists of eight watersheds. Six watersheds drain to the Pacific Ocean:

- Necanicum
- Nehalem
- Tillamook Bay
- Nestucca
- Netarts/Sand Lake
- Neskowin



Two of the watersheds drain to the Columbia River:

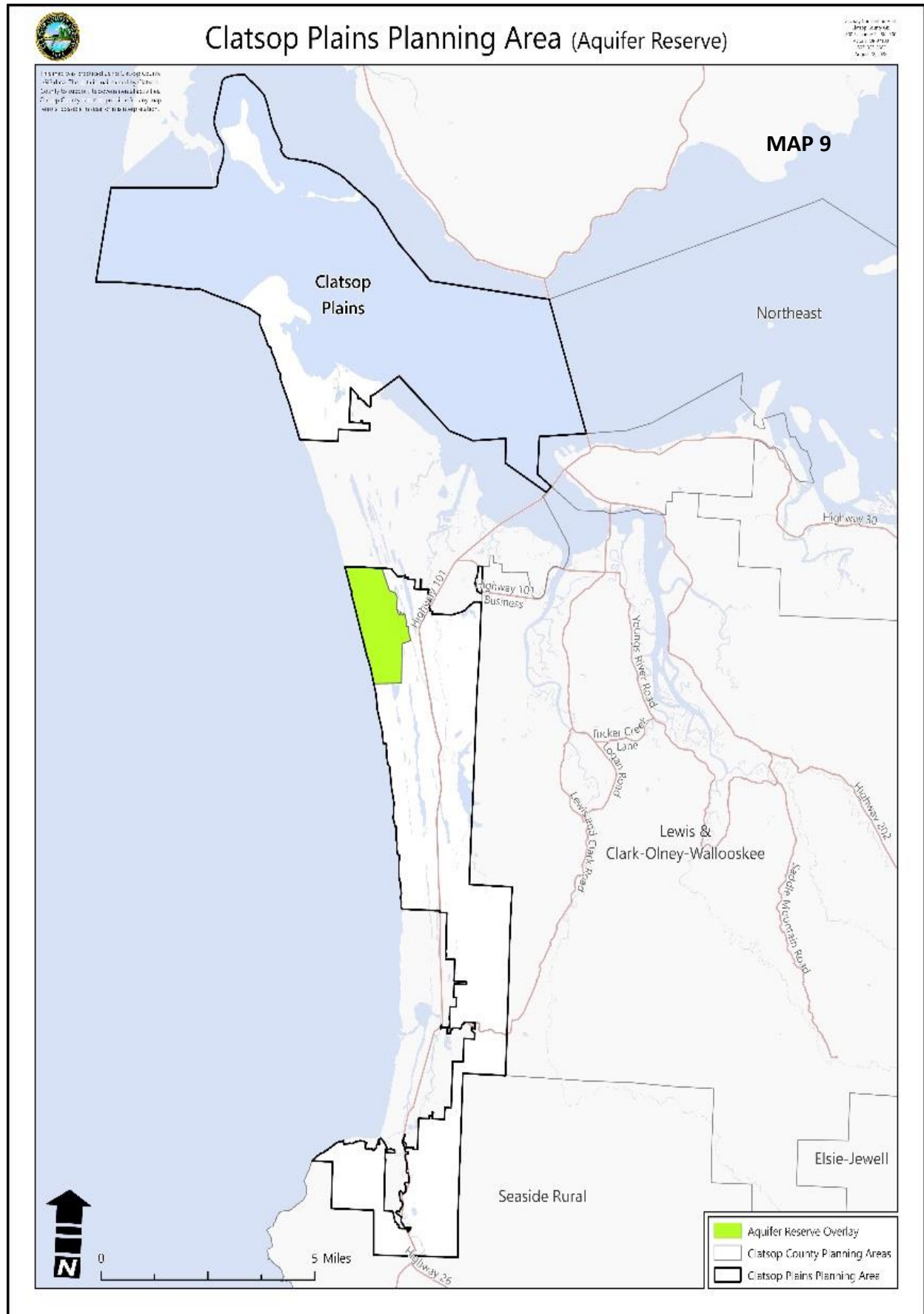
- Lower Columbia
- Lower Columbia-Clatskanie

As noted in the currently-adopted Clatsop Plains Community Plan, water quality issues have been an ongoing concern in this planning area. This included a moratorium from 1977 through 1982 that restricted, and eventually prohibited, development that utilized onsite waste disposal systems.

In 1982, the County adopted an Aquifer Reserve Overlay Zone, which covers lands in the North Clatsop Plains area, including a portion of Camp Rilea (**Map 9**). The purpose of the overlay is to protect the aquifer as a future drinking water source by controlling activities which may occur on the ground surface.

In Oregon, the Department of Environmental Quality (DEQ) has the primary responsibility for groundwater protection. DEQ, in coordination with the Oregon Health Authority Drinking Water Program, the Oregon Water Resources Department, and the Oregon Department of Agriculture implement the majority of federal and state programs related to groundwater. Per information from the Oregon Water Resources Department there are four observation wells currently located at Camp Rilea (**Figure 1**). The easternmost well (Well Log CLAT 50230) measures groundwater levels. The three westernmost wells (are inactive water level observation wells).

Camp Rilea Armed Forces Training Center, comprised of approximately 1,870 acres, provides both military and civilian users a training location and facilities such as firing ranges and barracks. The facility consists of the cantonment area and armory (450 acres), training and range areas (1,400 acres), and a wastewater treatment



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facility with two sewage lagoons adjacent to a spray irrigation area (20 acres). (Source: *Final Site Inspection Quality Assurance Project Plan Addendum Camp Rilea Warrenton, Oregon* October 2021, AECOM). Camp Rilea is situated above the Pacific Northwest basin-fill aquifer, characterized as a sand and gravel aquifer at or near the land surface. Camp Rilea obtains drinking water from two onsite wells located in the central/western portion of the facility. These wells were installed in 2011.

The Oregon Water Resources Department has also identified a portion of the Clatsop Plains planning area where limited groundwater yield has been noted as a groundwater resource concern (**Figure 2**).

During the process of updating the Clatsop County Comprehensive Plan and associated community plans, it has become apparent that all communities are strongly concerned about water quantity and quality and whether there is sufficient current data available to provide a foundation for policy and projects.

It should also be noted that the City of Warrenton issued an emergency order in March 2020, which prohibits new connections or expansion of existing water services outside of the city boundaries. Because much of the new residential development west of Highway 101 relies on water from Warrenton, this moratorium has had an impact on new development in the Clatsop Plains Planning Area.

The Clatsop Plains Planning Area contains many significant wetlands and coastal lakes. The environmentally-sensitive character of this area will likely always require monitoring to ensure the availability and quality of drinking water. It is possible that within the 20-year horizon of this community plan that future restrictions may be required to ensure that development does not exceed the carrying capacity of the air, water, and land within this planning area.

FIGURE 2: AREA OF LIMITED GROUNDWATER YIELD



Area of limited groundwater yield
Source: Oregon Water Resources Department,
Groundwater Information System Mapping Tool

NATURAL RESOURCES

FOREST LANDS

Most of the forest lands within this planning area have a forest site class of 2 and 3 and are privately-owned. There are several small holdings owned by the State, County and numerous small woodlot owners. Past development pressure has been directed away from forest lands, except when adjacent to urban areas, due to the high groundwater or steep slopes.

AGRICULTURAL LANDS

Members of the Chinook Indian Nation traditionally collected food from animals and plants naturally occurring within the Clatsop Plains planning area. Subsequent settlement by non-Native American peoples transitioned to a more cultivated agrarian system, which was primarily centered on the grazing of cattle and ranching. Over the years, most of the farming on the Clatsop Plains has been on the peat bogs for cranberry production and grazing of livestock on the rolling dunes. Most development is not suited for cranberry bogs due to the high groundwater and compressible soils. Large parts of the Clatsop Plains dunes have been committed for uses other than farming over the years.

As agriculture continues to change and adapt smaller farms and new crops may become more viable during the planning horizon. While cranberries have long been associated with the wetlands on the Clatsop Plains near the Coastal Foothills, other agricultural uses such as flower cultivation, egg production, and grazing of sheep may become more prominent. Self-sufficiency should be encouraged in food production and support should be provided for future agricultural opportunities.

Climate change will also likely alter agricultural practices over the next 20 years. As noted by OCCRI in its 2020 report for Clatsop County, average temperatures are projected to rise 2.1°F by 2040. Instances of drought will also increase due to low summer moisture, low spring snowpack, low summer runoff, low summer precipitation and higher summer evaporation.

MINERAL AGGREGATES

Over the years, several areas in the Clatsop Plains have been mined for sand. The availability of sand will continue to play an important role in various construction projects in the County. There are no extensive gravel deposits in the Clatsop Plains. Basalt is the major source of crushed rock.

OPEN SPACE, HISTORIC, RECREATION, SCENIC AND NATURAL AREAS

PRESERVATION, RECREATION, SCENIC, AND OPEN SPACE AREAS

The semi-rural atmosphere of the Clatsop Plains is directly related to the large proportion of land that is presently in open space. Forest lands along the Coastal Foothills form the eastern boundary of the Clatsop Plains, while to the west is a wide strip of sandy beaches. Between the beaches and forest lands large amounts of open space still exist in the form of farms, large ownership of land, Camp Rilea and golf courses.

Clatsop County has historically had a strong tourism base. Per information from Travel Oregon, in 2019 local recreationists and visitors spent \$785 million on outdoor recreation in Clatsop County. Many of those visitors are drawn by Goal 5 resources (Natural Resources, Scenic and Historic Areas, and Open Spaces), including scenic views and sites, open spaces, and wildlife. As visitation increases there is the potential for conflicting uses and unintended consequences which may threaten inventoried Goal 5 resources.

One of the highest priorities for the Clatsop Plains Planning Area has been the importance of maintaining the semi-rural character of the Clatsop Plains and to preserve large amounts of open space. Open space can exist through a wide variety of different land uses as shown by the following categories:

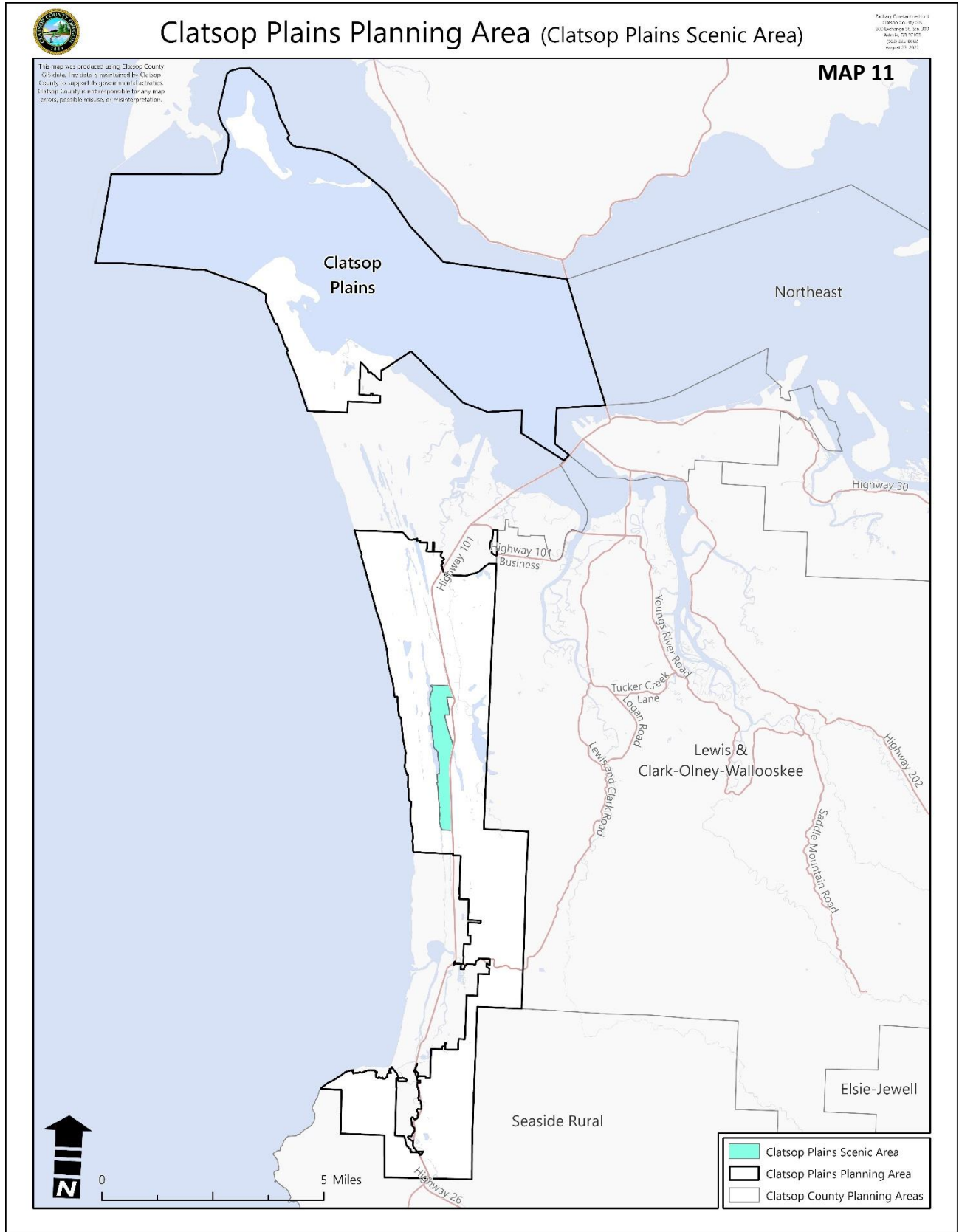
CATEGORIES

Resource management
Preservation
Recreation
Scenic/buffer

EXAMPLES

Forest/farm lands
Aquifer recharge, historic, cultural, fish and wildlife areas
Fort Stevens State Park
Open space in subdivisions

Map 10 shows the location of open spaces within the planning area. **Map 11** identifies the Clatsop Plains Scenic Area.



Resource Management

Open space is one of the benefits that results from resource management. Resource management relates to the ability of the land to yield a resource on a sustained basis. These resource management lands, such as forest and agricultural lands, have potential economic value which requires some form of protection to maintain their wise utilization.

Preservation – Aquifer Recharge

The Clatsop Plains aquifer is like a large underground lake which has the potential of supplying vast amounts of drinking water. Based upon recommendations from the Clatsop Plains Groundwater Protection Plan (208 Study) approximately 1,444 acres or 2.25 square miles has been set aside as an "aquifer reserve" area.

Preservation - Historic Areas

The Clatsop Plains Planning Area is rich in history, containing many historical sites associated with both native persons who originally utilized the resources within this area and the subsequent non-native immigrants that settled in the same area.

Preservation – Fish and Wildlife Areas

The Clatsop Plains is an area with diverse and plentiful wildlife areas. This abundance of both numbers and species types is largely resultant from diversity of habitats. Zones of transition, such as the shorelines, estuary and forest lands provide areas rich in animal life.

The Clatsop Plains has large blocks of land in both public and private ownership which have not been developed. Fort Stevens State Park, Camp Rilea and timber holdings east of Highway 101 provide most of the prime wildlife habitats on the Clatsop Plains.

Increased residential development in the Clatsop Plains area has resulted in an increased number of interactions between elk and humans. Changing elk migration patterns have also played a role in the increase. In 2019, Clatsop County, in coordination with the cities of Warrenton, Gearhart and Seaside, participated in a process lead by Oregon Regional Solutions to develop tools and strategies to minimize impacts due to encounters between elk and humans. A formal Declaration of Cooperation was signed by all parties on September 1, 2021.

Roosevelt elk are not the only species to be affected by habitat loss. The Oregon silverspot butterfly utilizes salt-spray meadows as a primary habitat. The butterflies also depend upon two very specific species of violets – the early blue and the western blue – as host

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plants. Habitat loss due to coastal development has impacted the silverspot butterfly population in Clatsop County. The Western Snowy Plover utilizes sandy and sparsely-vegetated shoreline areas above the high tide line for nesting. Snowy Plovers require suitable habitat free from invasive European beach grass in an area relatively free of ground or avian predators. Impacts from development, including the introduction of European beach grass has reduced successful breeding of this species.

Due to the limited availability of public transit within Clatsop County and connections to adjacent counties, few viable transportation options are available for visitors to the area. Tourism traffic impacts the residents and businesses within Clatsop County as a whole and within the Clatsop Plains Planning Area specifically. Increased tourism, which has traditionally been based upon visitors coming to the beach, increases travel time for residents and increases the risks of accidents. Visitors who slow, stop or pull to the side of the road to view elk herds or other wildlife disrupt the flow of traffic, increasing congestion and travel times. While the Oregon Solutions' Clatsop Plains Elk Project identified possible solutions to address these concerns, not all of those options have yet been implemented.

The Declaration of Cooperation details a list of commitments that Clatsop County has agreed to fulfill. Among those is a commitment to review the County's density transfer requirements, especially within the Clatsop Plains area.

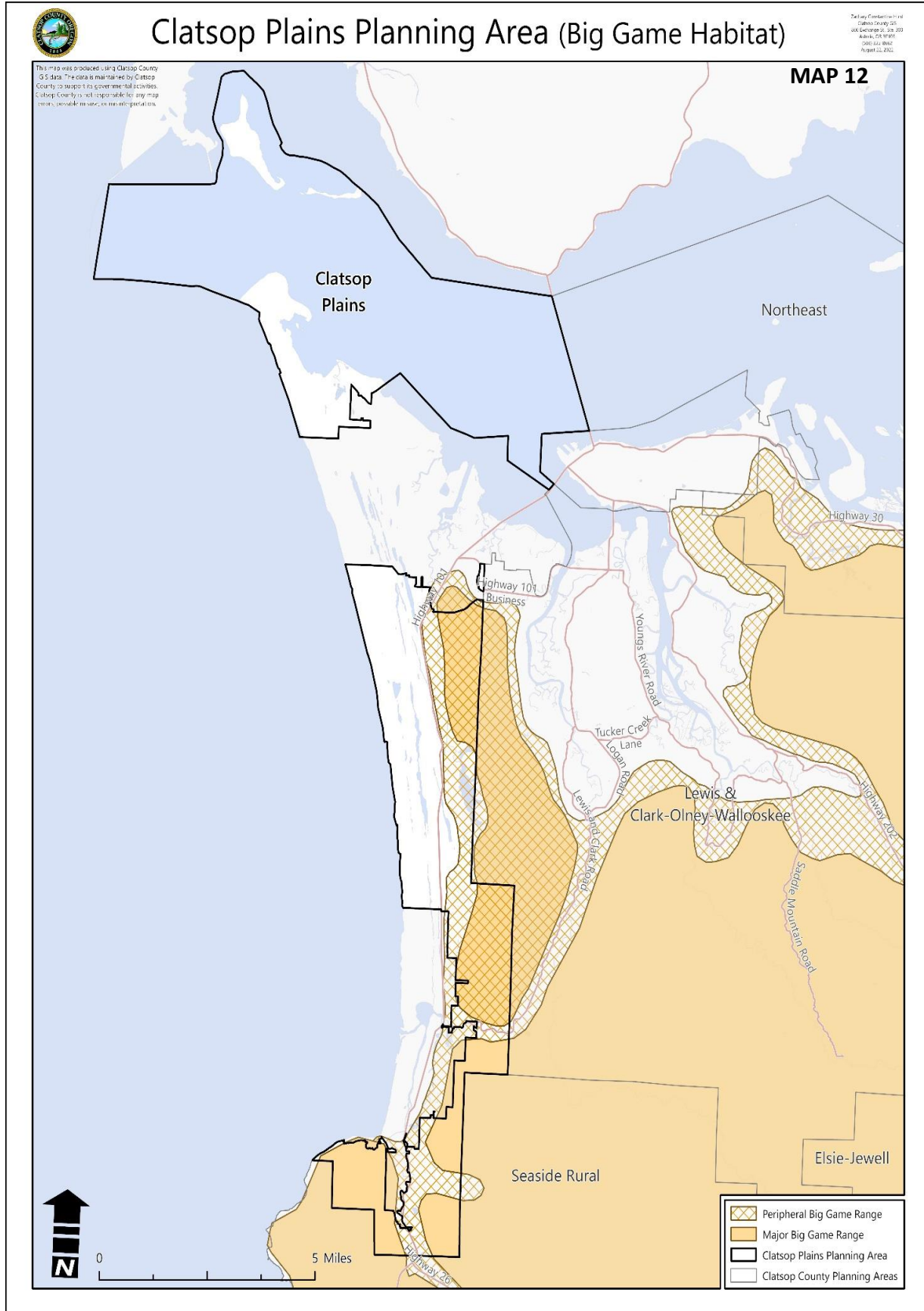
Recreation - Parks

Within this planning area, there is one national historic park (Lewis and Clark National Historic Park) and three State parks (Fort Stevens, Ecola and Elmer Feldenheimer State Natural Area).

A portion of the Lewis and Clark National Historic Park is located within the Clatsop Plains Planning Area. While the visitor center and Fort Clatsop are located to the east of the planning area, the Fort to Sea Trail is almost entirely located within the Clatsop Plains Planning Area.

Fort Stevens, one of the nation's largest campgrounds per information from Oregon State Parks, has extensive day use and overnight sites. The park, which consists of 4,300 acres, provides a variety of recreation opportunities, including camping, beach-combing, a freshwater lake, trails, wildlife viewing, and an historic shipwreck. Visitors can also view year-round military displays at the military museum and information center.

The originally-adopted Clatsop Plains Community Plan included a policy requiring to the County to adopt the *Fort Stevens State Park Plan* as part of the Clatsop Plains Community Plan. This was completed in 2001 when the County approved Ordinance 01-01. That



same ordinance also created the Parks Master Plan (PMP) Zone, which appeared to be intended for Fort Stevens. The zone change, however, was never completed. Discussion with Oregon Parks and Recreation Department (OPRD) staff as part of this update concluded with OPRD requesting that PMP zoning not be applied to the park.

Ecola State Park has picnic facilities as well as a hiking trail to the top of Tillamook Head or across the head to Ecola Point and Indian Beach. The park stretches along nine miles of coastline and offers outstanding sightseeing and recreational opportunities, including cliff side viewpoints of secluded coves, forested promontories and a long-abandoned lighthouse. The park's network of trails includes an eight-mile segment of the Oregon Coast Trail, and a 2 ½ mile historical interpretive route called the Clatsop Loop Trail.

Elmer Feldenheimer is a Forest Preserve to the east of Ecola and was created to protect forested areas in Ecola State Park.

The Del Rey Beach State Recreation Site provides access to the beach and parking.

There are three County parks in the planning area: Carnahan Park, Cullaby Lake, and Smith Lake Park. The County parks system has no capital improvement program and no park acquisition program. Any improvements and maintenance of parks is done by the County Public Works Department.

During the update of the Clatsop Plains Community Plan, the CAC members discussed the importance for the County to continue to keep small, isolated parcels of undeveloped land. While those parcels might not be suitable for park development, they do play a significant role in the providing resting and sheltering areas to wildlife and birds.

Recreation – Trails Bike/Foot

Bicycle touring along the Oregon Coast has become increasingly popular. U.S. Highway 101 is the route for two bicycle routes: the Oregon Coast Bike Route and the TransAmerica Trail. This bike route is very dangerous, having many curves and no barriers preventing automobiles from entering the bike lane.

In 1975, the State Transportation Commission established the Oregon Coast Trail. Between the mouth of the Columbia River and Gearhart all of the Coast Trail is on the beach. At the City of Gearhart, the trail turns on the highway shoulder into the City of Seaside, where it follows city streets to the beach access. From the southern edge of Seaside, the Coast Trail ascends Tillamook Head to Ecola State Park.

Scenic Areas

Scenic areas are defined as those sites, viewpoints, areas or structures that have significant visual worth, and that are pleasing to look at. This is a resource that is of greatest importance to this planning area. Places such as Tillamook Head, the vast sandy beaches and the Clatsop Spit attract visitors from all over the world due to the scenic beauty of these areas.

Open Space

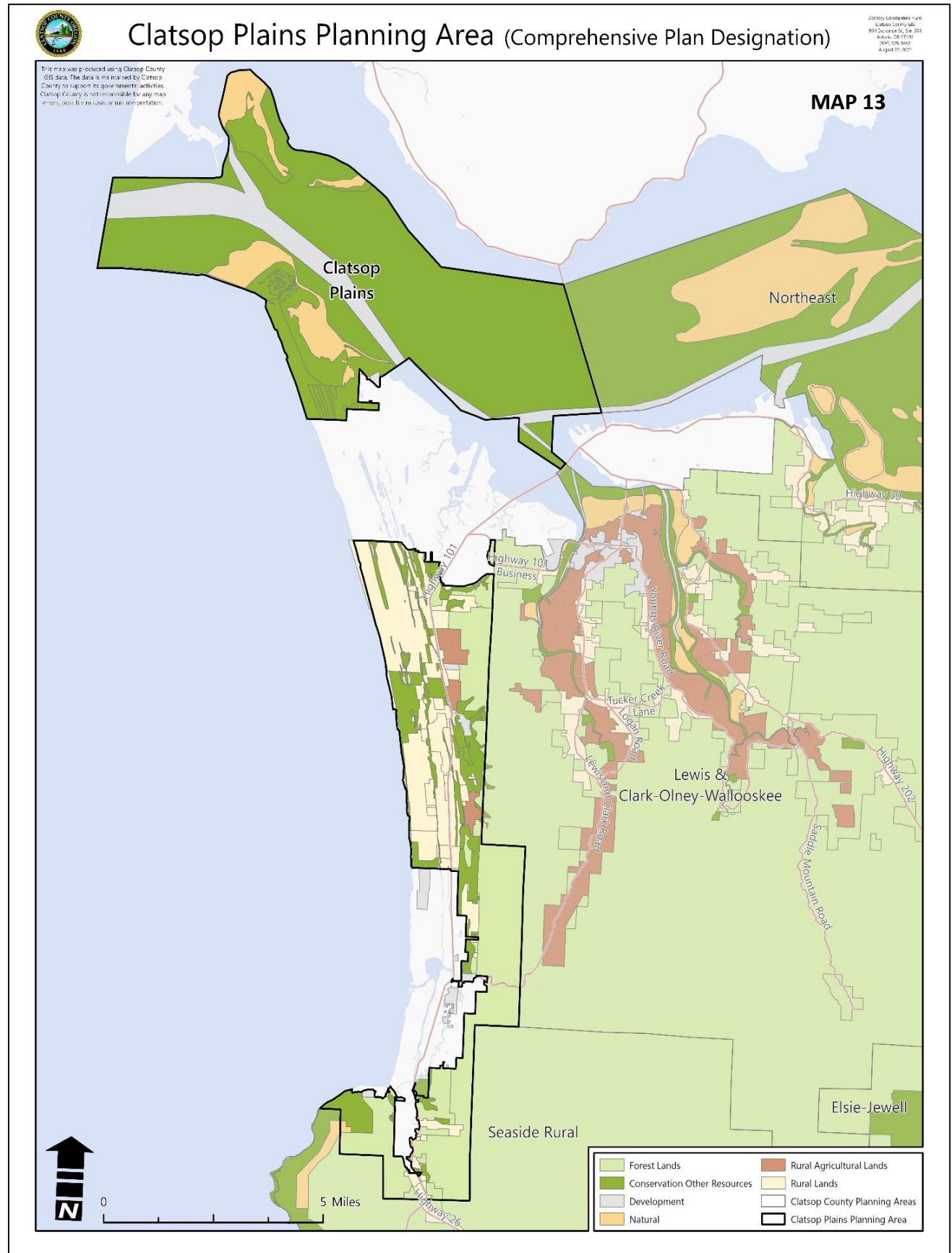
Forest, agricultural, natural and recreational areas play one part of the role in preserving the rural character of the Clatsop Plains. Another aspect of rural living is the open spaces between development and different land uses. In order to preserve the semi-rural character of the Clatsop Plains, both aspects of open space must exist. To that end, the Community Plan Open Space Policies were developed to preserve and enhance the rural quality of the Clatsop Plains.

DEVELOPMENT PATTERNS

Purpose and Intent of Rural Residential Development in the Clatsop Plains Planning Area:

It is the purpose and intent of Clatsop County to maintain the rural character of residential land outside urban growth boundaries within the Clatsop Plains planning area by preserving and protecting concentrated open space and natural resources, and minimizing the impact of rural residential development on essential services, while also allowing low density residential development.

Therefore, it is the County's purpose and intent that all residential planned developments and subdivision developments in the Clatsop Plains planning area shall be clustered which will ensure that the rural character is maintained. **Map 13** details the land use designations assigned within the Clatsop Plains Planning Area. Detailed zoning maps can be located on the Clatsop County [website](#).



HOUSING

Per information from the 2020 decennial census, the unincorporated northwest portion of Clatsop County, which includes the Clatsop Plains planning area, grew 33% between 2010 and 2020, reaching a total population of 3,393. When the original Clatsop Plains Community Plan was adopted in 1979, it was estimated that total population in this area would be 3,599 by 2000. It was also estimated that approximately 900 new housing units would be needed in the Clatsop Plains area by the year 2000.

In 2019, the County, in coordination with the five incorporated cities, completed a housing study. This study forecasted that over 1,500 new housing units would be required across the county to accommodate current and future residents, while allowing for a continued supply of vacation property. While growth has been slower than projected over the past four decades, it has always been anticipated that growth, especially residential growth, would be directed to this area of the county. Between 2005 and November 24, 2021, 298 permits were issued for new single-family homes within the Clatsop Plains Planning Area.

In recent decades, partially due to the construction of the South Jetty at Fort Stevens State Park, accretion along the Clatsop Plains oceanfront has accelerated. As a result, there has been pressure at times to either increase dune grading efforts to enhance views or to allow the subdivision of accreted land in order to create additional residential lots. It should be noted that dune grading policies are established in Goal 18: Beaches and Dunes and those policies are implemented through standards and regulations in the Clatsop County *Land and Water Development and Use Code* (LAWDUC). Per ORS 390.615, ownership of the shore of the Pacific Ocean between ordinary high tide and extreme low tide is vested in the State of Oregon. As noted by the Oregon Climate Change Research Institute (OCCRI) in its 2020 report [Future Climate Projections Clatsop County](#), sea levels are projected to rise 0.5 feet by 2040 under an intermediate scenario. Under the high and extreme scenarios, sea level rise is projected as 1.3 to 1.6 feet by 2040. Pressure to locate more residential development along the oceanfront may increasingly conflict with the need to mitigate impacts to people and property from coastal erosion and sea level rise.

The *Clatsop County Housing Strategies Report*, adopted by reference as part of the Comprehensive Plan, was an in-depth study of the current and projected housing conditions across the county, and included recommended strategies to better align the housing supply with local needs. The report included the following findings:

New housing development within the Clatsop Plains area is primarily concentrated on the west side of Highway 101 in the area between the incorporated boundaries of Warrenton and Gearhart. Since 2010, Clatsop County has approved several new subdivisions in the area, including:

CLATSOP PLAINS COMMUNITY PLAN 2040

- Polo Ridge (30 lots)
- Clatsop Estates (9 lots)
- West Dunes (15 lots)
- Westlake Village/Dune Estates (87 lots)
- Manion Pines (7 lots)

The majority of these subdivisions have been developed with one-acre lots and are a result of density transfers applied from other, more environmentally-sensitive areas of unincorporated Clatsop County. While most of the subdivisions have been completely built-out, construction of new housing units within some of these developments has been halted due to the unavailability of potable water.

In 2020, the City of Warrenton, which had previously supplied potable water to houses within this area of the Clatsop Plains, adopted a moratorium which prohibited the issuance of any new water connections outside the incorporated boundaries of the city. Additional concerns regarding water quality and quantity, the impacts of septic systems on the coastal lakes and creeks in this area, and a decreasing capacity to treat septage from those systems have arisen within the past several years. These concerns over water quality/quantity are also reflected in the Strategic Plan approved by the Board of Commissioners in December 2020.

In addition to water issues, in 2020 the coronavirus pandemic began to change where and how people live and work. These changes were reflected in the Clatsop County housing market, where the number of homes sold, and a corresponding increase in median prices, have further reduced the inventory of affordable housing within the Clatsop Plains planning area. Per information from Realtor.com, the median home sale price in July 2022 in Clatsop County was \$603,000.

GOALS, OBJECTIVES AND POLICIES

CLATSOP PLAINS PLANNING AREA GOALS

GOAL 1: The Clatsop Plains Community Plan shall provide for planned and orderly growth of the Clatsop Plains planning area. The plan shall:

1. protect and maintain the natural resources, natural environment and ecosystems,
2. respect the natural processes,
3. strive for well-designed and well-placed development, and
4. preserve the semi-rural, agricultural, open space and marine characteristics of the area.

In order to meet the Goal, the County shall:

1. Use the physical characteristics described in the section on landscape units as the major determinants of the location and intensity of the use of the land.
2. Retain as much of the land as possible in its natural state.
3. Review, update and amend the plan on a regular basis as needs, additional data and/or economics demand.
4. Expand the boundaries of the Clatsop Plains Planning Area to include Fort Stevens, portions of the Columbia River and the ocean shore to the territorial sea line.

GOAL 2: To preserve to the fullest possible extent the scenic, aesthetic, and ecological qualities of the Coastal Shorelands and other shorelands in the Clatsop Plains.

GENERAL DEVELOPMENT POLICIES

- Policy A:** Consistent with Statewide Planning Goal 14: Urbanization, new residential, commercial, and industrial development should occur within Urban Growth Boundaries.
- Policy B:** Residential, commercial and industrial development within the Clatsop Plains Planning Area shall be directed away from those areas designated FOREST LANDS, RURAL AGRICULTURE LANDS, CONSERVATION OTHER RESOURCES, and NATURAL.

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- Policy C:** The County will continue to maintain an overlay zone for the North Clatsop Plains Sub-Area that:
1. Prohibits increases in residential densities through zone changes and density transfers;
 2. Allows multiple density transfers from a single density transfer sending site, and requires that all receiving sites be located outside the North Clatsop Plains Overlay District;
 3. Encourages wildlife corridor protection through clustered development and open space preservation; and
 4. Applies noise attenuation construction standards to new dwellings in areas impacted by noise from Camp Rilea.
- Policy D:** The County shall consider the adequacy of water, sewer, fire protection and other public services when reviewing applications for commercial development in the Clatsop Plains

COASTAL SHORELANDS AND OTHER SHORELANDS POLICIES

The following are in addition to those found in Goal 17: Coastal Shorelands and Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces Element:

- Policy A:** Within the Clatsop Plains Planning Area, shorelands in Rural areas may be used to fulfill the open space requirements in subdivisions and planned developments.
- Policy B:** The County may participate in a study to determine a means to remove non-native vegetation in the various lakes within the Clatsop Plains. A study may be required due to the hazards to recreational use of water bodies caused by invasive species.

BEACHES AND DUNES POLICIES

The following are in addition to those found in Goal 18: Beaches and Dunes Element:

- Policy A:** The County may participate in studies designed to increase scientific knowledge about the processes that have shaped and will continue to shape the dunes of the Clatsop Plains.

FORT STEVENS STATE PARK SUBAREA POLICIES

- Policy A:** The County may coordinate with the Oregon Parks and Recreation Department (OPRD) to prohibit off-road vehicles on dune or wetland areas in the park and on the Natural wetland-salt marsh in Clatsop Spit.
- Policy B:** Clatsop County and the Oregon Parks and Recreation Department shall work together to implement the adopted

CLATSOP PLAINS AQUIFER POLICIES

- Policy A:** Land use actions (i.e. Comprehensive Plan changes, zone changes, subdivisions, partitions, planned developments, and conditional use permits) within the Clatsop Plains Planning Area shall be reviewed to ensure that the proposed activity will not:
1. adversely affect the water quality
 2. result in the drawdown of the groundwater supply
 3. result in the loss of stabilizing vegetation, or
 4. allow salt water intrusion into the water supply
- Policy B:** The County should periodically re-evaluate the Clatsop Plains Community Plan to determine whether existing policies and standards are adequate to protect water quality in the aquifer, lakes and streams. Consideration shall be given to protection of the lakes from further degradation (eutrophication), and possible remedial actions to improve water quality.
- Policy C:** Clatsop County may partner with Oregon Department of Environmental Quality (DEQ) and the Oregon Water Resources Department (OWRD) or appropriate agencies or consulting firm, complete a water assessment study in Clatsop Plains to analyze groundwater quality and quantity and prepare projections for future use.
- Policy D:** If a groundwater quality and quantity assessment is completed, the County should coordinate with appropriate state agencies and local jurisdictions to develop a water management program that is consistent with the water-budget equation for the Clatsop Plains.

PUBLIC FACILITIES AND SERVICES POLICIES

- Policy A:** The County may collaborate with local residents as well as the Rural Fire Protection Districts to examine the various methods available to improve fire protection.
- Policy B:** The County may coordinate with Rural Fire Protection Districts to require subdivisions and planned developments to

dedicate a site, funds, and/or construction materials for an additional fire station in the Clatsop Plains.

TRANSPORTATION POLICIES

It is the County's intent to develop a system of collectors, frontage roads and common access points within the Clatsop Plains Planning Area to solve the problems that many access points create along U.S. 101.

Policy A: Clatsop County may coordinate with the Oregon Department of Transportation to conduct a study of the Clatsop Plains to analyze access points and access control and to establish design standards for collectors and frontage roads.

HISTORIC AREAS POLICIES

Policy A: The County may work with the Clatsop County Historical Society, local Native American tribes and other historic preservation organizations to identify and protect important local historical and archeological sites within the Clatsop Plains Planning Area.

Policy B: The County should develop clear and objective standards to ensure compatibility for new development on property near or adjacent to important historical or archeological sites.

FISH AND WILDLIFE AREAS GOAL AND POLICIES

FISH AND WILDLIFE AREAS GOAL:

To preserve wildlife habitats and natural vegetation as an essential part of the ecosystem for both humans and wildlife.

Policy A: The County may coordinate with the Oregon Department of Fish and Wildlife (ODFW) to provide a natural waterway between Cullaby Lake to the adjacent drainage canal such that salmonids and lampreys can ascend it without the need of a fish ladder.

Policy B: The County should, in coordination with the cities and other appropriate organizations, implement the requirements of the Oregon Solutions Clatsop Plains Elk Project Declaration of Cooperation, which was signed September 1, 2021.

RECREATIONAL POLICIES

- Policy A:** Recreational vehicle parks shall only be permitted in the urban growth boundaries in the Clatsop Plains.
- Policy B:** The County may encourage the continued public and non-profit ownership of the dune area west of Sunset Lake and the land northeast of Camp Rilea.
- Policy C:** Clatsop County and the Oregon Parks and Recreation Department shall work together to implement the Fort Stevens State Park Plan.
- Policy D:** Clatsop County may work with Oregon Parks and Recreation Department, Oregon Department of Transportation and the Oregon Military Department to provide an additional trail connection(s) between the north end of Camp Rilea/ the beach/ Fort Stevens to the existing Fort-to-Sea Trail, and to address trail gaps within and adjacent to Camp Rilea.

SCENIC AREAS GOAL AND POLICIES

SCENIC AREAS GOAL:

The County should encourage preservation of important vistas, views of the ocean, and other significant visual features.

- Policy A:** Sign sizes and numbers of signs shall be regulated by the County's development standards. No new billboards or other off-premise signs shall be allowed, except on commercial or industrial. This policy applies to views along U.S. Highway 101 from the ocean dunes to the west to the Coastal Foothills to the east.
- Policy B:** No intensive development on the foothills or on top of dune ridges should be permitted. This policy applies to the Coastal Foothills and dune ridges in all directions within the Clatsop Plains.

OPEN SPACE POLICIES

- Policy A:** All planned developments and subdivisions in the Clatsop Plains planning area designated RURAL LANDS shall cluster land uses and designate areas as permanent common open space.
- Policy B:** The County shall require receiving sites for density transfers to be located outside of the North Clatsop Plains Overlay District.
- Policy C:** The County may coordinate with land trusts, cities, state and federal agencies, and other potential agency partners to

facilitate density transfers out of the North Clatsop Plains Overlay District.

Policy D: The County may explore the feasibility of adopting a Purchase of Development Rights program to protect open space within the Clatsop Plains/North Clatsop Plains Sub-Area.

LAND USE POLICIES

LAND USE GOAL:

To preserve and maintain the present overall rural quality of life now enjoyed in the Clatsop Plains

Policy A: The area known as Shoreline Estates shall be designated a RURAL SERVICE AREA, due to the existing facilities available. The land area for this designation shall not be larger than the existing treatment plant's capacity. The expansion of the RURAL SERVICE AREA designation should NOT be allowed.

Policy B: Residents and property owners should be encouraged to promote self-sufficiency with regard to food production. Examples of farm activities particularly suited to the Clatsop Plains Planning Area include, but are not limited to, cranberries, sheep, cattle, flowers and egg production.

Policy C: The following areas shall continue to be designated NATURAL: Clatsop Spit, Tillamook Chute, portions of Fort Stevens, Carnahan Lake, Slusher Lake and portions of the Tansy Estuary and Necanicum Estuary.

Policy D: The NATURAL aquatic designation for Slusher Lake shall extend 100 feet measured horizontally from the aquatic-shoreland boundary.

Policy E: The County may work with the owner of Taylor Lake to designate the lake as NATURAL and amend the zoning to comply with the new land use designation.

IMPLEMENTING OREGON ADMINISTRATIVE RULES (OAR):

None

COORDINATING AGENCIES:

Oregon Department of Fish and Wildlife (ODFW)
Oregon Department of Environmental Quality (DEQ)
Oregon Department of Agriculture (ODA)

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Oregon Parks and Recreation Department (OPRD)
Oregon Department of Energy (ODOE)
State Historic Preservation Office (SHPO)
Oregon Department of State Lands (DSL)
Oregon Health Authority (OHA)
Department of Geology and Mineral Inventories (DOGAMI)
Oregon Department of Land Conservation and Development (DLCD)
Clatsop Soil and Water Conservation District

BACKGROUND REPORTS AND SUPPORTING DATA:

[*Final Site Inspection Quality Assurance Project Plan Addendum Camp Rilea Warrenton, Oregon October 2021, AECOM*](#)

Fort Stevens Master Plan (2001)
Fort Stevens State Park Historic Fort Area – Site Development Plan (2001)
Camp Rilea Joint Land Use Study (2012)
North Clatsop Plains Sub-Area Plan (2014)
Oregon Solutions Clatsop Plains Elk Project Declaration of Cooperation (2021)
Future Climate Projections Clatsop County, Oregon Climate Change Research Institute, February 2020
Columbia River Estuary Regional Management Plan, CREST 1979
Clatsop Plains Environmental Plan (1974)