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# CLATSOP PLAINS COMMUNITY PLAN



**2040**

ORDINANCE 22-~~0709~~  
ADOPTED SEPTEMBER 28, 2022

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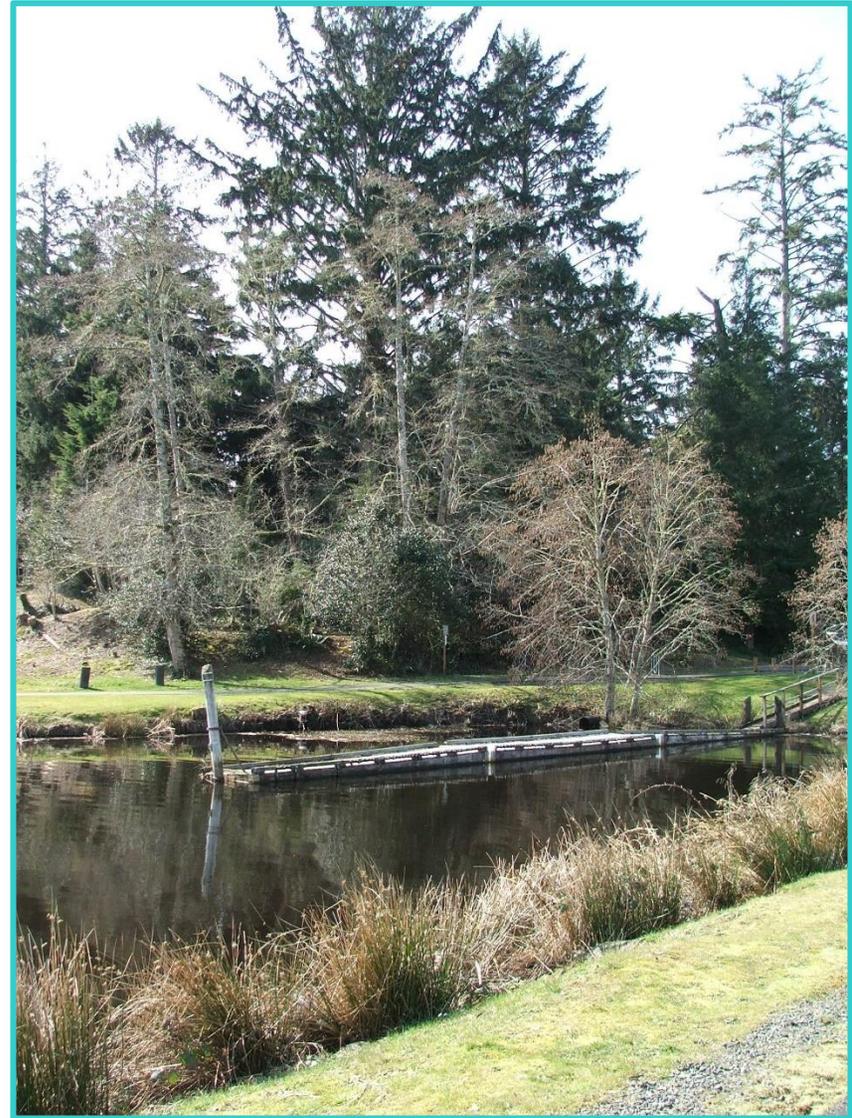
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- Joanna Lyons-Antley, County Counsel
- Patty Jo Angelini, Public Affairs Officer

### LAND USE PLANNING STAFF

- Julia Decker, Planning Manager
- Ian Sisson, Senior Planner
- David Cook, Planner
- Jason Pollack, Planner
- Clancie Adams, Permit Technician
- Gail Henrikson, Community Development Director



## Table of Contents

<b>INTRODUCTION .....</b>	<b>1</b>
Purpose .....	1
Scope .....	2
Planning Process .....	3
Using the Plan .....	4
Review and Update .....	5
<b>OVERVIEW OF THE CLATSOP PLAINS .....</b>	<b>6</b>
<b>LOCAL HISTORY.....</b>	<b>8</b>
<b>CURRENT ISSUES AND CONCERNS .....</b>	<b>10</b>
Housing .....	10
Water Quantity and Quality.....	12
Wildlife Habitat .....	14
Camp Rilea .....	16
Transportation .....	17
Changing Character .....	17
<b>FUTURE TRENDS .....</b>	<b>18</b>
Housing .....	18
Beach Accretion and Erosion .....	18
Traffic .....	18
Tourism .....	20
Water Resources and Carrying Capacity of the Land.....	20
Agriculture.....	20
Wildlife Habitat .....	21

**LANDSCAPE UNITS ..... 21**

- Introduction ..... 21
- Coastal Shorelands and Other Shorelands..... 24
- Beaches and Dunes ..... 25
- Estuarine Resources..... 25
  - Columbia River Estuary ..... 25
  - Necanicum Estuary ..... 27
- Alluvial Lowlands..... 28
- Alluvial Terraces ..... 28
- Coast Range Foothills..... 28

**NATURAL RESOURCES ..... 30**

- Forest Lands ..... 30
- Agricultural Lands ..... 30
- Mineral Aggregates ..... 30
- Water Quality – Clatsop Plains Aquifer ..... 25

**NATURAL HAZARD AREAS ..... 31**

- Mass Movement ..... 31
- Compressible Soils ..... 31
- Flooding..... 31
- Wind and Ocean Shoreline Erosion ..... 32
- Earthquake / Cascadia Subduction Event ..... 32
- Tsunami..... 35

**HOUSING AND PUBLIC FACILITIES AND SERVICES ..... 37**

- Housing ..... 37

Public Facilities and Services .....	40
Sewer Systems .....	40
Water Systems .....	41
Schools .....	43
Flood Control .....	44
Fire Protection .....	44
Transportation .....	49
Highways .....	49
Rail.....	49
Air Transportation.....	49
Preservation, Recreation, and Open Space Areas .....	50
Resource Management.....	52
Preservation .....	52
Aquifer Recharge .....	52
Historic Areas .....	52
Fish and Wildlife Areas.....	52
Recreation .....	53
Parks.....	53
Trails – Bike / Foot .....	54
Scenic Areas .....	54
Open Space .....	54
<b>LAND USE</b> .....	<b>54</b>
Development.....	55
Rural Lands.....	55

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**CLATSOP PLAINS COMMUNITY PLAN 2040 – DRAFT 0708**

Rural Agricultural Lands ..... 56

Forest Lands ..... 57

Conservation Other Resources ..... 57

Natural ..... 57

**GOALS, OBJECTIVES AND POLICIES ..... 59**

**Index to Maps and Figures**

**MAP 1: Clatsop Plains Planning Area ..... 7**

**MAP 2: Clatsop Plains Aquifer Reserve Overlay ..... 7**

**MAP 23: Generalized Landscape Units in the Clatsop Plains Planning Area ..... 23**

**MAP 34: Geologic Hazards Areas in the Clatsop Plains Planning Area ..... 34**

**MAP 45: Special Flood Hazard Areas the Clatsop Plains Planning Area ..... 35**

**MAP 6: Tsunami Inundation Zone ..... 35**

**MAP 57: Fire Districts in the Clatsop Plains Planning Area ..... 46**

**MAP 68: Water Districts in the Clatsop Plains Planning Area ..... 47**

**MAP 79: Sanitary in the Clatsop Plains Planning Area ..... 48**

**MAP 810: Open Space Areas for the Clatsop Plains Planning Area ..... 51**

**MAP 11: Clatsop Plains Scenic Area ..... 51**

**MAP 12: Peripheral and Major Big Game Habitat ..... 51**

**FIGURE 1: Camp Rilea Current Observation Wells ..... 12**

**FIGURE 2: Area of Limited Groundwater Yield ..... 14**

**FIGURE 3: North Coast Basin ..... 30**

**FIGURE 4: Aquifer Reserve Overlay Zone ..... 31**

**TABLE 1: U.S. Highway 101 Traffic Volumes (2018-2020) ..... 19**

TABLE 2: Clatsop Plains Planning Area – Drinking Water Systems .....42

TABLE 3: Clatsop Plains Planning Area – School Systems .....44

## INTRODUCTION

We no longer live in a time when we are few and the land is wide and waiting for us. We have reached the point where we can no longer insulate ourselves from the punishment and pollution we visit upon the earth and the atmosphere, and where the natural resources we once regarded as so endlessly available and expendable are becoming increasingly hard to get. The spread patterns of settlement and development that characterize our past urban growth are the unfortunate legacy of our old illusion that we had endless acres of land to build upon and unlimited resources to enjoy and consume.

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 urban or suburban type development, and the choices made in the use of land frequently reduce substantially the options for future uses. For example, the decision to commit land to a subdivision precludes the use of that land for many other purposes for decades to come.

Common resources, such as streams, lakes and air are by their very nature, subject to exploitation. Differing from land, such resources are difficult, if not impossible, to reduce to individual ownership; thus, they are subject to overuse and congestion.

All too often, land use policies formulated to address the foregoing concerns, problems, and situations take a totally negative view toward growth. In truth, such plans and regulations should only take a negative view toward unplanned or poorly planned growth which ultimately can cost the general public and taxpayer uncalled for and unnecessary damage to their physical, social, economic and environmental situations. Commonly, when land use designations or policies are established, they set forth definitively those lands which cannot or should not be developed. There is, however, a lesser effort to set forth guidelines or policies as to which lands can or should be developed and standards for such development.

### **Purpose**

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. It represents a public statement of the most desirable land conservation projections for the next 20 years. These policies and statements are based on inventories, developmental limitations, projected needs, public attitudes and the Statewide Planning Goals.

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 main objectives of this Comprehensive Plan are:

- a. To the highest possible extent, prevent future conflicts between land use and activities.
- b. To provide an objective basis for the land use decisions of elected officials, planners, public agencies, and individual citizens.
- c. To provide a source of information describing the conditions and characteristics of the community.
- d. To identify the direction and nature of changes which may be expected within the community.
- e. To provide a better understanding of specific actions, programs, and regulations which may affect the general public.
- f. To establish a balance between the competing state and county resource preservation goals and development preferences.

The Comprehensive Plan for the County has been updated with the expressed purpose of providing an accurate statement of the County's land use program and to comply with the State Land Use Goals.

### **Scope**

The scope of the ~~Plan-plan~~ is comprehensive and long range. To provide common direction and consistency within each city and county ~~Comprehensive-comprehensive Plan-plan~~ in Oregon, the Legislature in SB100, 1973, directed the Land Conservation and Development Commission (LCDC) to adopt Statewide Planning Goals and Guidelines. Goals are required to be addressed by law in ~~Comprehensive-comprehensive Plansplans~~. Guidelines are suggested ways to achieve the statewide values contained in the Goals. The Statewide Goals and Guidelines are to be used by cities and counties, special districts, and state and federal agencies in preparing, adopting, revising, and implementing comprehensive plans. They form the foundation of Oregon's land use program.

Oregon's 19 Statewide Planning Goals, which were developed through numerous public meetings, identify statewide values, policies and concerns of Oregonians. The Goals provide the skeletal framework for comprehensive plans with each local government filling in and adopting the plan to reflect their own local needs and concerns.

In order to incorporate and address those local needs and concerns, Clatsop County has taken an exception to the Statewide Planning Goal 3: Agricultural Lands and to a portion of ~~the~~ Statewide Planning Goal 18: Beaches and Dunes ~~Goal #18~~ 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.

It is extremely important to maintain a clear distinction between the Comprehensive Plan itself and implementing measures. Implementing measures include such controls as the zoning and subdivision codes, public land acquisition, taxation policies, and public improvement. These measures are specifications which are taken to transform the Plan-plan proposals and policies into reality. This Plan-plan does not automatically change zoning; however, an Oregon Supreme Court decision in 1975 reaffirmed that the Comprehensive-comprehensive Plan-plan and the implementing zoning must be consistent with each other and the zoning must be subordinate to the Planplan. The Comprehensive-comprehensive Plan-plan establishes a guide for future zoning within the County as well as a plan for all other land use decisions.

### Planning Process

In looking at the various uses of land and consequences of its use, the Comprehensive-comprehensive Plan-plan looks to the future of the County and provides for the orderly and systematic growth of the communities in the County. Clatsop County's Comprehensive Plan consists of background data from various sources and documents. The Comprehensive Plan is a result of combining all these sources, in addition to local needs, to develop public policies in the form of goals, policy statements, generalized maps, and standards and guidelines.

Within the Comprehensive Plan, there are goals, policies and recommended actions which are Countywide and which apply to the entire unincorporated County. However, within each of the Community-community Plan-plansections, other goals, policies and recommended actions apply only to a particular planning area, such as the Clatsop Plains. Goals are indicators of the direction a community desires to direct its efforts whether it be for growth, housing, or natural resource protection. Policies are established to achieve the intent of a goal; they are more specific in nature and imply a commitment to growth, preservation, or a desired change in the development pattern of a specific area of the County. The plan maps, therefore, are designed to be utilized with the written text of the plan and not as an independent element. The plan map is a conceptualized picture of the development and protection of the natural environment as envisioned at a particular point in time. As time passes, new approaches may occur necessitating

changes in goals and policies which will be reflected in the plan map. The Clatsop Plains Citizen Advisory Committee did not identify any required changes to the plan map or zoning that would be needed through the 20-year planning horizon of 2040.

When conflicts arise between the text and map, the written text prevails. In certain circumstances maps are referred to outside the plan document, i.e. Flood Hazard Maps, which are site specific.

Recommendations contained in the plan reflect some possible conflict or concern and suggest future studies or considerations. They do not carry the weight or effect of goals or policies.

The Comprehensive Plan is flexible in the sense that it is a living document subject to change, and therefore amendable. The plan is inflexible by the reason that once goals and policies are established they must maintain their consistency and their integrity of commitment which underlies them, until amendments are adopted.

When the original Clatsop Plains Community Plan was adopted in 1979, a classification system was developed as a tool to implement the various policies contained in the Comprehensive Plan. The system reflected either what an area already was or what the community wanted the area to become. Some of the factors considered in designating properties were the types of public facilities available, existing uses and lot sizes, ~~identified preservation of~~ forest and agricultural lands and the ~~future land use needed, such as housing~~ need to accommodate future residential and commercial growth. The classification system has six designations:

- DEVELOPMENT
- RURAL LANDS
- RURAL AGRICULTURAL LANDS
- FOREST LANDS
- CONSERVATION OTHER RESOURCES
- NATURAL.

These classifications are used to designate different areas on the Comprehensive Plan Map. They are defined in the Community Development section of the plan.

### Using the Plan

A primary consideration in the preparation of a ~~Comprehensive comprehensive Plan plan~~ should be its usefulness. The Clatsop County Comprehensive Plan and the attendant community plans are a statement of public goals, policies, objectives and standards

that are intended to be used in making specific decisions about present and future land use, along with various maps.

In addition, the plan contains intent statements in a narrative form. These statements explain the basis and intent for the County's position on each subject in the plan and have significance in clarifying and setting County policy. Goals, policies, objectives and standards are implemented when the County reviews individual land use actions. To determine whether a specific land use proposal is appropriate, a decision must be made concerning the applicability of each goal, policy or standard.

### Review and Update

The original Clatsop Plains Community Plain was adopted on November 21, 1979 (Ordinance 79-10). The Clatsop Plains Community Plan, along with the community plans for each of the ~~five~~ other ~~five~~ planning areas in Clatsop County is broken down into landscape units. Goals, objectives, policies and/or recommendations are provided for each of the landscape units. Additional sections in each community plan also include specific policies for the planning area related to the 18 statewide planning goals. Since originally adopted, 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 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:

- ~~North Clatsop Plains Sub-Area Plan~~

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## CLATSOP PLAINS COMMUNITY PLAN 2040 – DRAFT ~~0708~~

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

To maintain the Comprehensive Plan as an accurate statement of County land use goals and policies based on current inventory data, it is necessary to periodically review and evaluate it. If changes in the social, physical or economic conditions of Clatsop County occur it will be necessary to restate the land use goals and policies as well as the land use designations on the plan map. Plan amendments may range from individual property requests to a complete plan revision. The need to revise the plan on an individual property can be considered through an application by an affected property owner. A review of the entire Plan-plan should occur at least every 5-7 years.

The flexibility of the planning program through amendments and changes based on new information is important but, at the same time, the integrity of the goals and policies must be maintained through long-long-term stability and consistency in their application.

## OVERVIEW OF THE CLATSOP PLAINS

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. The 2022-2020 Decennial Census estimated the population of the rural northwest part of Clatsop County, which includes the Clatsop Plains Planning Area as ~~3~~3,393. This is an increase of 33% from 2010.



# Clatsop Plains Planning Area

2019 Comprehensive Plan  
 Clatsop County, OR  
 4000 NE Oregon St., Ste. 102  
 Astoria, OR 97103  
 503.325.2422  
 8/20/2022

This map was produced using Clatsop County GIS data. The data is maintained by Clatsop County in support of governmental activities. Clatsop County is not responsible for any errors, omissions, or possible misuse of information.

MAP 1



The Clatsop Plains Citizen Advisory Committee recognizes that the natural resources and amenities of the Clatsop Plains are in fact the features which make it a desirable place in which to live. Protection of these resources (the forest, dunes, open spaces, views, animal life and habitat, ocean beaches, lakes and streams, to name a few) is paramount if the quality of life is to be maintained for both existing and future residents. Development must be required to respect these resources and amenities since poor development or over-development could very easily destroy these values which make up the traditional character of the Clatsop Plains.

The community goals and policies which follow in this plan are the basis from which the implementing ordinances have and will be developed.

The Clatsop Plains Community Plan is an amplification of some of the policies in the Countywide Elements section of the Comprehensive Plan, and also contains policies addressing particular concerns people have for the Clatsop Plains. The goals in the Countywide Comprehensive Plan are used at the community level to identify policies and strategies for addressing specific local opportunities ~~and~~ problems.

## LOCAL HISTORY

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, ~~and 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 up and down~~ along the Pacific sea coast.

The geographical 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. ~~However, the~~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.

Of all the early American historical events on the Clatsop Plains, perhaps the most significant 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-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.

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. Gone are the many seasonal salmon runs in the Skipanon due to past heavy non-native commercial fishing pressure, development on the middle portion of this river, the introduction of non-native fish into the lake, and severe clear-cutting and degradation of the headwater creeks that fed the lake and river.

For many decades, the Clatsop Plains was primarily an agricultural area. Development has ~~been~~ 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 willing local landowners selling agricultural lands for residential development.

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. ~~Also, during~~During this time, the Roosevelt Coast Military Highway from Astoria to California was also completed, ~~which~~. 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.

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 s with tribal members for about three years, ~~exploring to explore~~ options for how the Conservancy might help ~~them~~ 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.

## CURRENT ISSUES AND CONCERNS

### HOUSING

Within the Clatsop Plains Planning Area, the majority of new residential growth has ~~been~~ taken place west of Highway 101. This

development has primarily occurred in one-acre-lot subdivisions which have benefited from transfer of density from other parcels. The density transfer program encourages the clustering of higher-density housing in order to preserve open space and environmentally-sensitive areas. Several revisions have been made to the density transfer regulations over the years, resulting in an incomplete count of the number of units transferred and remaining credits that have yet to be applied. Review and revision of this program, particularly with regard to the Clatsop Plains Planning Area, is strongly recommended within the next two to five years.

In 2019, Clatsop County and the cities of Astoria, Warrenton, Gearhart, Seaside and Cannon Beach, completed a housing study to identify opportunities and weaknesses associated with housing supply in Clatsop County. That report concluded that while the County has a surplus of potentially buildable lands, certain types of housing and housing products at specific price-points are either missing from the county's housing inventory, or are not provided in sufficient quantities. Other findings from the study included:

- The use of residential structures for non-residential uses should be discouraged and/or controlled. The study recommended that this also include the use of homes for short-term rental and investment income, but not second homes.
- Use available residential land efficiently, by encouraging the maximum density allowed in higher density zones.
- Focus on providing and encouraging construction of workforce housing. While subsidized housing is very important, there are already existing programs and institutions that provide those types of units at the lowest price points. By focusing on workforce housing, the goal is to allow some older housing units to become available to lower income residents as workers transition to newer housing.

In March 2020, the coronavirus pandemic resulted in changes worldwide that have significantly altered housing markets, including in Clatsop County. Some people choose to leave more densely populated areas and relocate to more rural areas. Others benefited from remote work options, which no longer tied workers to a specific geographic location. As a result, the median selling price of a home in Clatsop County rose from \$322,500 in November 2018 to ~~\$502,500~~603,000 in ~~September 2021~~July 2022 (Source: Realtor.com). While some of these home sales will be to households that become permanent Clatsop County residents, many will be vacation homes and some of those ~~will~~may be used for short-term rentals. The increase in median housing prices, coupled with a lack of long-term rental units, will ~~result in increased~~amplify pressure to increase housing stock by constructing new residential units. While Goal 14: Urbanization stresses that higher-intensity uses and dense development be directed to urban areas, there is, and will continue to be, a movement to increase housing development on rural lands. Encroaching residential development has the

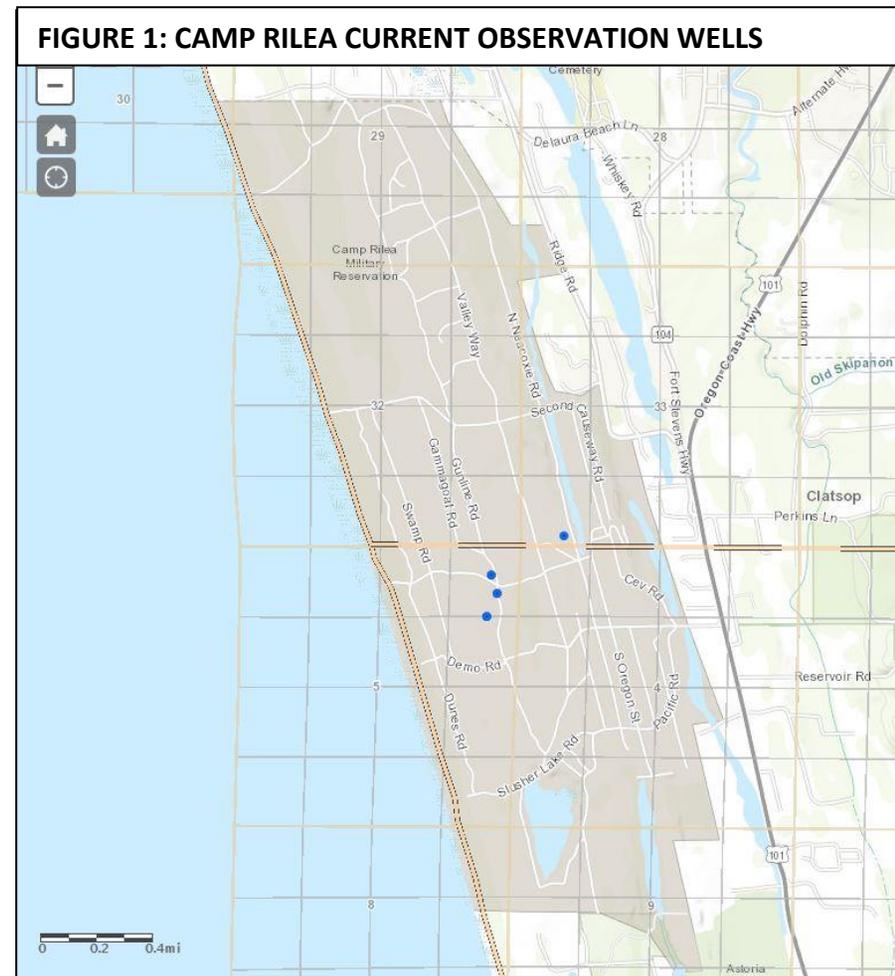
potential to impact farm and forest lands and inventoried Goal 5 resources, including wildlife habitat, groundwater, and open spaces.

## WATER QUANTITY AND QUALITY

In 1977 the then Oregon Environmental Quality Commission passed a resolution which prohibited any development utilizing septic tanks in the Clatsop Plains area. After several studies, including groundwater investigations and analysis, the moratorium was fully lifted in August 1982. As a result of these studies, the aquifer reserve overlay was created and groundwater monitoring was instituted.

In Oregon, the Department of Environmental Quality (DEQ) has the primary responsibility for groundwater protection. DEQ, in coordination with the Oregon [Department of Human Services 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



**Current observation wells at Camp Rilea**  
Source: Oregon Water Resources Department, Groundwater Information System Mapping Tool



In October 2021, AECOM, working on behalf of the Army National Guard, issued a final report regarding the presence of Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) sites on Camp Rilea. Specifically, the Army National Guard is assessing the potential environmental impacts associated with aqueous film forming foam and similar chemical releases suspected at the camp by fire training, firefighting, and metal plating activities. The final study identifies the steps that will be taken to identify whether there has been a release into the environment of the above identified chemicals. The results of this testing and fieldwork is tentatively scheduled to be completed in 2022.

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 the-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, ~~however,~~ 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.

## WILDLIFE HABITAT

### *Clatsop Plains Elk Project*

In April 2019, Governor Kate Brown designated the Clatsop Plains Elk Collaborative as an Oregon Solutions Project. The Governor designated Warrenton Mayor Henry Balensifer and Seaside Mayor Jay



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

Barber as co-conveners of the project and Oregon Solutions formed a project team of 26 members consisting of key stakeholders, private landowners, state agency staff, local community and government leaders, academics, Governor’s Regional Solutions staff, and area non-profit representatives to focus on the goals of reducing conflict between elks -and human ~~interactions~~, increasing safety, and promoting cohabitation between elk and people in the Clatsop Plains area.

A kick-off meeting with the entire project team was held on May 28, 2019. At that meeting, the team drafted the following purpose statement in order to form the scope of the project:

The community in and around the greater Clatsop Plains study area seeks to reduce elk-human related conflicts. We have expressed a sense of urgency and willingness to work collaboratively to identify management solutions and implementation strategies. The purpose of this collaborative is to find viable ways to improve public safety and reduce property damage through outreach and education and a community-wide approach to reducing urban elk interactions while maintaining healthy and viable herds as a valuable cultural and natural resource.

The project team organized its work through four different sub-committees:

- Elk Management
- Human Behavior Management
- Land Use
- Data

A steering committee oversaw the general work of the sub-committees and full project team.

The work of these four sub-committees culminated in a Declaration of Cooperation, which was signed by Clatsop County on September 1, 2021. By signing the Declaration, the County committed to undertaking the following actions:

- Pass a “no feeding” ordinance for unincorporated areas west of Highway 101
- Assist in the guidance and education of residents and tourists regarding elk safety, landscaping, and best practices for pets; support the development of content, printed materials, and community outreach
- Conduct community outreach and education to assist residents when making elk fencing options

- Identify land to be maintained in an undeveloped state for the purpose of creating wildlife corridors, open space requirements for subdivisions, and other practices that will decrease pressure on elk habitat. Build necessary partnerships for support and implementation.
- Review subdivision ordinances, develop educational campaigns, and work with private property owners to build support for requiring minimum open space requirements and regulations that provide adequate elk habitat and forage within and between adjacent developments.
- Integrate land use issues regarding the Clatsop Plains Elk Collaborative into the Clatsop County Comprehensive Plan update process. Use the Clatsop Plains Elk Collaborative Declaration of Cooperation as consideration and guidance for zoning code discussions (open space requirements, locations, designs) and density transfer discussions.
- Develop and implement an informal process of coordinating with and notifying developers and private landowners of the presence of elk in areas they may be converting from a more natural state to residential or commercial use. An informal process might include:
  - Ensuring that developers and land owners are aware of wildlife buffers and other land use recommendations from the Clatsop Plains Elk Collaborative
  - Providing an additional disclaimer on over-the-counter building permits to advise applicants of the possible presence of elk
  - Providing mapping of wildlife areas in conjunction with notifications
  - Working with real estate agents to build support for notifying potential buyers of the presence of wildlife where they are buying a home or setting up a business
- Provide ODFW with copies of all public notices for conditional use permits, even in areas not officially designated as Big Game Habitat
- Assist in education and outreach, in coordination with Warrenton and Gearhart, to inform the public and local officials on the relationship between land use planning and wildlife interactions
- House and administer GIS data for the Clatsop Plains Elk Collaborative map
- Review the County’s density transfer program and adjust as needed to disperse density transfers throughout appropriate areas of unincorporated Clatsop County

- Support requests for culling permits made by cities within the Clatsop Plains area that would be conducted on unincorporated land outside of city limits when the elk are understood to be biologically attached to the city making the request. This does not require a formal resolution.
- Consider passing a formal resolution for a culling permit from ODFW when requests are made by private entities for elk on unincorporated land that are not biologically attached to a city.

### **CAMP RILEA**

Camp Rilea, formerly named Camp Clatsop, was constructed in 1927. Camp Clatsop was an important mobilization site during WWII and was the first encampment location of the Oregon Army National Guard after the war. In 1959, the installation was renamed Camp Rilea in honor of Major General Thomas E. Rilea, the Adjutant General of the State of Oregon from 1941-1959. The Camp Rilea Armed Forces Training Center, comprising approximately 3,000 acres, offers both military and civilian users training options including fire ranges, barracks and other facilities. The County’s Emergency Operations Center (EOC) is also housed at Camp Rilea.

In 2012, Clatsop County, in partnership with Camp Rilea, the City of Warrenton, and several state and local organizations and agencies, completed the *Camp Rilea Joint Land Use Study* (JLUS). When Camp Rilea was first constructed, the surrounding area was rural with few residences. New development over the decades brought residents into closer proximity with Camp Rilea, raising concerns for long-term compatibility between military and civilian uses. The JLUS was intended to bring all parties involved in planning of the areas surrounding Camp Rilea together in order to address current and future compatibility issues and improve coordination between local jurisdictions, federal and state agencies, the Chinook Indian Nation, Camp Rilea / Oregon Military Department, and the public. While the study resulted in several operational and land use recommendations designed to enhance compatibility between potentially conflicting uses, residents surrounding the camp continue to report concerns over noise and pollution. As part of this comprehensive plan update, a representative of Camp Rilea was appointed to the Clatsop Plains Citizen Advisory Committee.

### **TRANSPORTATION**

In addition to noise concerns, safety concerns have been noted regarding the intersection of U.S. Highway 101 and Patriot Way, the entrance to Camp Rilea. During times of training or when events are held at the base, access onto Highway 101 from Camp Rilea or surrounding residences is difficult.

The Oregon Department of Transportation (ODOT) is currently undertaking improvements to the intersection of Perkins Lane and Highway 101 to increase safety at this intersection.

### **CHANGING CHARACTER**

During discussions of the Clatsop Plains Citizen Advisory Committee, the question of whether the planning area still retains its rural, or even semi-rural character, ~~has been~~was debated. Development within the City of Warrenton, both commercial and residential, has expanded to the south end of its city limits, adjacent to the north boundary of the planning area. Residential development on the west side of Highway 101, within unincorporated Clatsop County, while relatively less dense than urban areas, has altered the landscape and reduced open space. Additionally, denser, urban residential development has and is occurring on the north end of the City of Gearhart. Much of this new development has replaced agricultural lands and farms which had previously replaced traditional Chinook Indian Nation gathering places and villages. Additional community discussions regarding the existing and future character of the Clatsop Plains Planning Area should be conducted.

## **FUTURE TRENDS**

### **HOUSING**

As noted above, the County ~~and cities~~ completed a housing strategies study in 2019. In early 2020, the coronavirus pandemic occurred, resulting in significant, and possibly permanent, changes to how and where people live and work. A shift to telecommuting or remote work occurred during this period, which in turn led to a desire for open space and larger homes or second homes. Correspondingly the real estate market saw a dramatic increase in the number of property sales and the selling price of homes. The 2019 study, which was completed prior to the pandemic, does not anticipate or capture these potentially permanent shifts in the housing market. It is recommended that either the study be updated to incorporate this new dynamic and/or that a housing needs analysis and building lands inventory be completed by the County within the next 2-5 years.

### **BEACH ACCRETION AND EROSION**

Throughout the course of history, beach erosion and accretion has naturally occurred. In recent decades, partially due to the construction of the South Jetty ~~and 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 protect 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 and those policies are implemented ~~through ordinances-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 ~~ordinance-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 damage to people and property from coastal erosion and sea level rise.

### TRAFFIC

As the demand for housing increases there is also a corresponding increase in the need to provide new roads to those homes. Again, while Goal 14: Urbanization directs new housing development primarily to urban areas, partitioning and subdividing of rural lands continues to occur in unincorporated Clatsop County. The construction of new roads, or the expansion of existing roads, has the potential to eliminate or reduce wildlife habitat.

As discussed above, 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-counts (AADT)~~ 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.

TABLE 1: 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

### TOURISM

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, 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.

Due to the limited availability of public transit within Clatsop County and connections to adjacent counties, few viable 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, ~~none~~ not all of those options have yet been implemented.

### WATER RESOURCES AND CARRYING CAPACITY OF THE LAND

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 and wildlife habitat. The recommendations of the [Clatsop County 2020 Strategic Plan, and subsequent amendments](#), should be completed and acted upon in order to determine what, if any, 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.

## **AGRICULTURE**

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. 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.

## **WILDLIFE HABITAT**

As noted above, the continued pressure to construct new residential units within the Clatsop Plains Planning Area, particularly west of Highway 101, will result in the continued loss of wildlife habitat. With regard to elk specifically, the original community plans and comprehensive plan did not identify this area as potential elk habitat. However, as development has increased, and new residents have created landscapes with vegetation preferred by elk, human and animal interactions have risen. In order to balance the habitat needs of both people and wildlife, the County should review its subdivision regulations to address the following:

- Is the currently-required 30% open space sufficient?
- Is open space connected to provide a continuous corridor for wildlife?
- Are there water and forage opportunities within that open space?

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 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.

## LANDSCAPE UNITS

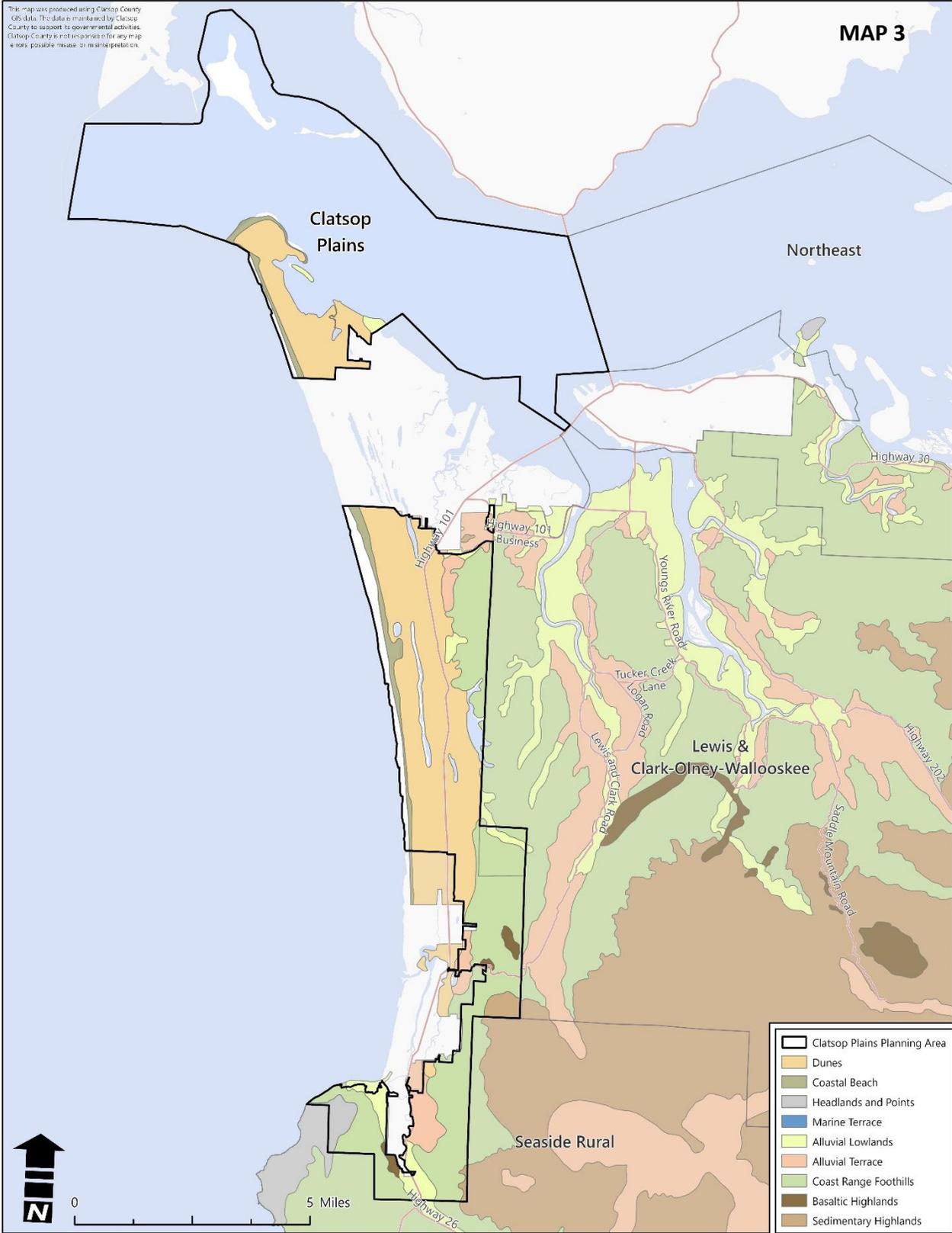
### INTRODUCTION

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, Dunes, Alluvial Lowlands, Alluvial Terraces, Coastal Range Foothills, Estuary Wetlands, Freshwater Wetlands, Waterbodies, and Shorelands.



# Clatsop Plains Planning Area (Generalized Landscape Units)

Zelevy Consulting, Inc.  
 Clatsop County GIS  
 200 Duane St., Ste. 100  
 Astoria, OR 97103  
 (503) 325-9182  
 August 22, 2012



Each landscape unit's capabilities and limitations were originally documented in the Clatsop Plains Environmental Plan (1974). The Environmental Plan contains four elements: landscape units, critical hazards areas, an open space program, and priority resources areas. Each element performs a specific purpose in incorporating environmental data and policies into the Community Plan Element. The policies in the Environmental Plan are the basis and background for the policies in this section and other sections of this plan.

### COASTAL SHORELANDS AND OTHER SHORELANDS

The 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. The purpose of identifying shorelands is to conserve and protect shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent waters.

Within the State Coastal Shorelands Goal, the process for determining the extent of the shorelands requires that coastal shorelands include the following:

1. Lands which limit, control or are directly affected by the hydraulic action of the coastal water body, including floodways;
2. Adjacent areas of geologic instability;
3. Natural or man-made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;
4. Areas of significant shoreland and wetland biological habitats;
5. Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, and areas having characteristics suitable for aquaculture;
6. Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal water areas;
7. Coastal headlands.

The above resources have been inventoried and are found in Goal 17: Coastal Shorelands. The extent of the Coastal Shorelands is shown on maps in the above referenced Goal.

## BEACHES AND DUNES

Beaches consist of gently sloping areas of loose material (i.e. sand, gravel) that extend landward from the low-water line to a point where there is a definite change in the material type such as vegetation. Dunes are hills or ridges of sand formed by wind along sandy coasts. The Dune landscape unit includes the following land forms:

- Active dune is dune that migrates, grows and diminishes from the force of wind and supply of sand.
- Conditionally stable dune is a dune which is presently in a stable condition, but vulnerable to becoming active due to fragile vegetative cover.
- Older stabilized dune consists of a dune which is stable from wind erosion, has significant soil development, and may include diverse forest cover.
- Interdune area is a low-lying area between higher sand land forms which is generally under water during part of the year. Within the interdune areas, there is a deflation plain which is wind scoured to the level of the summer water table.

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 ~~that might be considered as having~~ must be reviewed for possible environmental ~~effect include~~ 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.

## ESTUARINE RESOURCES

There are two estuary systems within the Clatsop Plains: the Clatsop Spit area which is part of the Columbia River and the Necanicum Estuary.

### *Columbia River Estuary*

A plan for the shoreland and estuary of the Columbia River was prepared by the Columbia River Estuary Study Taskforce (CREST), whose recommendations form the basis for managing the resources of this area. CREST is a bi-state voluntary planning organization

that was organized in 1974 to develop a coordinated regional estuary management plan for the Lower Columbia River. The County has participated in the planning of the estuary as a member of the regional council of CREST.

The following definitions will help one better understand this portion of the Clatsop Plains Community Plan concerning the estuarine areas and their related coastal shorelands.

### ***Definitions***

#### **Aquatic Areas**

Aquatic areas include the tidal waters and wetlands of the estuary and non-tidal sloughs, streams, lakes and wetlands within the shoreland planning boundary. The upper limit of aquatic areas is the line of non-aquatic vegetation or, where such a line cannot be accurately determined, Mean Higher High Water (MHHW) in tidal areas or Ordinary High Water (OHW) in non-tidal areas.

#### **Shoreland Areas**

Estuary Shorelands include forests, cliffs and steep topography, diked farm and urban lands along the estuary and the tidal reaches of estuary tributaries; and shoreline areas suitable or already developed for water-dependent uses.

CREST has developed an inventory of Estuary and Shoreland Resources and Regional Policies for the Columbia River Estuary. The policies serve as the base policy statement for the County on development and other actions related to the estuary. This plan included subareas around the Upper Skipanon River, the Youngs Bay Astoria Planning Area, and Fort Stevens. Over time, as the planning area boundaries were revised, portions of these subareas appear to have been excluded from the Clatsop Plains Planning Area. Discussion during the citizen advisory committee meetings in 2021 have included ~~expansion of~~ expanding certain planning area boundaries to include unincorporated portions of these subareas. The CREST document has not been updated since the 1980s and it is recommended that the County update this inventory within the next 2-5 years.

#### ***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 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-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.

The existing Clatsop Plains Community Plan includes 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. ~~However, the~~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 ~~the that~~ PMP zoning not be applied to the park.

### ***Necanicum Estuary***

The Necanicum Estuary is located in the cities of Seaside and Gearhart and ~~the~~ within unincorporated 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 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 within 5-7 years of this update as increased development and environmental and climate changes may necessitate policy revisions.

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.

#### **ALLUVIAL LOWLANDS**

Alluvial lowlands occur on valley floors which have resulted from the deposition of material by water. Examples in the Clatsop Plains are the lowlands along the Skipanon and Necanicum Rivers. Characteristics of the alluvial lowlands landscape unit are floodplains, diked lands and peat soils.

#### **ALLUVIAL TERRACES**

Alluvial terraces are relatively flat or gently sloping topographic surfaces which mark former valley floor levels. Stream down-cutting has caused the terraces to be higher than the present valley floor. Alluvial terrace deposits consist of gravel, sand, and finer material. Alluvial terraces are present above the Skipanon River and in the area east of the Necanicum River.

#### **COAST 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.

## 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

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.

### 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.

### WATER QUALITY - CLATSOP PLAINS AQUIFER

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

## CLATSOP PLAINS COMMUNITY PLAN 2040 – DRAFT 0708

Two of the watersheds drain to the Columbia River:

- Lower Columbia
- Lower Columbia-Clatskanie

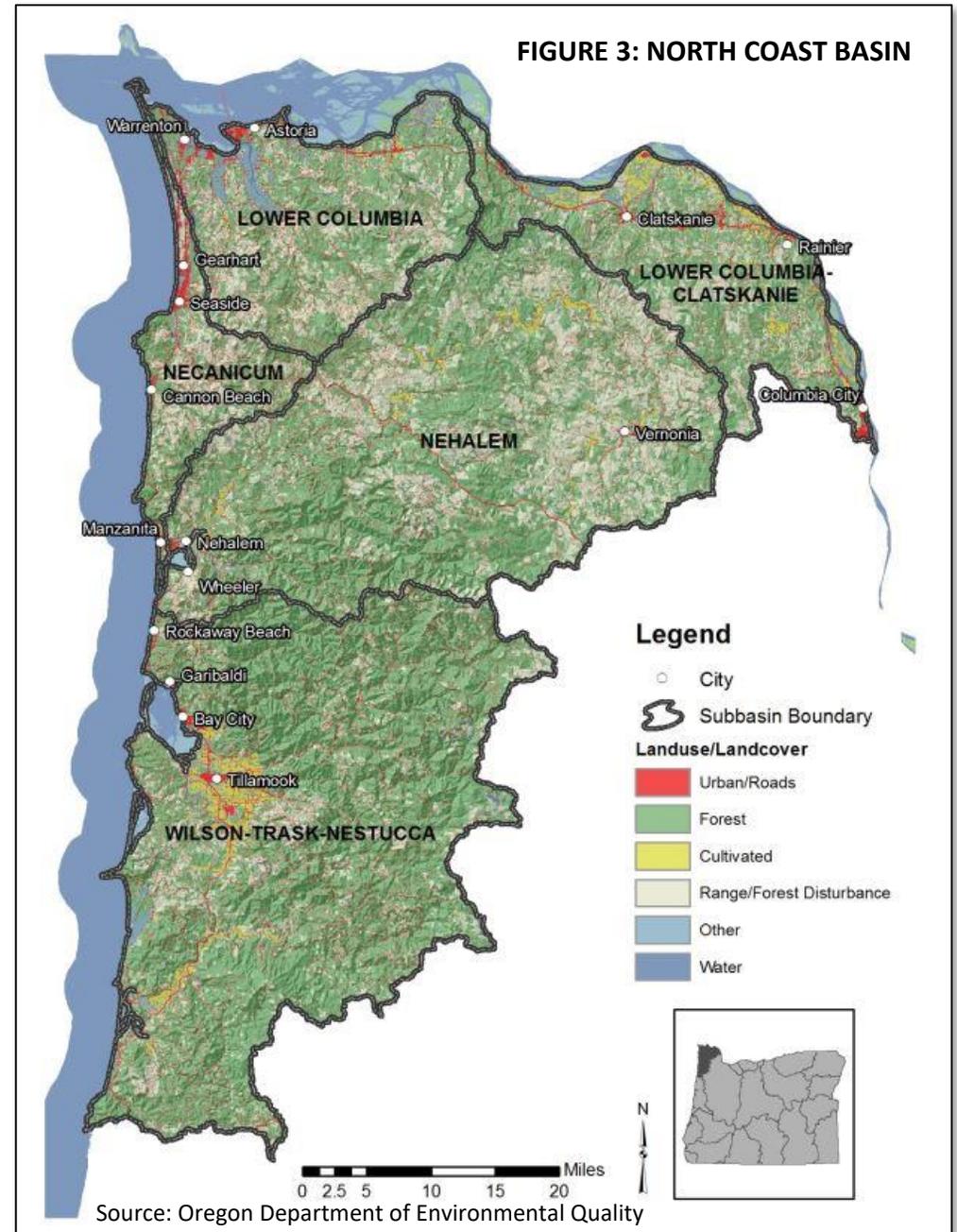
As noted in the current~~ly~~-adopted Clatsop Plains Community Plan, water quality issues have been an ongoing concern in this planning area. This included a moratorium ~~in the 1970s~~~~from 1977~~ through 1982 that restricted, and eventually prohibited, development that utilized onsite waste disposal systems. ~~This~~~~While this~~ moratorium was lifted in 1982. ~~However~~, during the drafting of the 2020 Strategic Plan, it was noted that a future moratorium on septic utilization may be required while water quality studies are conducted.

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 ([Figure 4Map 2](#)). 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.

## NATURAL 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 [1-4](#) and [2-5](#) show the locations of geologic and flood hazards in the Clatsop Plains.

### MASS MOVEMENT



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 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 ~~Plan~~, a high percentage of lands with the 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 seasonally high water table. ~~Also, areas~~ Areas along the beaches and estuaries are also subject to damage from high storm tides or tsunamis.

### WIND AND OCEAN SHORELINE EROSION

The coastal beaches and dunes of Clatsop County are fragile landscape units. They are fragile because they are composed of easily moveable sand which, if not managed properly, may threaten human life and property.

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.

### 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 really only come to be 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 and then the Alaska earthquake of 1964 with its resulting tsunami that impacted the Oregon coast was a major catalyst for the scientists in the field of seismic study. Emerging tools and scientific vigor set several researchers on the path to discover the Cascadia subduction zone and arrangement of plates in the Pacific Northwest, but also to develop 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. The science was conclusive enough to be acted upon by policy makers that citizens demanded—the groundswell of knowledge and advocacy coming from the north coast of 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 ~~the~~ 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 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 ~~the~~ liquefaction and landslides, communities and structures on higher ground will likely be “islands” disconnected from other communities by severed transportation routes.

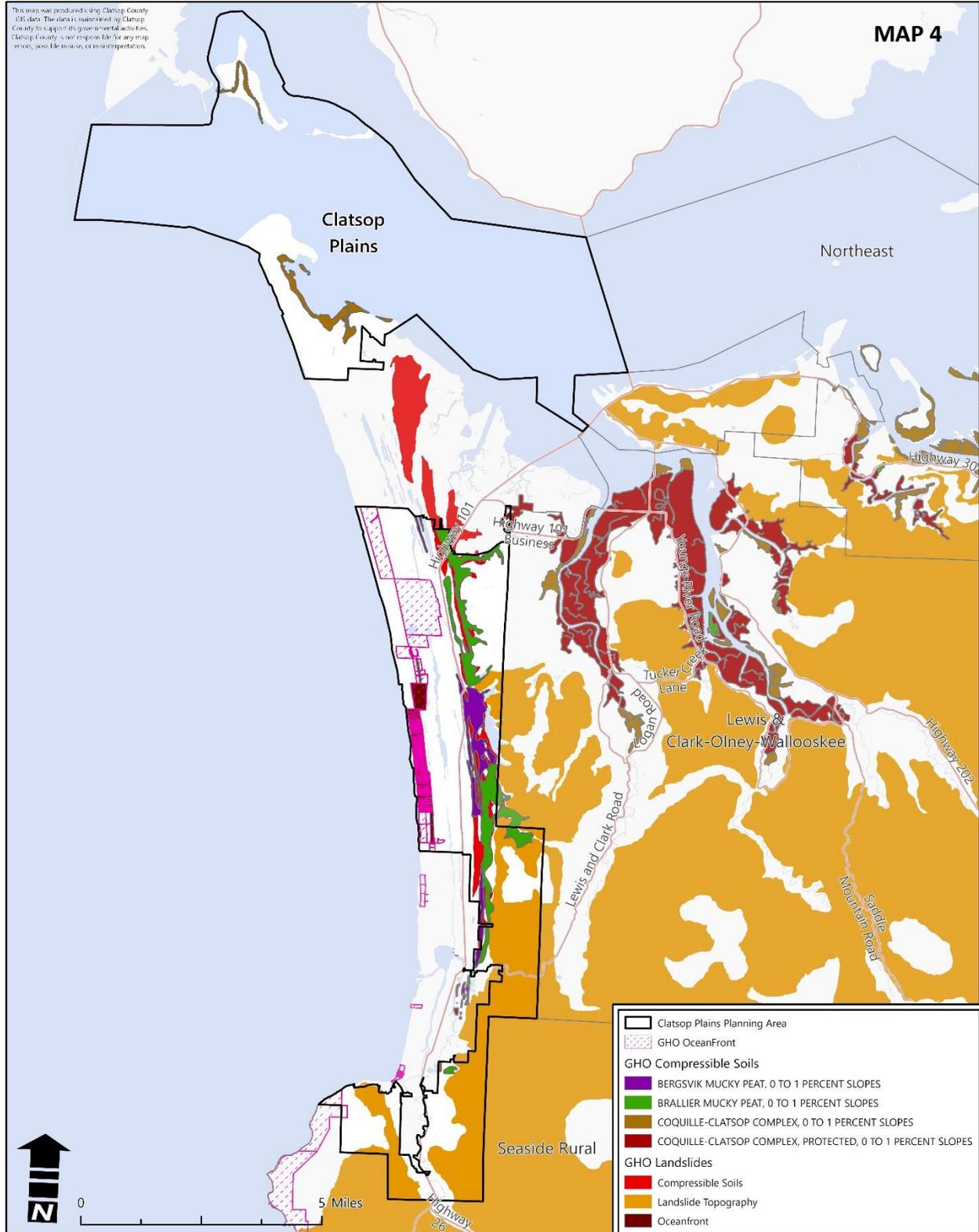


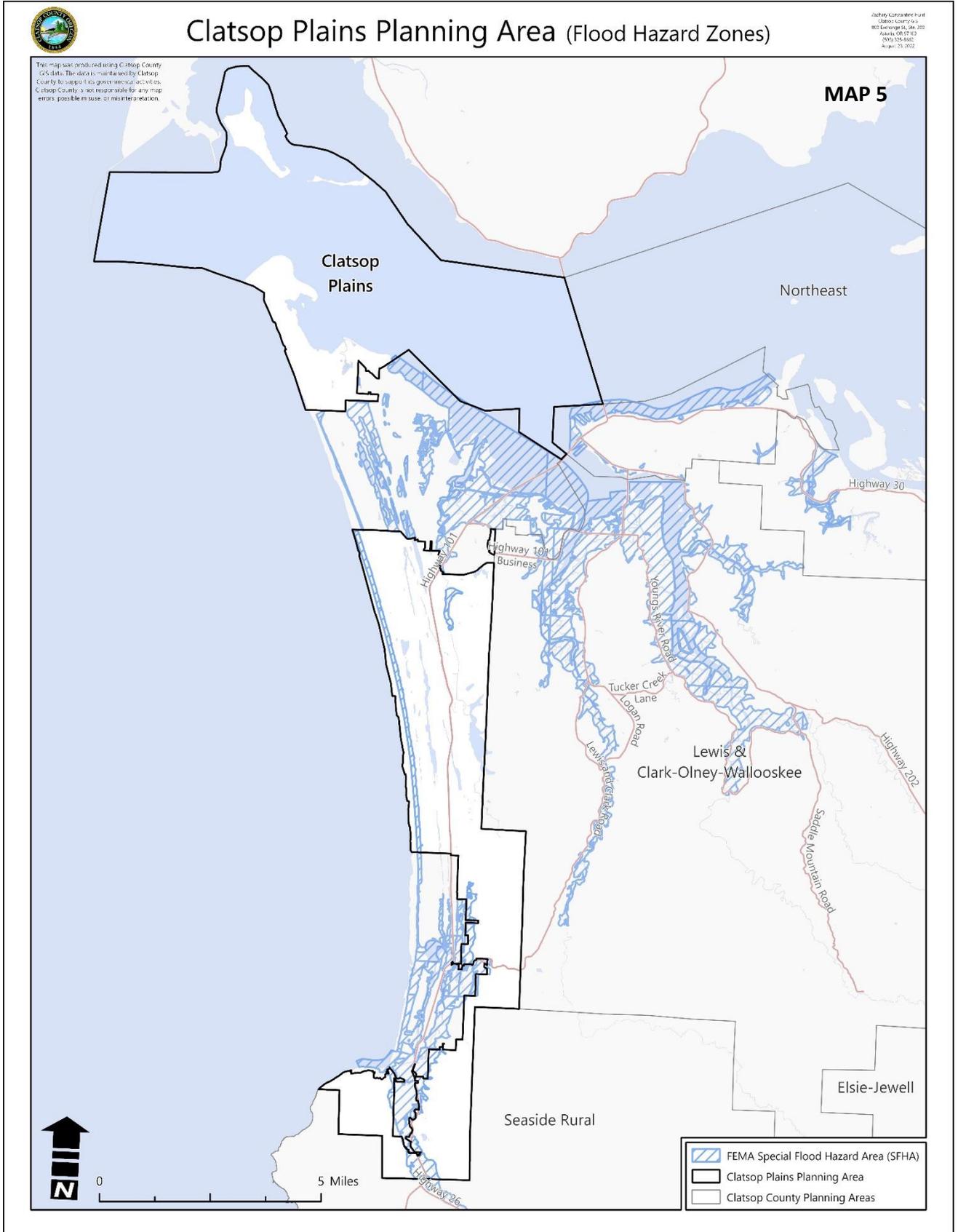
# Clatsop Plains Planning Area (Geologic Hazards Overlay)

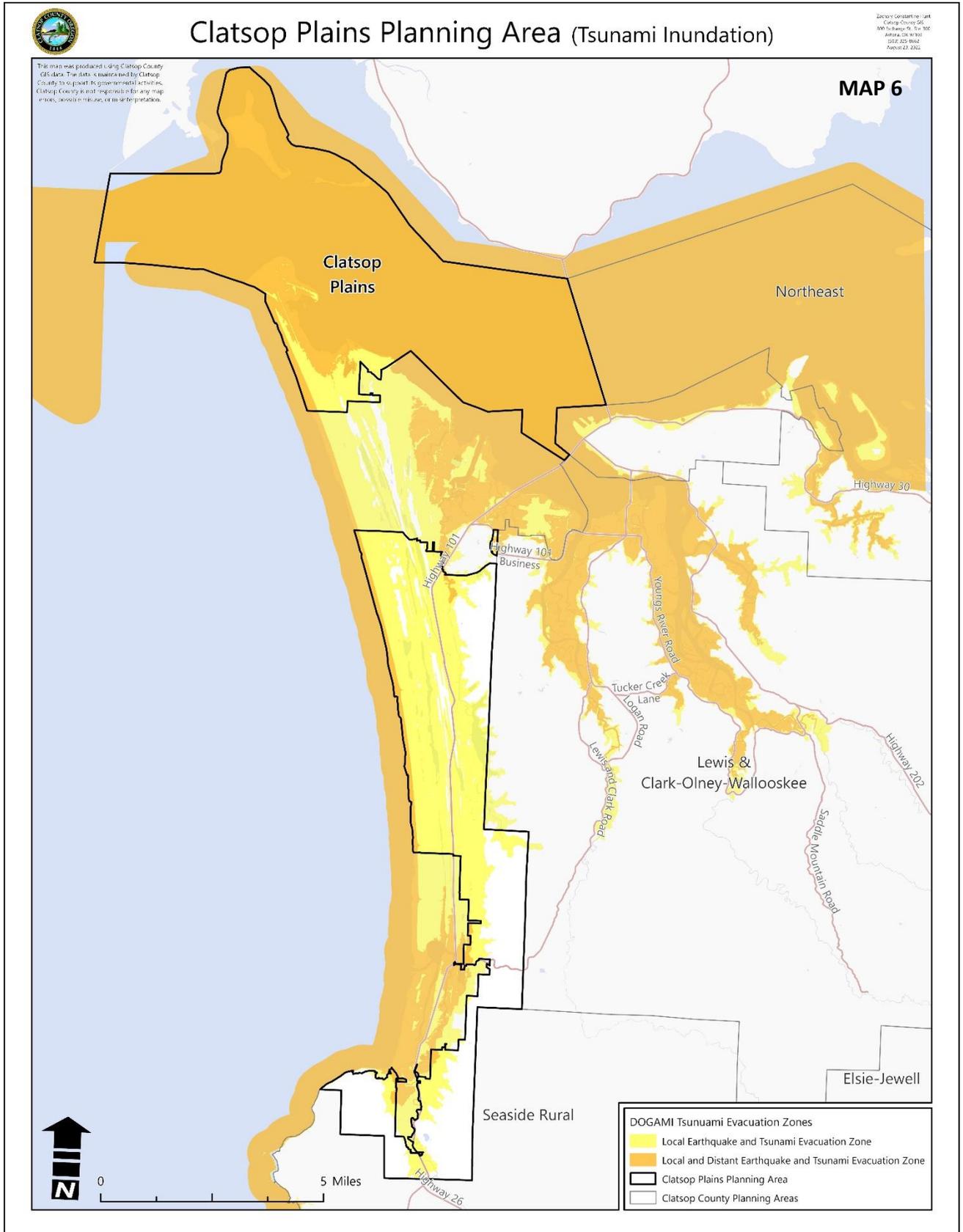
Zachary Constantine, Inc.  
Clatsop County GIS  
805 Buchanan St., Ste. 100  
Astoria, OR 97103  
503.325.8822  
August 22, 2022

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MAP 4







## 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. The City of Seaside is the most vulnerable city 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 ~~was tabled~~ 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 ~~FOZ~~THO is a recommended mitigation action in the adopted Multi-Jurisdictional Natural Hazards Mitigation Plan.

***Tsunami Evacuation Facilities Improvement Plan (TEFIP)***

On ~~August 22, 2019~~June 8, 2022, the County ~~received an award letter from the Oregon Transportation and Growth Management Program to prepare~~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. ~~The project began in January 2020 and is expected to be completed in early 2022.~~

## HOUSING AND PUBLIC FACILITIES AND SERVICES

### 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 ~~1980~~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.

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:

- 1) Sufficient Supply, but Not the Right Types of Housing**

- Technically, there seems to be a sufficient supply of land and number of housing units to meet both current and future needs. In 2019, there were 1.4 housing units in the county for each permanent resident household, with an estimated vacancy rate of over 27%. However, much of this supply serves the second home and short-term rental market, leaving insufficient supply for year-round residents to both purchase or rent. In addition, some of the supply of future residential land suffers from a variety of constraints related to natural features and hazards, infrastructure challenges, or other issues.

## 2) Add the Right Types of Supply

- Strategies should focus on adding the right type of supply, meaning home-buying opportunities at affordable price points, and more multi-family rental housing.
- Adding “missing middle” housing types such as townhomes, cottage clusters, and medium density housing can help to meeting the needs of first-time homebuyers. This housing, if not located in the most sought after beach locations, should be less attractive to second home buyers.
- Increased multi-family rental housing development should be encouraged to serve the local service, tourism, and other working-class sectors.

## 3) Control Commercial Use of Residential Land

- Non-residential uses of housing units should be discouraged and/or controlled to the extent possible. This includes housing used purely for short-term rental and investment income. It can be helpful to shift the mindset to thinking of these as commercial uses (like a hotel) taking place in residential zones where they may not be appropriate.
- This does not necessarily include second homes, which may be vacant for much of the year, but are not being used as a commercial venture.

## 4) Use Available Residential Land Efficiently

- Remaining available residential land should be used efficiently. This means encouraging middle- and high-density residential zones to be used for housing at these densities, and not be built out with low-density housing that doesn't meet the intention of the zones.

- An added benefit of efficient use is that it encourages housing types that may more naturally serve the local residents, including “missing middle” types and multi-family rental housing.

**5) Focus on Workforce Housing**

- Strategies should focus on the needs of the county’s current and future workforce (at all income levels.) While subsidized housing is very important and should be continually expanded, there are also existing programs and institutions for providing units at these lowest price points.
- If more non-subsidized housing is provided for the general market, this has the beneficial effect of allowing some older housing to become available to lower income residents as well.

The 2019 housing study also found that the supply of residential buildable land is concentrated in north County, primarily within and around the cities of Warrenton and Astoria. It was also noted that while there is a substantial supply of buildable residential land in the unincorporated portions of Clatsop County, many of those areas may lack a full set of commercial and other support services and non-municipal water and sewer districts may not have the infrastructure or plant capacity to serve increased development. Additionally, Oregon’s statewide land use planning system, and in particular Goals 10 (Housing) and 14 (Urbanization), is focused on directing growth to urban areas.

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:

- 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 ~~captured-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 ~~sole-sale~~ prices in ~~October 2021~~ July 2022 in Clatsop County was ~~\$587,500~~ 603,000.

## **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-sequencing Batch-batch Reactor-reactor Wastewater wastewater Treatment-treatment Plan-plant~~ located at 105 NE 5<sup>th</sup> Street. The plant staff also operates 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-septage Receiving receiving Station-station~~ and limiting the types of septage that would be accepted. As a result, septage 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 ~~upgrading-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 ~~average-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~~age~~ 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 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-sewer Systems~~system.

### **Water Systems**

Within the Clatsop Plains area, there are six water systems: City of Warrenton, City of Gearhart, Camp Rilea, Sunset Lake RV Park, City of Seaside, and Stanley Acres.

The City of Warrenton operates a 6 million gallon per day (MGD) ~~Continuous-continuous Microfiltration-microfiltration Water-water Treatment-treatment Plant-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 plains. ~~At the present~~

~~time, the City of Warrenton has instituted a moratorium on new water connections outside the incorporated city limits.~~ 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
- 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 2: 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
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-middle~~ and ~~High-high Schools~~ 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 3: 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
<b>Grades</b>	K-5	6-8	9-12	K-5	K-8	9-12
<b>Enrollment</b>	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.

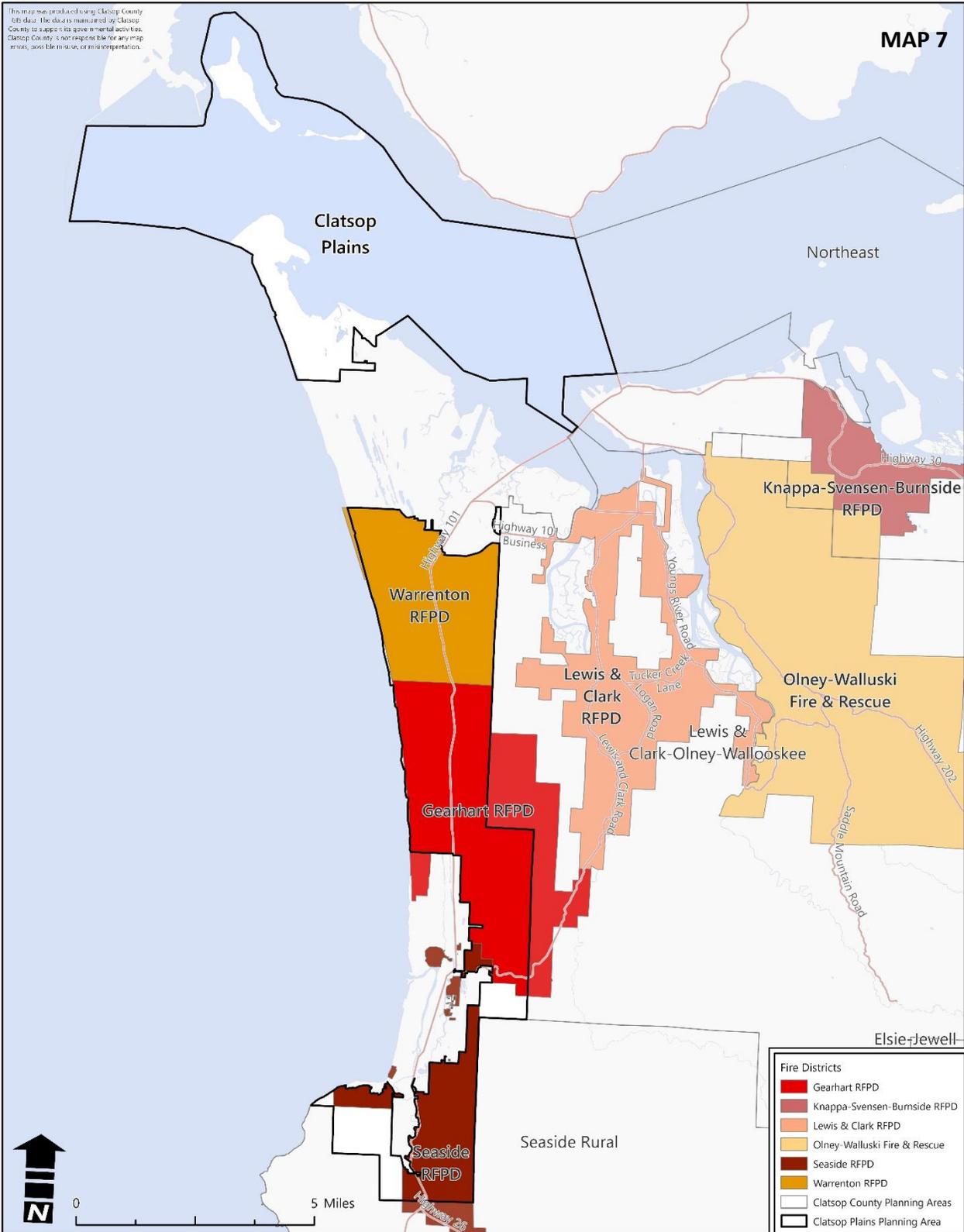


# Clatsop Plains Planning Area (Rural Fire Protection Districts)

Clatsop County  
 Planning Department  
 1000 NE Oregon St., 3rd Fl.  
 Astoria, OR 97103  
 503.325.4922  
 August 23, 2022

MAP 7

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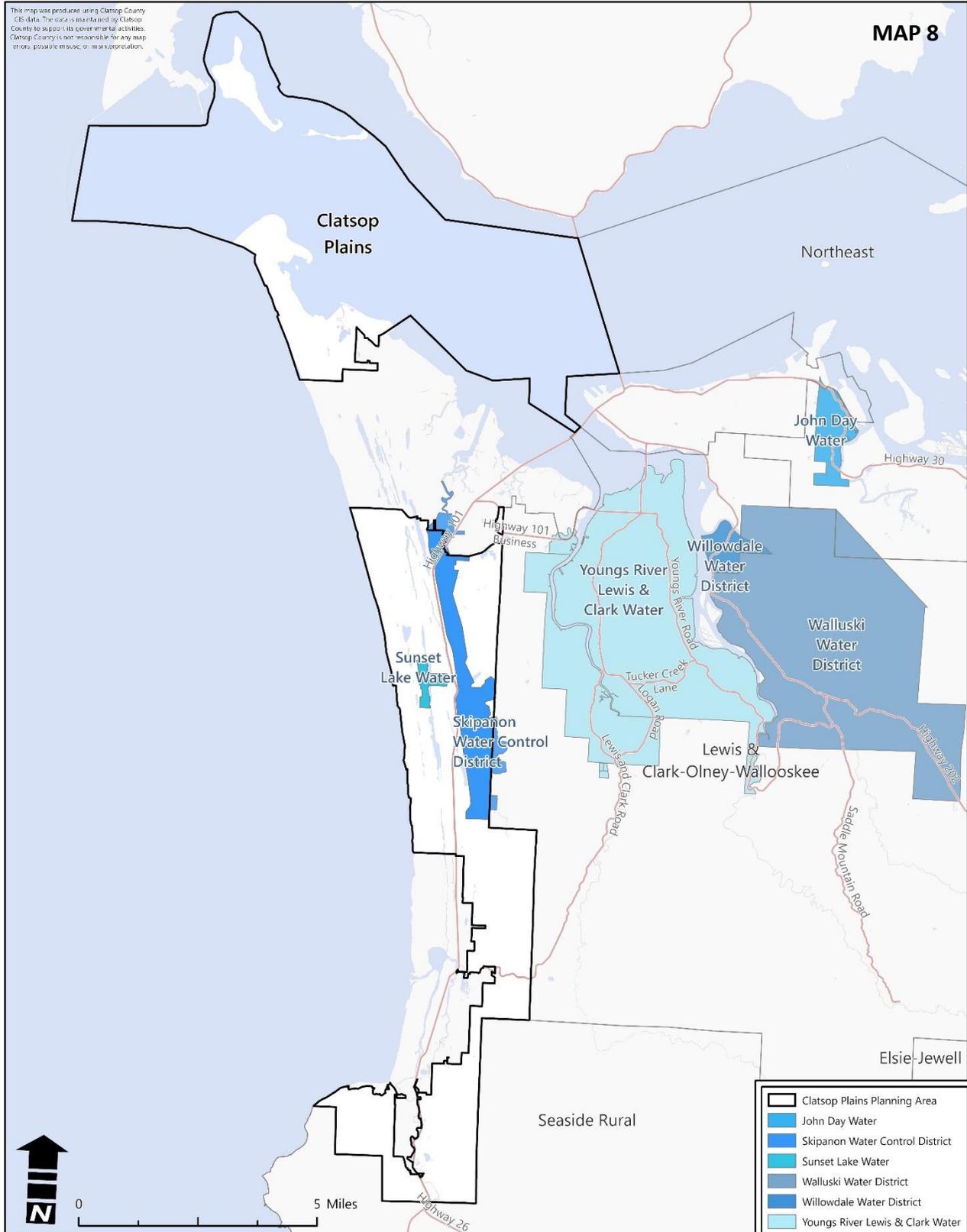


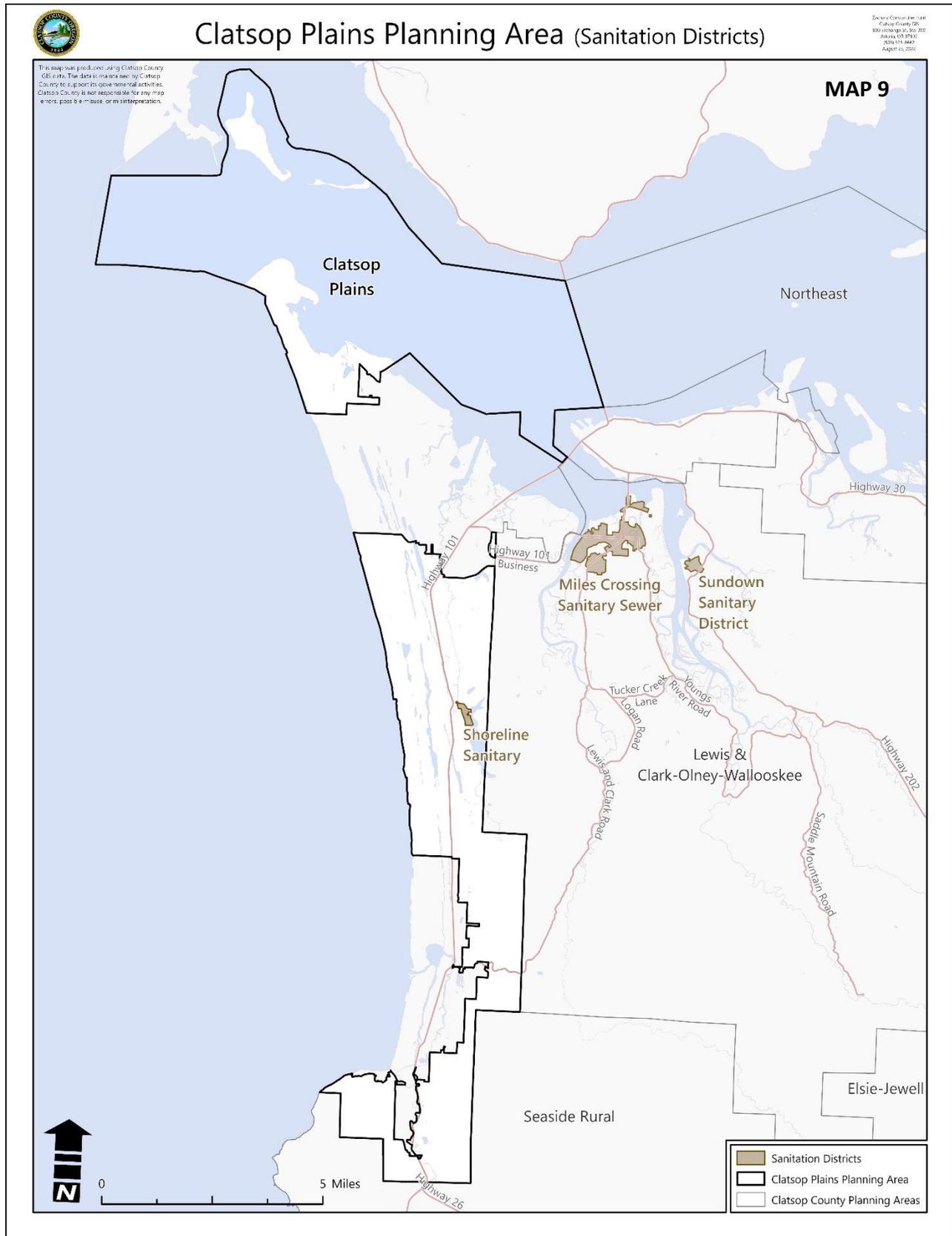
# Clatsop Plains Planning Area (Water Districts)

Timothy Conant as Artist  
 Carter Davis GIS  
 800 College St., S.W. 333  
 Astoria, OR 97103  
 503.325.4652  
 August 22, 2002

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**MAP 8**







## TRANSPORTATION

### *Highways*

Roads within the County maintenance system are generally two lanes and uncongested. Most of the driving in the planning area 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. As also discussed above, traffic conflicts at the intersection of U.S. Highway 101 and Patriot Way, the entrance to Camp Rilea, continues to present safety issues for users of the Camp and surrounding residents.

### *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.

**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.

One of the highest priorities for the Clatsop Plains CAC has been the importance of maintaining the semi-rural character of the Clatsop Plains and to preserve large amounts of open space. However, with property tax laws, property rights, and local government financial limitations to purchase open space, there is no simple solution to achieve this objective. The Community Plan recommends a strategy for preserving open space that is consistent with the statewide planning goals as well as local concerns. The policies for the preservation of open spaces and for the accommodations of residential development in the planning area is reflected in the following sections on open space

Open space can exist through a wide variety of different land uses as shown by the following categories:

<b>CATEGORIES</b>	<b>EXAMPLES</b>
Resource management	Forest/farm lands
Preservation	Aquifer recharge, historic, <u>cultural</u> , fish and wildlife areas
Recreation	Fort Stevens State Park
Scenic/buffer	Open space in subdivisions

**Map 4-10** shows the location of open spaces within the planning area. **Map 11 identifies the Clatsop Plains Scenic Area.**

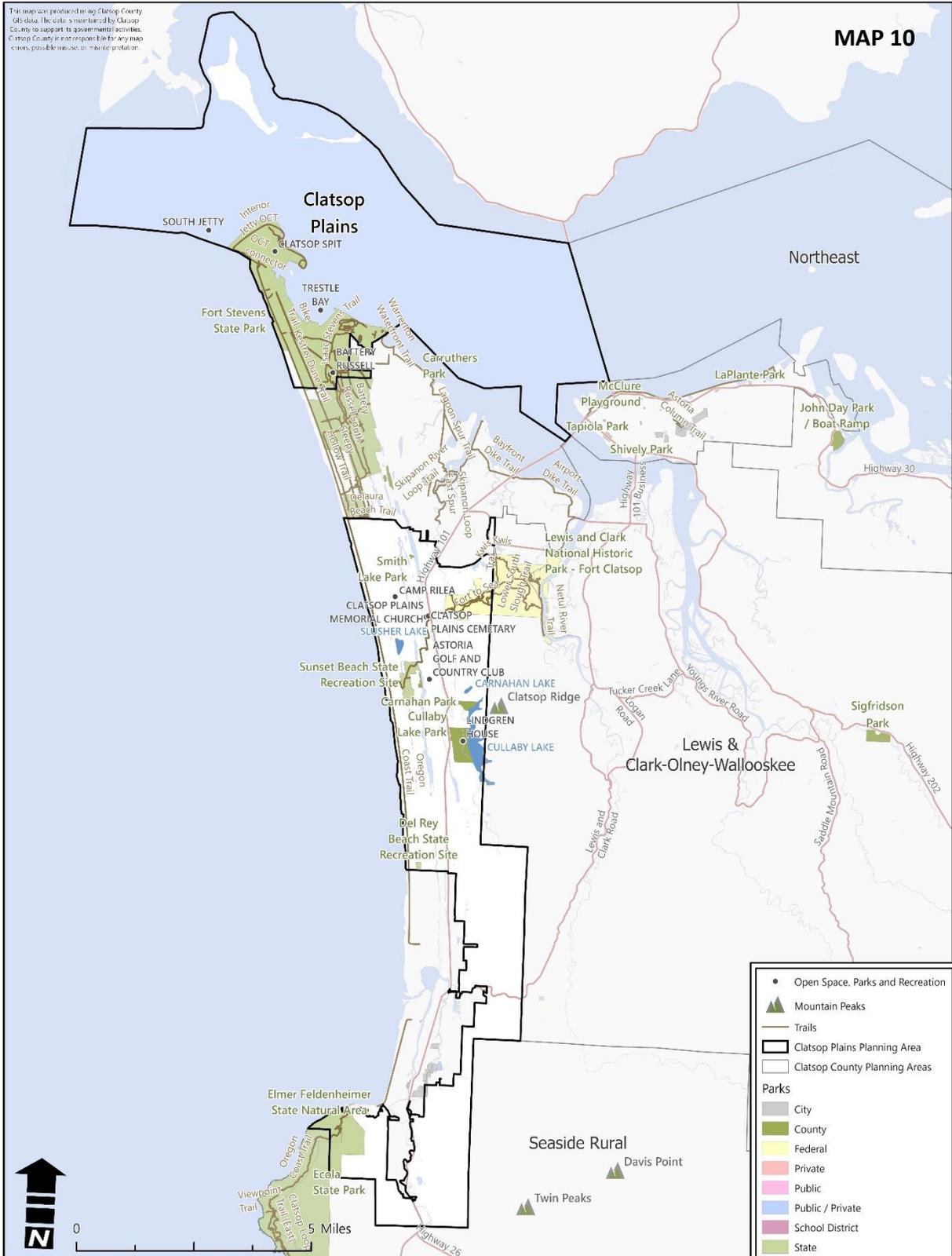


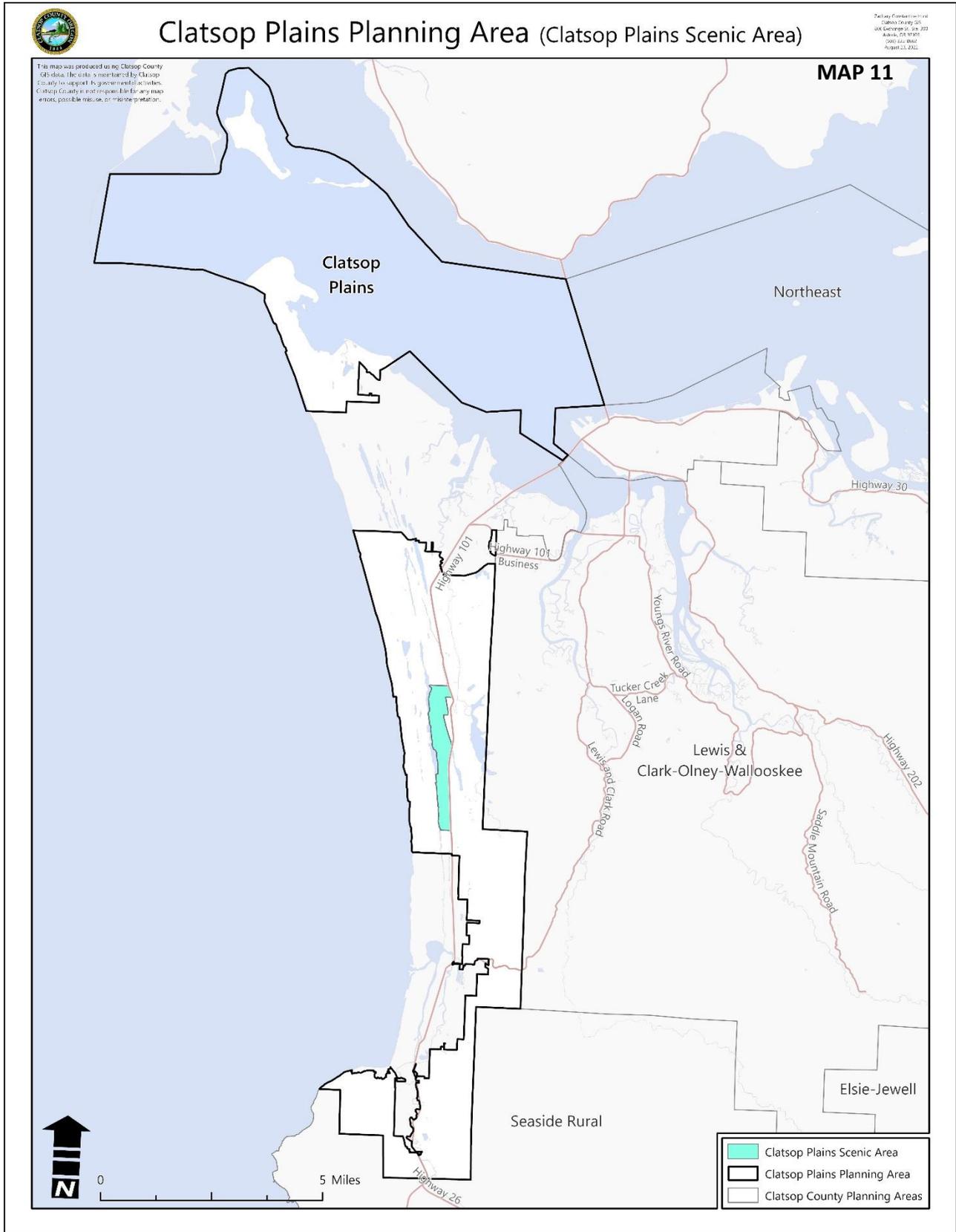
# Clatsop Plains Planning Area (Open Space, Parks and Recreation)

Zachary Covert/Map  
 Clatsop County GIS  
 400 Washington St., SE  
 Astoria, OR 97103  
 503.325.8867  
 August 21, 2009

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MAP 10





***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, provide or 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***

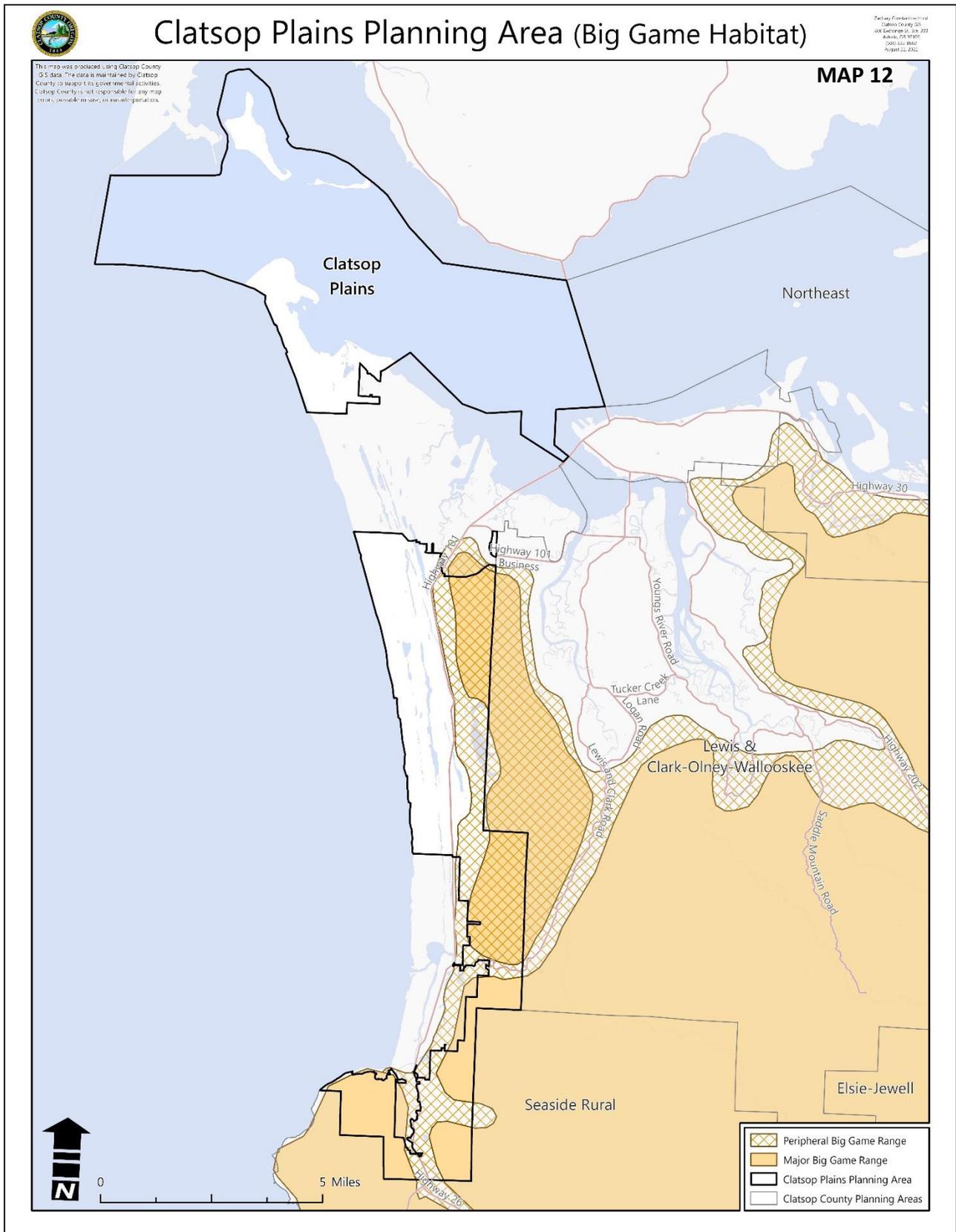
The Clatsop Plains Planning Area is rich in history, containing many historical sites associated with both native persons who originally utilized the resources within this area and the subsequent non-native immigrants that settled in the same area.

***Preservation – Fish and Wildlife Areas***

The Clatsop Plains is an area well-endowed 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 Plains is fortunate in having large blocks of land in both public and private ownership which ~~has~~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.



The Declaration of Cooperation details a list of commitments that Clatsop County agrees 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.

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.

## **LAND USE**

The purpose of this section is to provide a guide for development whether it be residential, commercial, industrial or recreational, and to preserve the high quality of life in the area. The intent of the plan is NOT to stop or limit rural growth, but rather to direct growth into appropriate locations. In looking at appropriate locations for various types of development, consideration was given to

preserve resource lands (agricultural or forest lands), level of public facilities and services available, the land carrying capacity, and the different needs for various uses within urban and rural areas.

### ***DEVELOPMENT***

DEVELOPMENT lands or areas designated DEVELOPMENT are areas with a combination of physical, biological, and social/economic characteristics which make them necessary and suitable for residential, commercial, or industrial development and includes those which can be adequately served by existing or planned urban services and facilities.

Areas within Urban Growth Boundaries and Rural Service Areas are included in this designation. Lands within an Urban Growth Boundary are those determined to be necessary and suitable for future urban growth. These lands can be served by urban services and facilities, and are needed for the expansion of an urban area. The Urban Growth Boundaries are based upon the cities' population projections and needs for residential, commercial and industrial lands. Clatsop County maintains Urban Growth Boundary Management Agreements with each incorporated city.

Rural Service Area is an unincorporated area located some distance away from a city which contains residential densities similar to those found in cities. The size of Rural Service Areas is based upon many factors, some of which are population projections, capacity of public facilities and proximity to a city.

Predominant uses in the DEVELOPMENT land use category include:

1. Medium to high density single family houses (less than 1/2 acre).
2. Multi-family housing (apartment, mobile home parks).
3. Offices, commercial facilities.
4. Industrial facilities (light/heavy).

### ***RURAL LANDS***

RURAL LANDS. Rural lands are those lands which are outside the urban growth boundary and are not agricultural lands or forest lands. Rural Lands include lands suitable for sparse settlement, small farms or acreage homesites with no or hardly any public services, and which are not suitable, necessary or intended for urban use.

RURAL LANDS are those which, due to their value for aquaculture, low density residential uses, high intensity recreational uses, and non-renewable mineral and non-mineral resource uses should be protected from conversion to more intensive uses. Rural

subdivisions, major and minor partitions, and other uses served by few public services which satisfy a need that cannot be accommodated in urbanizable areas are also likely to occur within this designation.

Most RURAL LANDS designations in this plan area contain old town plats and fragmented land ownerships. These areas may require vacation and replatting or utilization of a Planned Development to protect the natural resources of the area.

***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.

The County recognizes that achieving the density permitted in rural residential zones through a clustered development pattern better promotes the County’s purpose and intent of maintaining the rural character of any area than does the traditional grid pattern of development where lots are not clustered and are created to directly correspond to the density permitted in the base zone. Through clustering development, where the density permitted in the base zone is satisfied by combining smaller individual lots with larger expanses of open space, the County is able to retain the greatest concentration of permanent open space with the least impact on essential services. Conversely, large lots developed in a grid pattern extending over an entire subdivision or planned development site, negatively impact the rural character of an area by minimizing the amount of permanent open space and attendant resource protection, while increasing the public facility infrastructure necessary to service development covering a large, expansive area.

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.

***Rural Lands West of U.S. Highway 101***

This area is located west of U.S. Highway 101 between the Urban Growth Boundaries of Warrenton on the north and Gearhart on the south. An exception is not necessary for this area because it is not resource land under the definitions in Goal 3 - Agricultural Lands or Goal 4 - Forest Lands.

***RURAL AGRICULTURAL LANDS***

RURAL AGRICULTURAL LANDS are those lands that are to be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space.

Predominant uses in the Rural Agricultural Lands Classification include:

1. Farm use
- ~~2. Low density residential (1 acre or larger)~~
- ~~3. Commercial (gas station, grocery store)~~
- ~~4. High intensity recreation (i.e. golf course)~~

### **FOREST LANDS AND CONSERVATION OTHER RESOURCES**

FOREST LANDS AND CONSERVATION OTHER RESOURCES. Conservation and Forest Lands areas provide important resource or ecosystem support functions but because of their value for low-intensity recreation or because of their unsuitability for development (e.g. hazard areas) should be designated for non-consumptive uses. Non-consumptive uses are those uses which can utilize resources on a sustained yield basis while minimally reducing opportunities for other future uses of the area's resources.

FOREST LANDS. Forest lands are those lands that are to be retained for the production of wood fiber and other forest uses.

CONSERVATION OTHER RESOURCES. Conservation Other Resources areas provide important resource or ecosystem support functions such as lakes and wetlands and federal, state and local parks. Other areas designated CONSERVATION OTHER RESOURCES include lands for low intensity uses which do not disrupt the resource and recreational value of the land.

Predominant uses in the Forest Lands Classification and the Conservation Other Resources Classification include:

1. Forestry / forest processing
2. Small woodlots
3. Parks / recreational use
4. Community watersheds

### **NATURAL**

A NATURAL designation will be used for lands which have not been significantly altered by humans and which, in their natural state, perform important resource or ecosystem support functions.

Publicly owned fragile and ecologically valuable areas, especially wetlands, marshes, stands of old growth timber and isolated lakes, are most likely to be designated as NATURAL. NATURAL areas identified by the Oregon Natural Heritage Program as well as fish and wildlife areas and habitats identified by the Oregon Wildlife Commission will be considered for a NATURAL designation.

Predominant uses in the NATURAL Classification include:

1. Open space
2. Scientific study
3. Low intensity recreation (trails, nature observation)
4. Wildlife habitat

## GOALS, OBJECTIVES AND POLICIES

### CLATSOP PLAINS PLANNING AREA GOAL 1

The Clatsop Plains Community Plan shall provide for planned and orderly growth of the Clatsop Plains planning area which is in keeping with a majority of its citizens and without unduly depriving landowners and/or residents of the reasonable use of their land. 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.

### CLATSOP PLAINS PLANNING AREA 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 in harmony with those uses which are deemed essential to the life and well-being of its citizens.

## GENERAL DEVELOPMENT POLICIES

- Policy A:** The predominant growth (residential, commercial, and industrial) shall occur within the Cities of Seaside, Warrenton, and Gearhart, as well as those areas in the 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.
- Policy C:** 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 following policies shall be used when examining commercial development in the Clatsop Plains:
1. To direct and encourage commercial activities to locate within urban growth boundaries. This will be most convenient for customers because most people will live in the urban areas. Also, business requirements for water, sewer, fire protection and other public services can best be met.
  2. To group business activities into clusters or "centers". This will be more convenient for patrons, permitting them to accomplish more than one purpose during a stop. It will also avoid mixing homes with scattered businesses. Joint use of vehicular access and parking at commercial centers will be more economical and be less disruptive for street traffic.
  3. To prevent "strip" commercial development along arterials, particularly U.S. Highway 101, and to limit business to designated strategic locations. To reserve non-commercial portions of arterials so that property owners may develop residential or other uses without fear of disruptive business development next door.
  4. To emphasize and support existing town centers as business places. These centers are important for community identify, social cohesion, civic activity, public service, convenience, attractions and amenities. They should continue to be a focus for commercial activities as well.
  5. To concentrate new commercial development in and adjacent to existing, well-established business areas. To increase the patronage and vitality of these areas and to avoid undue dispersal of new commercial activities.

## GENERAL LANDSCAPE UNITS POLICIES

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## CLATSOP PLAINS COMMUNITY PLAN 2040 – DRAFT 0708

- Policy A:** Excavations in sedimentary highland (Toms) should be properly engineered to assure against slop failure
- Policy B:** Proposed projects involving modifications of established drainage patterns should be evaluated in terms of potential for altering land stability.
- Policy C:** Loss of ground cover for moderately to steeply sloping land may cause erosion problems by increasing runoff velocity and land slumpage. Standards for minimizing or prohibiting removal of vegetative cover on moderately to steeply sloping areas shall be developed and enforced.

## COASTAL SHORELANDS AND OTHER SHORELANDS POLICIES

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

- Policy A:** Within the Clatsop Plains Planning Area, shorelands in Rural areas shall be used as appropriate for the following:
1. farm use,
  2. private and public water dependent recreation,
  3. aquaculture, and
  4. to fulfill the open space requirements in subdivisions and planned developments.

### Recommended Action

A study should be undertaken to determine a means to remove non-native vegetation in the various lakes within the Clatsop Plains due to the hazards it causes in recreational use of water bodies.

## BEACHES AND DUNES POLICIES

- Policy A:** The county supports 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 will work 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 *Fort Stevens Park Master Plan*.

## CLATSOP PLAINS AQUIFER POLICIES

**Policy A:** Land use actions (i.e. Comprehensive Plan changes, zone changes, subdivisions, 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 shall 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:** Consideration shall be given to protection of the aquifer, surface waters and groundwater from further degradation (eutrophication), and possible remedial actions to improve water quality.

**Policy D:** In conjunction with DEQ and Water Resources Department (WRD) 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.

**Recommended Action 1:** To avoid desiccation of the groundwater-fed lakes and encroachment of sea water, a water management program which is consistent with the water-budget equation for the Clatsop Plains should be developed. The County should request technical and financial assistance from state and federal agencies in evaluating water development potentials.

## PUBLIC FACILITIES AND SERVICES POLICIES - FIRE

**Policy A:** The County shall encourage the improvement of fire protection in the Clatsop Plains. The County shall work with local residents as well as the Rural Fire Protection Districts in examining the various methods available to improve fire protection. One method which could be used is to require subdivisions and planned developments to dedicate a site, funds, or construction materials for an additional fire station in the Clatsop Plains.

## TRANSPORTATION POLICIES

**Policy A:** 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. Standards should be developed in order to implement this policy.

**Policy B:** Clatsop County, in coordination with the Oregon Department of Transportation, should conduct a study of the Clatsop Plains to analyze access controls and problems in establishing criteria for collectors and frontage roads. The study should include: designation of specific access points, location of frontage roads, criteria for temporary access points, etc.

## HISTORIC AREAS POLICIES

**Policy A:** The County shall work with the Clatsop County Historical Society, local Native American tribes and other organizations to identify and protect important local historical and archeological sites within the Clatsop Plains Planning Area. Standards should be developed to achieve compatible uses and designs for 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:** Provide a natural waterway between Cullaby Lake to the adjacent drainage canal such that salmonids and lampreys can

~~ascent~~ ascend it without the need of a fish ladder.

**Policy B:** The County shall, 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. The County shall develop zoning regulations and development standards to implement these commitments.

## RECREATIONAL POLICIES

**Policy A:** Recreational vehicle parks shall only be permitted in the urban growth boundaries in the Clatsop Plains.

**Policy B:** The dune area west of Sunset Lake and the land northeast of Camp Rilea should be encouraged to be kept in public and non-profit ownership. These areas should be preserved for their scenic value as well as for wildlife value.

**Policy C:** Clatsop County and the Oregon ~~Department of~~ Parks and Recreation Department shall work together to implement the Fort Stevens State Park Plan.

**Policy D:** Clatsop County will 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 and Fort Stevens to the existing Fort-to-Sea Trail, and to address trail gaps within and adjacent to Camp Rilea.

**Recommended Action:** Further research should be done to develop additional trails ~~going from~~ connecting Fort Clatsop National Park to the coastal beaches.

## SCENIC AREAS GOAL AND POLICIES

### SCENIC AREAS GOAL:

**Preservation of important vistas, views of the ocean, and other significant visual features should be encouraged.**

**Policy A:** Excessive sign sizes and numbers of signs shall be discouraged by local regulations. No new billboards or other off-premise signs shall be allowed, except in commercial or industrial zoned land with strict controls. 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.

## 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. The clustering of dwellings in small numbers and the provision of common open space assures good utilization of land, increased environmental amenities, maintenance of a low density semi-rural character, maintenance of natural systems (dunes, wetlands), and may be used as an open space buffer between the residential use and adjacent military lands, agricultural or forest uses.

**Policy B:** Require receiving sites for density transfers to be located outside of the North Clatsop Plains Overlay District.

**Recommended Action 1:** Coordinate the Transferable Development Rights program 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.

**Recommended Action 2:** Explore the feasibility of adopting a Purchase of Development Rights program to protect open space within the Clatsop Plains / North Clatsop Plains Sub-Area, including consideration of financing options for program start-up and possibilities of mitigation banking.

## LAND USE OBJECTIVES AND POLICY – DEVELOPMENT CLASSIFICATION

**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. It is the intent of the Community Plan to encourage urban densities to occur within the cities and the Urban Growth Boundaries where more facilities and services are available.

## LAND USE GOAL – RURAL LANDS CLASSIFICATION

**RURAL LANDS GOAL:**

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

### LAND USE POLICY – RURAL AGRICULTURAL LANDS CLASSIFICATION

**Policy A:** 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.

### LAND USE POLICIES – NATURAL CLASSIFICATION

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

**Policy C:** The County shall 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)  
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 \(1974\)](#)