

APPENDICES

A Summary of Oregon's Statewide Planning Goals

1. **CITIZEN INVOLVEMENT** Goal 1 calls for "the opportunity for citizens to be involved in all phases of the planning process." It requires each city and county to have a citizen involvement program containing six components specified in the goal. It also requires local governments to have a committee for citizen involvement (CCI) to monitor and encourage public participation in planning.
2. **LAND USE PLANNING** Goal 2 outlines the basic procedures of Oregon's statewide planning program. It says that land use decisions are to be made in accordance with a comprehensive plan, and that suitable "implementation ordinances" to put the plan's policies into effect must be adopted. It requires that plans be based on "factual information"; that local plans and ordinances be coordinated with those of other jurisdictions and agencies; and that plans be reviewed periodically and amended as needed. Goal 2 also contains standards for taking exceptions to statewide goals. An exception may be taken when a statewide goal cannot or should not be applied to a particular area or situation.
3. **AGRICULTURAL LANDS** Goal 3 defines "agricultural lands." It then requires counties to inventory such lands and to "preserve and maintain" them through farm zoning. Details on the uses allowed in farm zones are found in ORS Chapter 215 and in Oregon Administrative Rules, Chapter 660, Division 33.
4. **FOREST LANDS** This goal defines forest lands and requires counties to inventory them and adopt policies and ordinances that will "conserve forest lands for forest uses."
5. **OPEN SPACES, SCENIC AND HISTORIC AREAS AND NATURAL RESOURCES** Goal 5 covers more than a dozen natural and cultural resources such as wildlife habitats and wetlands. It establishes a process for each resource to be inventoried and evaluated. If a resource or site is found to be significant, a local government has three policy choices: preserve the resource, allow proposed uses that conflict with it, or strike some sort of a balance between the resource and the uses that would conflict with it.
6. **AIR, WATER AND LAND RESOURCES QUALITY** This goal requires local comprehensive plans and implementing measures to be consistent with state and federal regulations on matters such as groundwater pollution.
7. **AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS** Goal 7 deals with development in places subject to natural hazards such as floods or landslides. It requires that jurisdictions apply "appropriate safeguards" (floodplain zoning, for example) when planning for development there.
8. **RECREATION NEEDS** This goal calls for each community to evaluate its areas and facilities for recreation and develop plans to deal with the projected demand for them. It also sets forth detailed

standards for expedited siting of destination resorts.

9. ***ECONOMY OF THE STATE*** Goal 9 calls for diversification and improvement of the economy. It asks communities to inventory commercial and industrial lands, project future needs for such lands, and plan and zone enough land to meet those needs.
10. ***HOUSING*** This goal specifies that each city must plan for and accommodate needed housing types, such as multifamily and manufactured housing. It requires each city to inventory its buildable residential lands, project future needs for such lands, and plan and zone enough buildable land to meet those needs. It also prohibits local plans from discriminating against needed housing types.
11. ***PUBLIC FACILITIES AND SERVICES*** Goal 11 calls for efficient planning of public services such as sewers, water, law enforcement, and fire protection. The goal's central concept is that public services should to be planned in accordance with a community's needs and capacities rather than be forced to respond to development as it occurs.
12. ***TRANSPORTATION*** The goal aims to provide "a safe, convenient and economic transportation system." It asks for communities to address the needs of the "transportation disadvantaged."
13. ***ENERGY*** Goal 13 declares that "land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles."
14. ***URBANIZATION*** This goal requires cities to estimate future growth and needs for land and then plan and zone enough land to meet those needs. It calls for each city to establish an "urban growth boundary" (UGB) to "identify and separate urbanizable land from rural land." It specifies seven factors that must be considered in drawing up a UGB. It also lists four criteria to be applied when undeveloped land within a UGB is to be converted to urban uses.
15. ***WILLAMETTE GREENWAY*** Goal 15 sets forth procedures for administering the 300 miles of greenway that protects the Willamette River.
16. ***ESTUARINE RESOURCES*** This goal requires local governments to classify Oregon's 22 major estuaries in four categories: natural, conservation, shallow-draft development, and deep-draft development. It then describes types of land uses and activities that are permissible in those "management units."
17. ***COASTAL SHORELANDS*** The goal defines a planning area bounded by the ocean beaches on the west and the coast highway (State Route 101) on the east. It specifies how certain types of land and resources there are to be managed: major marshes, for example, are to be protected. Sites best suited for unique coastal land uses (port facilities, for example) are reserved for "water-dependent" or "water related" uses.
18. ***BEACHES AND DUNES*** Goal 18 sets planning standards for development on various types of dunes. It prohibits residential development on beaches and active foredunes, but allows some other

types of development if they meet key criteria. The goal also deals with dune grading, groundwater drawdown in dunal aquifers, and the breaching of foredunes.

19. ***OCEAN RESOURCES*** Goal 19 aims "to conserve the long-term values, benefits, and natural resources of the

nearshore ocean and the continental shelf." It deals with matters such as dumping of dredge spoils and discharging of waste products into the open sea. Goal 19's main requirements are for state agencies rather than cities and counties.

To: Anne Marie Skinner, City of Lincoln City **Date:** July 27, 2022
From: Todd Chase & Tim Wood; FCS GROUP
CC: Steve Faust, 3J Consulting
RE Lincoln City Housing Implementation Plan Background Report and HNA Update

INTRODUCTION

Purpose of Housing Implementation Plan

The objective of the Lincoln City Housing Implementation Plan (HIP) is to identify locally preferred strategies the city can implement to foster the development of needed housing in the City of Lincoln City (City). The HIP process will build upon the findings contained in the Lincoln City Housing Needs Analysis, with focus on evaluating and recommending housing development incentives. This evaluation will cover potential legislative, regulatory and policy options for the expansion of housing for households at all income levels. The HIP will also build upon and complement efforts previously undertaken by the City.

HIP Work Products

The HIP Work Plan tasks include the following:

- This **Lincoln City Housing Background Report** contained in this Memorandum sets the stage for the overall HIP. The background report summarizes findings from the recent housing studies; identifies actions already taken by the City to foster housing production; identifies housing policies the City should consider going forward; and sets forth a set of draft policy evaluation criteria to be used for prioritizing future housing policies.
- **Stakeholder Interviews.** Interviews shall be conducted with housing stakeholders such as developers, affordable housing advocates, real estate brokers and others to confirm housing development barriers and opportunities.
- **City code evaluation and recommendations.** During the HIP process, the City and consultant team will review current city codes and recommend draft code amendments for Lincoln City to consider to help foster housing investment and production.
- **Planning Commission and City Council Presentations.** On July 19th, a meeting was held with the Planning Commission to review the results of the study and refine the policies, tools and strategies. A meeting with the City Council was held on August 22nd as well. Both meetings were open to the public.
- **Final Report.** The HIP findings and recommendations have been compiled into this final report. Final housing policy and strategy recommendations were provided in separate documents.

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HOUSING POLICY BACKGROUND

Lincoln City Housing Needs Analysis (2017)

The Lincoln City Housing Needs Analysis (HNA) was adopted in 2017 along with the Economic Opportunity Analysis (EOA).

Key findings contained in the 2017 HNA include:

- As a year-round resort community, Lincoln City has a high level of demand from permanent residents, seasonal residents, and short-term visitors. As the result, the HNA identified a nearly even split within the existing housing inventory from owner-occupied units (1,801), renter-occupied units (1,918), and second homes or short-term rentals (1,834).
- In light of the development pressure generated by seasonal housing demand, the HNA noted high levels of rent burdens which has led to relatively long-distance commutes by workers that reside well outside the City.
- Given these unique market conditions, the HNA included two alternative housing needs forecasts. Scenario A includes a baseline forecast that only addresses demand generated by housing needed to accommodate the PSU population growth forecast. Scenario B includes demand from the baseline scenario A plus the addition of workforce housing needed to address a portion of the gap created by a lack of attainable housing.

Scenario A Baseline Housing Need: over the next 20 years, this scenario forecasts the overall housing need to increase by 1,484 net new housing units to keep pace with population growth.

- 798 single-family detached units
- 160 single family attached units
- 385 multifamily units
- 141 mobile home/other units

Scenario B Baseline plus Workforce Housing Need: over the next 20 years, this scenario forecasts the overall housing need to increase by 1,814 net new housing units to keep pace with population growth and to address a share of the current gap in workforce housing demand.

- 940 single-family detached units
- 205 single family attached units
- 484 multifamily units
- 185 mobile home/other units

After 2017, the state of Oregon changed its requirements for HNAs, which are now required to comport with the 20-year official population forecast prepared by Portland State University. This change in methodology results in reduction in the growth assumptions and related housing needs for Lincoln City (as reported later in this Memorandum).

While the updated housing needs analysis described later in this Memorandum reflects the amount of housing required to address the latest coordinated population growth forecast for the Lincoln City UGB, the prior Buildable Land Inventory from 2017 concluded that there is an adequate supply of vacant buildable land area within the current UGB to fully address the most robust housing scenario from the 2017 HNA (Scenario B). As such, we recommend that the City continue to plan for Scenario B, (the *Baseline plus Workforce Housing* growth scenario) that anticipates demand from

population growth as well as demand from narrowing the existing gap in workforce housing over the next 20 years.

Lincoln County Workforce Housing Toolkit

The 2009 Lincoln County Workforce Housing Toolkit was a component of a larger effort to address the lack of workforce housing in the County. The report is organized around providing tools to six distinct stakeholder groups. Highlights are detailed below:

Renter Tools

Suggested tools for renters include rental assistance in the form of vouchers from employers or the government as well as units run by nonprofits with controlled rents. Educational resources about renting responsibly are also suggested as well as contact information for housing nonprofits and other community-based organizations.

Homebuyer Tools

Suggested tools for homebuyers included lists of numerous local and national resources for down payment assistance and home purchase loans. Like with renters above, tools also included educational resources for prospective home buyers.

Employer Tools

Tools listed for employers include both employer-assisted housing (in which an employer provides subsidies, loans, or education to employees) and employer-developed housing (in which the employer develops employee housing). Additionally, employers are provided with information with which to advocate for an improved housing policy.

Developer Tools

These tools are focused on the types of housing that developers would most likely consider including attached or multifamily housing types. The findings also identified technical and financial assistance resources for developers.

Local Government Tools

Local government tools include potential changes to development code to allow construction of more affordable housing types. Financial tools are also discussed in the context of lowering development costs including SDC waivers for affordable housing, the use of urban renewal funds, and allowance of property tax abatement for multifamily development.

Community Tools

Community tools include education and advocacy tools and formation of non-profit organizations and volunteer opportunities for community members.

At Home in Lincoln County 2.0

At Home in Lincoln County 2.0 is a revision to the 2007 original with an increased focus on addressing homelessness. Key aspects are described below.

Goals for 2017

- Provide improved emergency response and prevention of homelessness
 - Increased provision of overnight shelters
 - Intervention for unaccompanied minors and foster children aging out of the system
- Provide coordinated outreach

- Coordination with hospitals, first responders, and court systems to cover gaps in housing coverage
- Development of new channels of communication between governments to address local housing issues
- Develop Housing Opportunities
 - Identify housing for people who have special needs
 - Investigate the feasibility of non-traditional housing models such as single room occupancy (SROs) and co-housing

Prior 2007 Goals

- 18 units of permanent supportive housing
- 6 new emergency and transitional shelter facilities
- Policy toolkits
- 4 local government Workforce Housing Funds
- 5 more policy goals are in progress

Lincoln County Housing Strategy Plan

In 2019, Lincoln County completed a countywide Housing Strategy Plan. The findings of this study are not specific to Lincoln City; however, highlights from the study are listed below:

- Lincoln County population levels are expected to increase by about 15,000 over the next 50 years with virtually all growth to be concentrated in the urban areas, especially Newport and Lincoln City.
- 50% of Lincoln City renters are experiencing rental cost burden (30% or more of household income being spent on housing). For reference, 46% of Newport renters experience cost burden.
- Stakeholders highlighted challenges with developing housing in the County including a lack of available land, low rents leading to a low rate of return on multifamily development, and relatively higher labor and materials costs in Lincoln County.
- Vacation rentals contribute to a lack of housing inventory in the County, especially for communities along the US 101 corridor.
- Several strategies were recommended for Lincoln County including development code amendments, implementation of a construction excise tax (CET), a regional buildable land inventory (BLI), and system development charge (SDC) updates and deferrals.

HOUSING NEEDS ANALYSIS UPDATE

At the request of Lincoln City staff, FCS GROUP has prepared an update to the housing needs projection and related residential land needs. This current 2022 housing needs forecast is consistent with the latest Portland State University (PSU) population growth forecast for the Lincoln City Urban Growth Boundary (UGB).

Population

Lincoln City recorded a record-high population of 8,865 in 2020, up from 7,307 in 2000. In that timeframe, the population growth rate in the City outpaced Lincoln County as a whole. As shown in **Exhibit 1**, Lincoln City’s population expanded an average annual growth rate (AGR) of 0.97% between 2000 and 2020. In comparison, Lincoln County’s overall growth rate was 0.63%.

Exhibit 1: Population Trends (2000-2021)

	2000	2010	2020	2000-2020 AGR
Lincoln County	44,479	46,135	50,387	0.63%
Lincoln City	7,307	7,935	8,865	0.97%

Sources: Population Research Center, Portland State University July 1 estimates for cities and counties.

Population Growth Forecast

Long-range population forecasts prepared by PSU predict a much slower rate of growth in population for Lincoln County and Lincoln City that what has occurred over the past decade. As indicated in **Exhibit 2**, the forecasted AGR for population growth over the next 20 years is 0.51% for Lincoln County and 0.55% for the Lincoln City UGB. This amount of growth would result in 1,124 year-round permanent residents being added to the Lincoln City Urban Growth Boundary (UGB) over the next 20 years. Based on these forecasts, the Lincoln City UGB would “capture” approximately 22% of the overall increase in Lincoln County population growth over the next 20 years.

Exhibit 2: Population Projections (2022-2042): Lincoln County and Lincoln City UGB

Population Forecasts, Lincoln County and Lincoln City, 2020 2042					
	2020	2022	2042	2022-2042 change	2022-2042 AGR
Lincoln County	48,304	48,793	53,969	5,176	0.51%
Lincoln City UGB	9,671	9,777	10,900	1,124	0.55%
UGB Capture Rate	20%	20%	20%	22%	

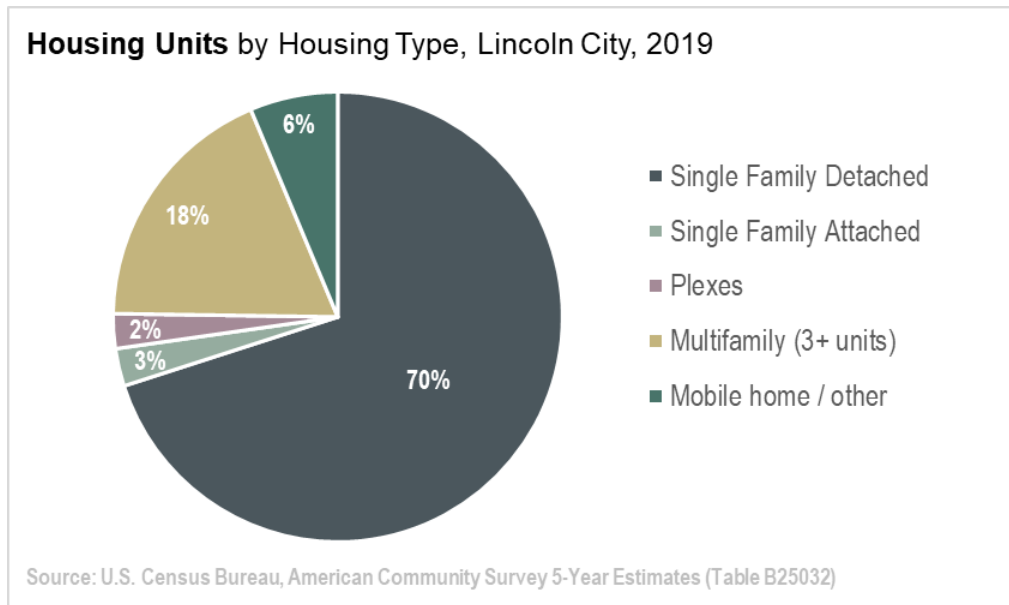
Sources: Population Research Center, Portland State University, June 2021.

Housing Inventory and Tenancy

Current housing inventory and tenancy characteristics shed light on housing demand preferences. In 2019, there were 6,735 housing units in Lincoln City of which 3,975 units were classified as occupied and 2,756 units were classified as for seasonal or occasional use.

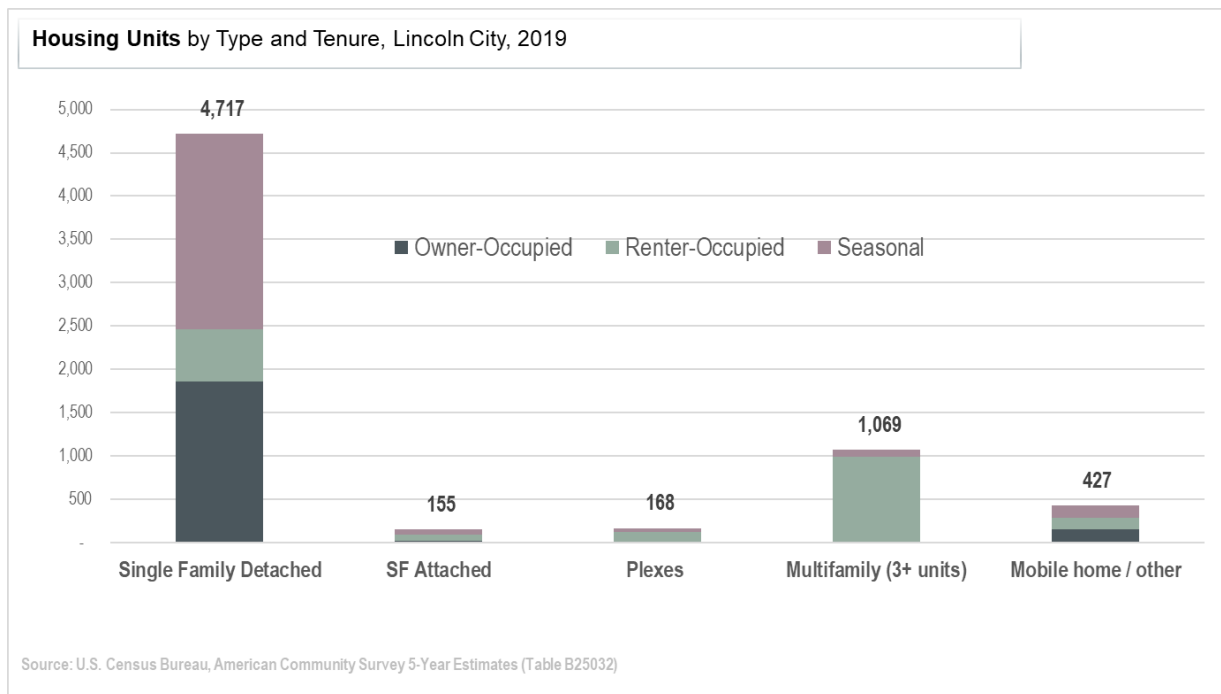
Like most Oregon cities, single-family detached housing is the most prevalent housing type representing 70% of total housing stock in the City. The remaining housing inventory includes multifamily (16%), townhomes and duplexes (8%), and mobile home/other (6%), as shown in **Exhibit 3**.

Exhibit 3: Existing Housing Mix and Tenancy



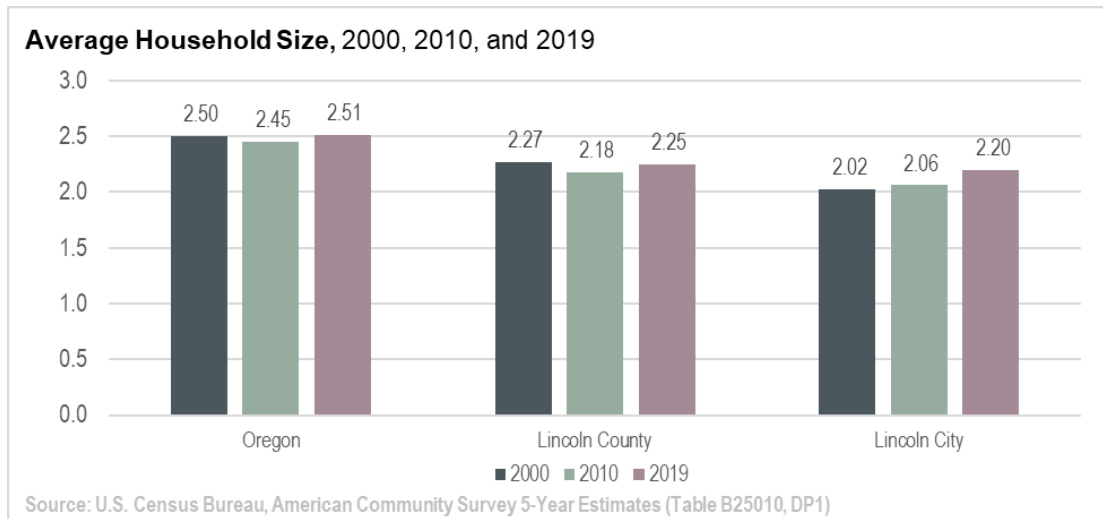
Owner-occupied housing units represent 52% of the occupied housing inventory while renter-occupied units account for the other 48% of the occupied inventory (**Exhibit 4**).

Exhibit 4: Existing Housing Mix: City of Lincoln City



Average household size in Lincoln City is well below County and Oregon state averages, but has increased from 2.02 people per HH in 2000 to 2.2 in 2019 (**Exhibit 5**).

Exhibit 5: Average Household Size: Oregon, Lincoln County, City of Lincoln City, 2000-2019



Housing construction activity has been relatively steady over the past five year in Lincoln City with a total of 452 new housing units permitted between 2016 and 2021. This growth in construction equates to an average of 83.8 dwellings added over the past five years (**Exhibit 6**). The largest demand segment has been single family detached housing followed by multi-family construction. The city is experiencing moderate construction activity for manufactured housing as well as duplexes.

Exhibit 6: New Housing Units Permitted, City of Lincoln City, 2016-2021

Housing Type	2016	2017	2018	2019	2020	2021	Total	Avg. Annual
Single Family Detached	42	49	53	49	43	46	282	56.4
Townhouse	0	0	0	0	0	2	2	0.4
Accessory Dwelling	0	3	1	0	1	0	5	1
Duplex	4	8	4	0	1	2	19	3.8
Multi-Family (3+)	29	0	30	0	42	10	111	22.2
Manufactured Home	5	6	3	6	7	6	33	6.6
Total	80	66	91	55	94	66	452	83.8

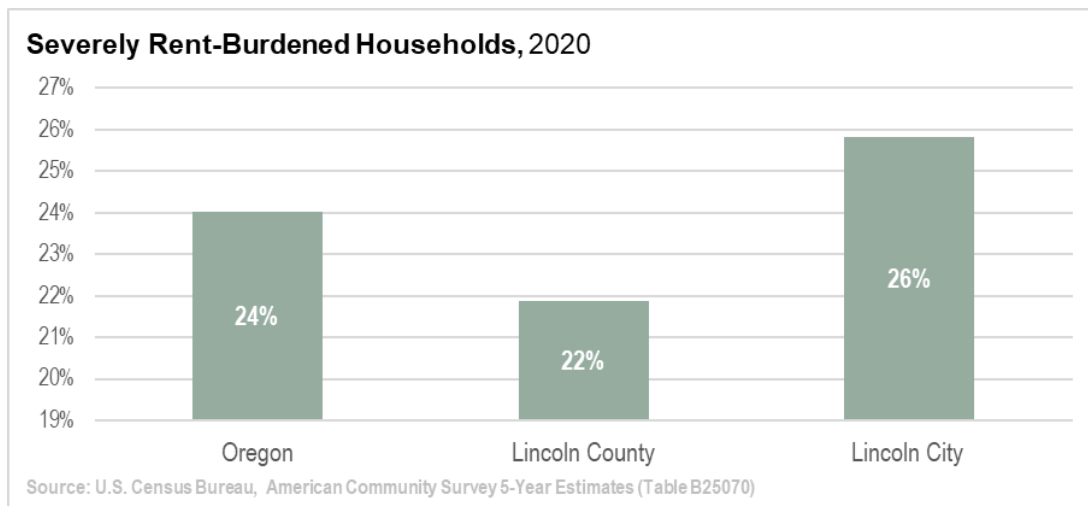
Source: City of Lincoln City.

Housing Cost Burdens

According to the U.S. Housing and Urban Development (HUD), households are considered “cost burdened” if they pay over 30% of their gross income on housing and utilities. Households are “severely cost burdened” if they pay over 50% of their gross income on housing and utilities.

As of 2020, over 1 in 4 renters (26%) in Lincoln City were severely cost burdened by housing expenses alone (**Exhibit 7**). If housing costs continue to rise faster than income levels, the share of severely cost burdened households will continue to increase.

Exhibit 7: Severe Rent Burdened Households, 2020



Houselessness

The level of houselessness has been increasing for several years nationally and is a perplexing issue facing Lincoln County and Lincoln City. A recent study by Corvallis First and SHELTERWARE (June 2020) estimated that there were between 750 and 1,100 individuals confronting houselessness in Lincoln County. Approximately 68% of these individuals have lived in the County for over one year, and only 73 individuals were “sheltered.” These estimates appear to be at least three times higher than they were back in 2017. No accurate counts are available for the City of Lincoln City.

Housing Needs Forecast

The Lincoln City housing needs forecast is based on the most recent PSU population projections described earlier. The forecast assumes that the current household size (2.2 people per dwelling) and group quarters allocation (0.6%) remains constant. Group quarters includes residents that live in non-traditional housing situations such as students in dorms or individuals living in congregate care facilities or emergency/transitional shelters. The forecast assumes that the current ratio of seasonal-to-permanent housing also remains constant.

The resulting projected baseline housing need in Lincoln City over the next 20 years equates to approximately 821 housing units. In addition, it is assumed that there will be an additional 11 people living in group quarters by 2042 (see **Exhibit 8**).

Exhibit 8: Lincoln City UGB Housing Needs Forecast: Baseline Scenario A

	2022	2042	Change
Lincoln City UGB Population	9,777	10,900	1,124
Less Group Quarters (0.6%)	95	106	11
Pop in Households	9,681	10,794	1,113
Avg. Household Size	2.20	2.20	2.20
Households (year round)	4,401	4,906	506
Seasonal Housing Assumption	38%	38%	315
Growth-related Housing Demand (dwelling units)	7,140	7,961	821

Source: Previous Tables

Housing Demand by Dwelling Type and Tenancy

Like the previous HNA for Lincoln City, this update includes two housing growth scenarios.

Scenario A: Baseline Growth Forecast

This baseline housing need forecast is generally consistent with the observed mix of housing types in Lincoln City. The baseline housing forecast predicts a range in the demand for housing types to address market preferences. The baseline forecast includes approximately: 548 single-family detached homes; 26 single-family attached townhomes; 24 duplexes; 151 multifamily units (apartments); and 72 manufactured housing units (**Exhibit 9**). In addition, it is anticipated that there will also be the need to accommodate at least 11 people in some form of group quarters housing (such as single room occupancy units, congregate care, in-patient care, etc.).

Exhibit 9: Projected 20-year Housing Need, Lincoln City UGB: Baseline Scenario A

Housing Type	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Seasonal Units	Total Dwelling Units
Single Family Detached	226	38	283	548
Single Family Attached	6	12	7	26
Plexes	5	13	6	24
Multi family (3+ units)	2	139	9	151
Mfg. homes	11	52	9	72
Total Dwellings	251	254	315	821
Group quarters (beds)				11 +

U.S. Census, American Community Survey 5-Year Estimates (Tables B25032 and CP04) & previous tables.

Please note that this updated housing need forecast is based on the most current PSU population forecast, which assumes a lower growth rate than was assumed by the previous 2017 HNA.¹

In contrast to the PSU forecast described above, the 2017 HNA population and housing growth forecast was considered “bottom up” forecast based on post-Great Recession trends in housing starts, population growth, seasonal housing demand and other factors unique to the Lincoln City UGA. The 2017 HNA growth forecast was independently prepared by the City’s planning consultants. In 2018, the State of Oregon required all cities in Oregon to utilize PSU population forecasts for updating HNAs.

¹ A more detailed description of the current PSU population forecast methodology is reported in *Coordinated Population Forecast: 2021 through 2071, Lincoln County*, PSU Population Research Center. [Weblink](#).

Scenario B: Baseline + Workforce Housing Forecast

The Scenario B forecast includes the baseline forecast plus a reasonable capture of the “middle housing” demand based on the current lack of attainable housing inside the City for people working in Lincoln City but now having to commute long distances (50 miles or more per day) to their homes. Using the prior adopted 2017 HNA methodology, Scenario B assumes an additional amount of housing demand for 635 dwellings to account for a share of the existing unmet housing needs. When combined with the baseline housing forecast, the total housing demand with Scenario B equates to 1,458 dwelling units (**Exhibit 10**).

Exhibit 10: Projected 20-year Housing Need, Lincoln City UGB: Scenario B

	2016	Estimate 2022	Forecast 2042	Proj. Change 2022-42
Existing Workforce In-commuters	1,753	5,611		
Avg. Household Size	2.20	2.20		
Housing Unit Demand	797	2,550		
City Capture Rate Policy Goal*		----->	25%	
Existing Unmet Workforce Housing Demand		----->	638	638
Baseline Scenario: Resident Housing Units	3,853	4,401	4,906	506
Baseline Scenario: Seasonal & Short-term Units	2,177	2,739	3,054	315
Total Housing Units	6,030	7,140	7,961	1,458

* Represents city policy aimed at capturing share of workforce in-commuters that currently travel over 25 miles (each way) into Lincoln City.

Source: U.S. Census, On The Map. FCS GROUP.

Exhibit 11 reflects the 20-year housing growth forecast under Scenario B.

Exhibit 11: Projected 20-year Housing Need, Lincoln City UGB: Scenario B

Scenario B	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Seasonal Units	Total Dwelling Units
Housing Tenure Distribution:	447	696	315	1,458
	30.6%	47.8%	21.6%	100.0%
Housing Type Distribution				
Single Family Detached	402	104	283	790
Single Family Attached	11	33	7	51
Plexes	9	36	6	51
Multi family (3+ units)	4	381	9	395
Mfg. homes	20	141	9	171
Total Housing Units	447	696	315	1,458
Group quarters (beds)				11 +

* Represents city policy aimed at capturing share of workforce in-commuters that currently travel over 25

Source: prior tables and stated assumptions.

Reconciliation of Housing Supply and Demand

The projected buildable land area that is needed to accommodate housing growth in the Lincoln City UGB is shown in **Exhibit 12**. This analysis indicates that 112.4 acres (net buildable land area) are needed under Scenario A and 181.4 acres are needed under Scenario B. The acreage and density assumptions represent net land requirements and do not reflect additional land associated with potentially environmentally constrained unbuildable portions of development sites (such as wetlands or floodways).

It is also recommended that the City assume some additional land area that would be needed for roads and other public facilities. This would typically increase the net acre requirements by 15% to 18%.

The Buildable Land Inventory for the Lincoln City (2022 update by City planning staff) has concluded that there is an adequate supply of vacant buildable land area within the current UGB to fully address the most robust housing scenario (Scenario B). However, during the policy review process it is recommended that the City evaluate optimal locations for addressing both housing and employment land needs within the UGB. This could include an evaluation of potential rezoning of areas to ensure that the most cost effective sites are provided for housing and employment growth.

Exhibit 12: Projected 20-year Housing Land Need, Lincoln City UGB (buildable acres)

Housing Type	Scenario A: Housing Forecast (units)	Scenario B: Housing Forecast (units)	Avg. Density (units per acre)	Scenario A: Land Need (acres)	Scenario B: Land Need (acres)
Single Family Detached	548	790	6	91.3	131.7
Single Family Attached	26	51	8	3.2	6.4
Plexes	24	51	14	1.7	3.6
Multi family (3+ units)	151	395	18	8.4	21.9
Mfg. homes	72	171	10	7.2	17.1
Subtotal	821	1,458		111.8	180.8
Group quarters Demand	11 +	11 +	18	0.6	0.6
Total	832	1,469		112.4	181.4

Source: prior tables and stated assumptions.

HOUSING TOOLS AND STRATEGIES

As a part of the HIP planning process, the City will evaluate a range of potential housing policies and actions. A preliminary list of “best practice” strategies that have been utilized throughout Oregon are provided in **Appendix A**. This draft list of strategies shall be reviewed and refined as part of this HNA update.

As the city reviews its past accomplishments and actions with regard to housing strategies, it is recommended that a set of objective criteria be used to evaluate and compare each policy. An example of housing policy evaluation criteria is provided in **Appendix B**.

NEXT STEPS

Input provided during the planning process shall be utilized to evaluate these and other potential housing action plan policies.

Appendix A: Potential Housing Policy Options

Policy Option	Description
1. Land Use Policies and Regulations, Examination of Current Development Code Options.	Future Comprehensive Plan revisions to Housing and Land Use element policies and implementation directives that reflect the updated Housing Needs Assessment and community input.
2. Minimum density requirement	Minimum density standard in any residential zone.
3. Inclusionary zoning	Deed restrictions on bonus units for a specified amount of time to assure affordability.
4. Housing types	Limitation of single-family homes in the medium density residential district to a certain percentage of the total land area specified for medium family residential use.
5. Lot size reduction	Lot size reduction for new lots in residential areas.
6. Reduced setbacks	Revisit the lot line setbacks for residentially zoned property to refine as needed.
7. Parking requirements	Modification of parking requirements for certain housing types.
8. Middle income zoning	Middle Housing (triplexes and quadplexes) in single-family low-density residential zoning districts with design standards for compatibility with single family homes.
9. Current non-conforming Housing Limitations	Examine zoning limitations on existing non-conforming housing uses.
10. Non-Profit/ For Profit partnerships with the City	Working with non-profit or for-profit developers to identify and develop housing opportunities in partnerships with the City. A successful example is the City's policy to collaborate with the development community to make City land available for housing. Another alternative could be making City property available on a long-term ground lease to enable development of manufactured home housing with ground ownerships by the City.
11. Exploration of Establishment of Vacant Property Program registration	Explore establishment of a City vacant property registration program to engage a community partner such as a non-profit housing corporation to follow up with property owners for housing rehabilitation or purchase.
12. Naturally occurring affordable housing opportunity program analysis	A program in partnership with a housing nonprofit to acquire naturally-occurring affordable housing such as foreclosures.
13. Limited Tax Abatement	Exploration of the opportunities offered in statute including tax exemption for low income housing developments and single unit housing in distressed areas as well as property tax freezes.
14. Up zoning	Identify appropriate locations for "up-zoning" to create a high-density residential area to meet multifamily land needs. Use areas that were previously zoned for high density residential but are now medium density.

Policy Option	Description
	Preventing displacement and preserving "naturally occurring" affordable housing through acquisition, low-interest loans/revolving loan fund for preservation, and/or code enforcement.
16. Increased Housing Funding	Create affordable housing fund with construction excise tax and/or partial dedication of city transient room tax Consider other options to increase owner-occupied affordable housing such as general obligation bonds for affordable housing, a construction excise tax, and inclusionary housing requirements as specified in ORS 197.309.

Appendix B: Criteria for Evaluating Policy Strategies

An important part of setting policy direction includes criteria for evaluating the effectiveness of a given policy. Below are potential evaluation criteria that community members can consider to further refine which local policies are most appropriate. Each potential policy or incentive (action) should be evaluated for potential to produce targeted affordable and middle housing using a scoring system ranging from 0 (no impact), 1 (little impact), 2 (medium impact) and 3 (high impact). Potential evaluation criteria include:

Evaluation Criteria	Score
Political feasibility: Odds of support from City Council.	1 to 3
Public Opportunity Cost: Assessing measurement of policy costs such as foregone property tax income or staff time requirements, against estimated additional low or middle-income housing units added.	1 to 3
Compatibility with the targeted housing numbers and types: Options for new and / or revised policies opportunities.	1 to 3
Compatibility with other City Policies: Assessing if/how policy is compatible with other existing city policies to avoid conflict with other city objectives.	1 to 3
Development Feasibility: The ability for a policy or development incentive to enhance overall project feasibility improves the chance that a developer will be willing to risk private equity and leverage debt required to construct and sustain new investment.	1 to 3

**Lincoln City Main Street
Reconnaissance Level Survey
Lincoln City, Lincoln County, OR
August 2019**

Survey and Report prepared by:
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Statement of Project Objectives:

Lincoln City, OR, is an Exploring Downtown level member of the Oregon Main Street Network.¹ As part of this program the city decided to conduct a survey of the commercial buildings along the Highway 101 (Hwy 101) economic corridor within the “pearls” of Lincoln City in the summer of 2019. This survey was conducted and facilitated by Oregon Heritage.² The goals of this survey are to assess the potential of a historic district within Lincoln City, to individually assess the eligibility of each building as it relates to the National Register of Historic Places criteria, and to provide recommendations to the government and people of Lincoln City as to how they might implement strategies to leverage their historic resources, including applying for Oregon Heritage-sponsored grants. In addition, this survey will increase the knowledge of all historic resources within the survey boundary and provide information to Lincoln City for future preservation planning purposes.

Methodology

This is a Selective Reconnaissance Level Survey. In staying consistent with the Oregon State Historic Preservation Office (SHPO) Guidelines for Surveying Historic Resources in Oregon³, which themselves are based on National Register of Historic Places criteria, surveyors considered the age, architecture, materials, and integrity of buildings 45 years old or older within the project area. Condition of the buildings was not an assessment criterion. In addition, preliminary evaluations about the potential significance of the buildings were made to ensure that further research and investigation will be done on buildings that present the greatest potential for historic significance or those that qualify for additional Oregon Heritage grants. Lincoln City’s unique system of “pearls” formed the basis of the project area, which consisted of commercial properties bordering Hwy 101 within the pearls.

The survey was conducted by two teams of two people. Each team consisted of a permanent staff member and summer staff member from Oregon SHPO. The permanent staff members took a minimum of two photos of each building identified within the survey area. The summer staff members were responsible for taking accurate notes and working with the permanent staff members to ensure professional data management.

¹ For more details on the Oregon Main Street Network, visit <http://www.OregonMainStreet.org>.

² For more details on the Oregon Heritage, visit <http://www.OregonHeritage.org>.

³ <https://www.oregon.gov/oprd/HCD/SHPO/Pages/index.aspx>

In order to ensure efficiency and accuracy, teams split each pearl into two sections. Prior to moving into the field the teams assigned field numbers to each of the identified buildings within each pearl and agreed upon which team was responsible for which. One team generally surveyed buildings on the western side of Hwy 101, while the other team surveyed buildings on the eastern side of Hwy 101. Survey teams consistently worked from south to north, both within the pearls and within the city as a whole.

After field work and data management, staff then assigned one of four findings to each surveyed property. Buildings determined to potentially meet the high standards of integrity and significance needed for individual listing on the National Register were designated Eligible/Significant (ES). Buildings that do not meet this standard individually may still have the potential to be listed on the National Register when considered together with other buildings as an historic district. Buildings determined to potentially meet this lower threshold needed to contribute to a historic district were designated Eligible/Contributing (EC). Buildings that have undergone too much physical change to adequately convey their historic appearance and purpose were designated Not Eligible/Non-Contributing (NC). Finally, a few buildings were not on the original field list but were still surveyed because of historic potential. Those that further research confirmed were built after 1974 were designated Not Eligible/Out of Period (NP).

Boundary Explanation and Justification

The survey boundary was established by two criteria in consultation with the city government of Lincoln City. The first criterion was the “pearl” system previously established by the city representing the historically independent communities incorporated into the new municipality of Lincoln City in 1965. These pearls represent the areas being considered as boundaries for the City’s Main St participation as well. The boundary was further narrowed by a focus on commercial buildings that flank Hwy 101. Buildings that were once residential dwellings but that had a current commercial or economic function were considered. Once this general area was established, buildings were excluded based upon their date of construction. Using tax assessor data, buildings that were built after 1974 were excluded from the survey. This date is consistent with National Register guidelines generally requiring buildings to be 50 years old to be considered historic, with a buffer to ensure that data would be usable and effective for the next five years. Using these criteria, boundaries were drawn for each pearl of Lincoln City

and the major north and south boundaries are as follows (East/West boundaries are all the same for each pearl, as only buildings that flank Hwy 101 were considered).

- Wecoma – North: three lots north of 36th St.; South: NW 30th St.
- OceanLake – North: 21st St.; South – 12th St.
- DeLake
 - North DeLake – North: 12th St.; South: NW 2nd Dr.
 - South DeLake – North: SE 1st St.; South: SW 12th St.
- Nelscott – North: SE 31st St.; South: S 36th St.
- Taft – North: two lots north of SW Fleet Ave.; South: SE 52nd St.
- Cutler City – North: three lots north of SW Jetty Ave.; South: one lot south of SW 63rd St. at the city boundary.

These stated parameters yielded 131 properties. In keeping with the objectives of the Main Street program, buildings currently used for commercial purposes were the focus, including income generating multi-unit residential properties. Civic and religious buildings meeting all other criteria were considered as well. Lincoln City’s unique linear “pearls on a string” layout uniting previously separate municipalities along Hwy 101 and the close association of development of the highway with that of the city’s pearls made a focus on this road a natural choice (see Appendix D). Additional historic and potentially significant properties exist outside the survey area but were not considered.

Setting

All surveyed buildings were located along the Hwy 101 corridor within the pearls of Lincoln City. The survey area was focused on the commercial buildings that flank Hwy 101 and did not include potentially significant residential blocks east or west of the highway or commercial properties lining the ocean or outside of the pearls. The streets are paved and have traffic lights and crosswalks, though coverage varied. OceanLake benefits from mid-block crosswalks, decorative streetlights and sidewalk paving, and underground power lines. Street furniture, including unique Brutalist waste bin shelters, is largely consistent throughout.

Historical Overview

Lincoln City, incorporated in 1965, is a unique consolidation of six pre-existing oceanside communities, now neighborhoods making up the city's "string of pearls": Cutler City, Taft, Nelscott, DeLake, OceanLake, and Wecoma (itself first annexed by OceanLake). Following many previous failed attempts at consolidation, the 1965 incorporation reflected a growing desire to pool resources and city services. Named by a popular contest and almost called Surfland, Lincoln City has welcomed tourists since at least 1837⁴ and continues to foster a tourism-based economy today.

The area making up present-day Lincoln City was originally inhabited by two bands of native peoples: a Salish-speaking branch of the Tillamook Indians to the north and a band of Yaquina Indians to the south. Little archaeological evidence remains of these first inhabitants, who had largely vanished from the area by the mid-1800s. An 1855 executive order by President Franklin Pierce creating the Coast Reservation led to the forcible relocation of native peoples from southern Oregon and northern California to the central Oregon coast. These diverse groups became today's Confederated Tribes of the Siletz Indians.⁵

European contact began as early as 1572, with Sir Francis Drake naming the region New Albion. European powers continued to explore in search of resources and the Northwest Passage, but white settlement didn't begin in earnest until homesteaders arrived in the late 1890s following the passage of the 1887 Dawes Act, subsisting in the isolated area largely through fishing, farming, and hunting. As resources began to dry up in the 1920s and new regulations made fishing more difficult, residents of the pearl communities turned increasingly to the woods for their livelihood, facilitating a logging boom.⁶ This success, combined with a growing interest in coastal tourism brought by the development and paving of Hwy 101 (formerly the Roosevelt Highway), led to a 46% population growth countywide during the 1930s.⁷ By the early 1950s, many of the pearl communities had formally incorporated and begun to fully embrace tourism, joining together a decade prior to consolidation to brand the area as the Twenty Miracle Miles.

⁴ "History." Explore Lincoln City. Accessed July 27, 2019, <https://www.oregoncoast.org/things-to-do/culture-history/history/>.

⁵ Hall, Anne Jobbe. *Lincoln City and the Twenty Miracle Miles*. Charleston, SC: Arcadia Publishing, 2008.

⁶ "History." Explore Lincoln City. Accessed July 27, 2019, <https://www.oregoncoast.org/things-to-do/culture-history/history/>.

⁷ Ranzetta, Kirk, ed. *US 101 Oregon Coast Highway Historic Context*. Portland, OR: AECOM for Oregon Department of Transportation, 2015.

While the pearl communities share some common historical traits, each also has its own unique history and character. The town site for Cutler City was established in 1913 by the Cutler family but grew slowly due to difficult access. Improved roads and bridges in the 1920s brought visitors attracted by wild rhododendrons blooming in the area to stay at early auto camps such as that at Siletz Bay within the town. The dairy industry also played an important role in Cutler City's early history, particularly the Kangas Bros. Dairy, which prospered until the 1930s.⁸

Just to the north, Taft's location at the mouth of Siletz Bay meant the area was settled earlier than others beginning in the early 1900s, quickly establishing the site as a regional social center. Named in 1906 by postmaster John W. Bones in honor of President William Howard Taft, the town developed rapidly in the 1920s thanks to the efforts of Fred Robison, who established many businesses along Hwy 101. A large early hotel (The Pines), auto courts, a movie theater, roller skating rink, and many shops and restaurants further established Taft as a regional center, and it formally incorporated in 1949.⁹

The area that became Nelscott was heavily wooded before being developed by the Nelscott Land Company in the mid-1920s with the name coming from business partners Charles P. *Nelson* and Dr. W.G. *Scott*. The small community grew up specifically as a summer resort differentiated by its conscious choice to resist rapid growth, a result aided by small lot sizes. Taverns were initially banned, but the town did welcome one of the region's earliest libraries in 1937.¹⁰

Continuing north, homesteaders arrived in the DeLake area as early as 1901, with the settlements of Camp Roosevelt and Roosevelt by the Sea platted by brothers Alvin and Harry Thorpe the mid-1920s. The town site was established in 1926, and its development tracked with the growth of automobiles and tourism assisted by the town's easy access to recreation opportunities at Devils Lake. Formally incorporated in 1949, the city continued to grow and offer roadside tourist attractions despite issues with fire and sanitation over the years.¹¹

⁸ Hall, Anne. *Cutler City: Wild Rhododendron Capital of the Oregon Coast*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2007.

⁹ Wyatt, Steve M. *Taft: The Transformation of a Waterfront Community to a Resort Town*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2001.

¹⁰ Wyatt, Steve M. *2005 Nelscott Historic & Cultural Resource Inventory: Historic Context Statement for Lincoln City, Oregon*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2005.

¹¹ Hall, Anne. *Delake, Lincoln City's Playground*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2009.

The area between the ocean and Devils Lake became known as OceanLake in 1926 and officially incorporated in 1945. The largest of the pearls, OceanLake was itself the result of the consolidation of the early Catholic church-owned land at Raymond and the small resort community of Devil's Lake Park. A regional center from the beginning, OceanLake featured a dance hall, large hotel, and movie theater, the buildings of which all still exist in some form, and drew large crowds for its motorboat race, the Regatta, beginning in 1933.

This area and Wecoma to the north experienced particularly robust growth in the post-war period.¹² Wecoma, meaning "sea," was established as a town in 1926 and grew to include the former sites of Braemar, Norcrest, and Norwick, all of which were annexed by OceanLake in 1955. Developed initially by the Interstate Investment Company, Wecoma grew steadily even through the Depression. The popular Pixie Kitchen opened in 1948 and lasted into the mid-1980s, spawning an amusement park as well.¹³

Lincoln City, Oregon was officially incorporated on March 3, 1965. The individual towns of Wecoma, Taft, OceanLake, DeLake, Nelscott, and Cutler City were all in different stages of development and with distinct identities at the time of incorporation and continue to retain those separate identities. The incorporation of the city was driven by a need for better streets and services such as hospitals, police, and fire protection. With the incorporation of the city, a new name was chosen to represent all of the different individual towns and Lincoln City was born.

Today Lincoln city continues to have a strong tourist economy and is home to approximately 8,381 permanent residents ballooning to over 30,000 during peak summer months.¹⁴ Its 5.4 square miles includes each of the six neighborhood pearls along with the small community of Roads End and planned development of Villages at Cascade Head. The northernmost city in Lincoln County, it is bordered to the north by Siuslaw National Forest; to the east by the unincorporated community of Neotsu, Devils Lake, and unincorporated Lincoln County; to the south by the unincorporated community of Kernville; and to the west by Siletz Bay and the Pacific Ocean. Bisecting the city in DeLake is the D River, claimed to be the shortest in the world at 120 feet.¹⁵

¹² Wyatt, Steve M. *2002 Oceanlake Historic & Cultural Resource Inventory: Historic Context Statement for Lincoln City, Oregon*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2002.

¹³ Hall, Anne. *Wecoma means welcome to the ocean!* Lincoln City, OR: Lincoln City Urban Renewal Agency, 2011.

¹⁴ "About Lincoln City." Lincoln City Oregon. Accessed July 27, 2019, <https://www.lincolncity.org/about>.

¹⁵ "D River State Recreation Site." Oregon State Parks. Accessed July 27, 2019,

Data Summary

The surveyed area of Lincoln City had a total of 131 properties that were considered by the survey team. Of these, 1 (1%) was identified as Eligible/Significant, 34 (26%) were identified as being Eligible/Contributing, 94 (72%) were found to be Not Eligible/Non-Contributing due to integrity loss, and 2 (2%) were found to be too new to be considered historic. The Eligible/Significant building identified was the former DeLake Elementary School (current Lincoln City Cultural Center). Of the buildings that were deemed Eligible/Contributing, most have been altered in some appreciable way, although some character-defining features, setting, and association of these properties have been adequately maintained. Properties deemed Not Eligible/Non-Contributing had undergone too much change to adequately convey their original appearance and purpose, although several of these exhibited the potential for restoration. Through façade improvements and adjustments, some ineligible properties could regain their eligibility or otherwise better convey their historic character.

The majority of these buildings (67%) are in a commercial style with a large majority (79%) being built between 1930 and 1970. Relatively unique to Oregon is the high number of buildings surviving from the 1930s, a decade that saw a traditional downturn in construction due to the Depression but during which the communities of Lincoln County saw a 46% growth in population.¹⁶ A total of 94 buildings (72%) had historic or current uses of commerce or trade with the next largest category being domestic at 17 buildings (13%). The remaining 15% of buildings are split among the categories of transportation, government, industry, recreation/culture, and other. Each of these categories had between 1 and 3 properties and accounted for minimal portions of the surveyed stock. Slightly over half (51%) of the surveyed buildings are primarily sided with wood materials, and another quarter (24%) featured synthetic siding. The remaining 25% of building materials included stucco, concrete, and limited amounts of brick, metal, and stone.

https://oregonstateparks.org/index.cfm?do=parkPage.dsp_parkPage&parkId=154.

¹⁶ Ranzetta, Kirk, ed. "US 101 Oregon Coast Highway Historic Context." Prepared for Oregon Department of Transportation by AECOM, Portland, OR, 2015, p.118.

Recommendations

I. Engender an Ethic of Heritage Conservation

A. Further investigate National Register of Historic Places possibilities. The National Register is the official list of our country's historic buildings, districts, sites, structures, and objects worthy of preservation. Placing buildings on this list opens up numerous economic opportunities including grants like Oregon Heritage's Preserving Oregon, state special assessment, and federal tax credits. For more information on the National Register program please contact: Robert Olguin, National Register Coordinator, (503) 986-0668, robert.olguin@oregon.gov.

- i. Pursue individual listing for the 1927 DeLake Elementary School (Lincoln City Cultural Center) property at **540 NE Hwy 101**. This historic building's combination of integrity and significance to the community makes it an excellent candidate for National Register listing.¹⁷ Listing on the National Register opens the possibility for many and varied grant opportunities to further preserve the building's historic character and use it for multiple purposes.
- ii. The concentration of existing older properties in the historic core of OceanLake lends this area the potential to become a National Register-listed Historic District. A strategic focus on restoring the integrity of these properties through Diamonds in the Rough grants (see below) and other Oregon Heritage programs would enhance the potential eligibility of the district, as buildings whose façade better represents the historic design are better candidates for the National Register of Historic Places. Listing on the Register opens up numerous grants that can benefit the buildings and community.
- iii. Pursue further research on Eligible/Contributing properties with special focus on key properties identified below. Intensive Level Surveys may reveal the potential for properties to be listed in the National Register and uncover valuable local significance that can inform future planning decisions. We believe the following properties warrant further study:
 - a. OceanLake
 1. **1604 NE Hwy 101**, Old Oregon Tavern (1926) – The oldest Eligible/Contributing surveyed property, the former Johnson's Sweet Shop appears to have changed uses only once in its long life and retains integrity as a 1920s rural commercial building.¹⁸
 - b. DeLake

¹⁷ See Appendix D, Figure 11

¹⁸ See Appendix D, Figure 9

1. **304 SW Hwy 101**, vacant (1930) – This large building, delineated on historic maps as the city hall and post office, retains good integrity and may have historic significance to the development of DeLake.
- c. Nelscott
1. **3203 Hwy 101**, Nelscott Mercantile (1928) – One of the oldest buildings along Hwy 101, this historic property maintains strong integrity and forms the anchor of the historic Nelscott Strip.¹⁹
- d. Taft
1. **4788 Hwy 101**, Lincoln City Surf Shop (1948) – The distinctive angled entryway of this historic restaurant property (now used for retail) is indicative of postwar auto-oriented commercial architecture.
- B. Continue conversations already begun regarding becoming a Certified Local Government (CLG). Becoming a CLG allows a community to partner with the state of Oregon to identify and protect its historic resources. With this status, Lincoln City could be eligible for non-competitive grant funding for historic preservation projects and surveys as well as training programs and other technical assistance from Oregon Heritage. For information about becoming a CLG, please contact: Kuri Gill, CLG Coordinator, (503)986-0685, kuri.gill@oregon.gov.
- C. Encourage the owners of Eligible/Contributing properties to properly maintain them through regular cleaning, moisture checks, structural assessments, etc. so that they retain their historic character. Encourage all business and property owners to consider façade restoration projects such as modern siding removal and transom restoration when they are looking to remodel their storefronts. Utilize Oregon Heritage Bulletins²⁰ and National Park Service Preservation Briefs²¹ and Tech Notes²² for detailed guidelines.
- D. This report is meant as a momentum builder rather than an ending point for preservation efforts in Lincoln City. Continue learning and planning through future trainings and surveys.
- i. Many organizations, including Oregon Heritage, Oregon Main Street, the National Main Street Center, and others offer regular workshops and training opportunities that can benefit Main Street managers, city planners, and other government officials.
 - ii. “Historic” buildings, as defined by the National Park Service, generally must be 50 years old or older. Buildings built during the 1970s will meet

¹⁹ See Appendix D, Figure 10

²⁰ <https://www.oregon.gov/oprd/HCD/Pages/Bulletins.aspx>

²¹ <https://www.nps.gov/tps/how-to-preserve/briefs.htm>

²² <https://www.nps.gov/tps/how-to-preserve/tech-notes.htm>

this requirement within the next decade. Future surveys, or updates of this survey, could provide new data on such buildings.

II. Take Advantage of the Main Street Network

- A. As an Oregon Main Street community, Lincoln City will have access to long term benefits such as technical assistance, grant funding, workshops, and other training programs through Oregon Heritage which can help revitalize the community through its existing historic resources. Main Street initiatives are team efforts involving city administration, business and property owners, volunteers, and the public joining together to realize the possibility older buildings offer for community development. It is a proven structure for developing plans and goals related to long term economic revitalization that builds on the natural strengths of your older buildings.
 - i. Distribute the Main Street Incentives brochure (available from Oregon Heritage) to ensure that property owners in the Main Street area are aware of the grants and financial incentives available to them for the maintenance and renovation of their properties.
- B. The Oregon Main Street Revitalization Grant, open only to participating Main Street communities, is a competitive award of up to \$200,000 to be used for a wide range of projects seeking to facilitate community revitalization that will lead to private investment, job creation and retention, establishing or expanding viable businesses, or creating a stronger tax base. The 1930 vacant former DeLake city hall and post office building at **304 SW Hwy 101** may be a strong candidate for this grant, as the revitalization of this large, historically important building may serve as a catalyst for economic growth in the surrounding area. Funds could potentially be used for a market study to determine community needs, a feasibility study exploring adaptive reuse (maybe as offices/co-working/housing), or could pay for the physical restoration necessary to make the property usable for tenants, among others.
- C. Façade design assistance is also occasionally available to participating Main Street communities as a way to visually represent what key properties or streetscapes might look like if returned to their historic look or along historically appropriate themes. CLG grants or grants from the National Trust for Historic Preservation and elsewhere can also fund this work.
 - i. Particular focus could be placed on the effect of the removal of non-historic late 20th century awnings, which often obscure important historic details, and their replacement with period appropriate awnings or canopies.

- ii. Additional focus might be placed on creative ways to break up large blank facades stretching across historically separate buildings by revealing their underlying historical looks.

III. Apply for Diamonds in the Rough Grants

A. The Diamonds in the Rough Grant is a competitive award of up to \$20,000 allowing for the restoration or reconstruction of historic facades that have been heavily altered. If strategically targeted to key properties, this grant could facilitate revitalization not only of the property itself but of the wider community through the creation of historic clusters and possible designated historic districts. Potential candidates for this program are listed below, with possible “cornerstone” properties called out with an asterisk and described in greater detail.

i. OceanLake

a. Higher Priority

1. ***1534 NE Hwy 101**, former Maynard’s Café building (c.1926) – This building has good integrity with existing additions and alterations appearing easily reversible. Restoration of this property could spark a domino effect within the neighborhood.²³
2. **1542 NE Hwy 101**, Rocking Horse (1925), former OceanLake Dance Pavilion.²⁴
3. ***1610-1616 NE Hwy 101**, Sea the Light/Sea Wick Nautical & Collectibles/Collectable Swords & Knives (1930) – This building has good integrity with minimal alterations and additions. Historic fenestration remains, though windows have been replaced. The existing awning should be removed and replaced with a historically appropriate canopy.²⁵
4. **1642-1646 NE Hwy 101**, The Grill/Bug & Jack’s Li’l Boutique (c. 1945).²⁶

b. Lower Priority

1. **1316 Hwy 101**, OceanLake Vintage (1935).²⁷
2. **1333-1410 NW Hwy 101**, Marci’s Bar & Bistro/Tattoo/Sunray Cannabis (1938).
3. **1744 NE Hwy 101**, Barefoot at the Beach Gift Shop (c.1949).²⁸
4. **1826 NE Hwy 101**, Desperate Hard Drives (c.1936).

²³ See Appendix D, Figure 12

²⁴ See Appendix D, Figure 13

²⁵ See Appendix D, Figure 14

²⁶ See Appendix D, Figure 15

²⁷ See Appendix D, Figure 16

²⁸ See Appendix D, Figure 17

- ii. DeLake
 - a. ***316 SW Hwy 101**, Oldeline Lanes (1928) – This building has served as a bowling alley for the majority of its 90 year life. The exterior has been heavily altered by the current siding, and its removal and reconstruction to match the post-war integrity of the interior should be considered.
 - b. **317 SW Hwy 101**, Vacant former restaurant building (1935).
 - c. **620 NE Hwy 101**, Artists Co-op Gallery (c.1964).²⁹
 - d. **929-945 NW Hwy 101**, Beach Babies/Barber Shop/Coast Clocks/Black n Blue Tattoo (1925).
- iii. Nelscott
 - a. **3200 Hwy 101**, Nelscott House Antiques (c.1920).
 - b. ***3203 Hwy 101**, Nelscott Mercantile (1928) – This building retains good integrity despite some moderate additions that have not greatly impacted the building’s massing or overall look. Part of the front porch has been enclosed and a new canopy added along with new siding throughout. Reversal of these changes could positively impact the character of the Nelscott Strip.
- iv. Taft
 - a. **5028 SE Jetty**, Vacant former store/residence (1928).
 - b. **4840-4850 SW Hwy 101**, Jak’s Photo Studio/Sapphire Center (1950).
 - c. ***5030 Hwy 101**, Family Promise of Lincoln County (1938) – This building retains its historic form, with rear additions not substantively detracting from the overall character from the street. Of primary importance is the removal of the modern awning. This property’s key location means its restoration could strongly impact the community.³⁰

IV. Leverage Resources for Heritage Tourism

- A. Heritage tourism capitalizes on the fun and unique history of a community as represented through its stories and places in a way that is engaging and enticing to residents and visitors.
- B. Partner with the North Lincoln County Historical Society and Travel Oregon to creatively interpret places of historic, cultural, or architectural significance throughout the city. These partnerships increase capacity and open up museum and tourism-specific grant opportunities. Ideas include:

²⁹ See Appendix D, Figure 18

³⁰ See Appendix D, Figure 19

- i. Include the Museum in city-sponsored social events. This might include integrating history into the Finders Keepers program by providing winners with a museum-designed historical brochure on the pearl where their float was found or simply inviting the museum to set up information booths at events.
 - ii. Activate empty storefronts by displaying large scale historic photos of the property/streetscape in windows, including “fun facts” and trivia questions about the history of the property/neighborhood that passers-by can read.
 - iii. Create physical interpretive signage for each pearl at specific locations to increase historical understanding and appreciation. This can also be done with historic photo wraps of existing utility boxes to enliven otherwise unused space. Signage can also help to increase pedestrian activity in key desired areas. Similar initiatives can also be created as app-based walking or driving tours, printed brochures, or a website.
- C. Lincoln City retains a large number of properties tied to the story of tourism on the Oregon Coast, particularly automobile tourism. Funding obtained through CLG participation, Travel Oregon, the county cultural coalition, or elsewhere could be used to plan for and highlight the historical and architectural themes of automobile tourism in the city. Extant properties representing these themes fall into three (3) general categories:
- i. Historic Lodging – Lincoln City retains a strong collection of early lodging buildings. While many of these properties have been reconfigured for other uses, by restoring, highlighting, and advertising these “retro” buildings for lodging and housing, the city can take advantage of current enthusiasm³¹ for “vintage” aesthetics and sustainable micro-living.
 - a. Wecoma
 - 1. **2059-2065 NW 34th St**, Evergreen Home Loans (1938).³²
 - 2. **3510 Hwy 101**, Sea Echo Motel (1964).
 - b. OceanLake
 - 1. **2020 NE Hwy 101**, residences (1935).
 - c. DeLake
 - 1. **545-565 NW Hwy 101**, 7 Gables Shoppes (1930).³³
 - 2. **1014 NE Hwy 101**, City Center Motel (1940).
 - ii. Auto Age Architecture – A number of properties in Lincoln City are excellent examples of the dramatic exaggerated modern styles of architecture that emerged from the 1950s through 1970s to attract the

³¹ <https://www.curbed.com/2018/6/22/17493336/motel-midcentury-design-hotel-lodging-adaptive-reuse>

³² See Appendix D, Figure 20

³³ See Appendix D, Figure 21

attention of newly mobile Americans traveling and vacationing by automobile.

- a. OceanLake
 1. **1388-1344 NE Hwy 101**, vacant former Lincoln T.V. System building (1966).³⁴
 2. **1433-1533 NW Hwy 101**, Enrique’s Taqueria/Winddriven (1973).
 - b. DeLake
 1. **247-249 SW Hwy 101**, Subway (1963).
 2. **620 NE Hwy 101**, Artists Co-op Gallery (c.1964).
 3. **934 NW Hwy 101**, Century Link (c.1960s).
 - iii. Tourism – The story of leisure tourism has been a significant part of Lincoln City’s history since the interwar period, and a number of properties are especially indicative of its importance.
 - a. DeLake
 1. **316 SW Hwy 101**, Oldeline Lanes (1928).
 2. **404 SW Hwy 101**, Psychic Jennifer (1930), former Siberrian Café.³⁵
 3. **1009 NW Hwy 101**, Reed’s Taffy (1930).
 - b. Cutler City
 1. **5911 SW Hwy 101**, The Bay House (1930), former Cutler City Tavern.³⁶
- D. Choose a historic building for each pearl that helps to represent the story of the pearl, and create a passport program encouraging visits to each pearl to seek out that historic property. Consider awarding small prizes for completed passports. Create and place interpretative signage at each of these buildings that describes the history of the building and pearl. Possible passport properties include:
- i. Wecoma – **3510 Hwy 101**, Sea Echo Motel (1964), an excellent example of a mid-20th century motel.
 - ii. OceanLake – **1624 NE Hwy 101**, Bijou Theatre (1937), Lincoln City’s sole remaining operating historic theatre.
 - iii. DeLake – **540 NE Hwy 101**, Lincoln City Cultural Center (1927), a rare example of early brick schoolhouse architecture.
 - iv. Nelscott – **3203 Hwy 101**, Nelscott Mercantile (1928), an important early community hub formerly serving as a general store, restaurant, hotel, grocer, and bus station.
 - v. Taft – **4907 SW Hwy 101**, North Lincoln County Historical Museum (1948, 2003), partially located in a former fire hall, this museum chronicles the history of the region.

³⁴ See Appendix D, Figure 22

³⁵ See Appendix D, Figure 23

³⁶ See Appendix D, Figure 24

- vi. Cutler City – **5911 SW Hwy 101**, The Bay House (1930), the former Cutler City Tavern at the residential gateway is among the pearl’s only remaining historic properties along Hwy 101.

V. Embrace Placemaking Initiatives

A. The work of placemaking emphasizes small interventions in the physical landscape that lend character and identity to a specific place, often capitalizing on local history. Efforts highlight what is unique about a particular place and make it inviting to spend time in, turning an “anyplace” into a “someplace.” Specific preservation-based placemaking initiatives might include:

- i. Continue work already underway to create linked design standards for public spaces along the Hwy 101 corridor within the pearls (i.e. street furniture or sidewalk designs that are unique to each pearl but linked by unifying features; variations on a theme). This can be a simple way to tie the pearls together.
- ii. Activate large expanses of blank wall space while supporting the local arts community by commissioning local artists to create murals (i.e. contemporary designs calling on important aspects of local history and community character or the re-creation of historic photos).³⁷ Painting or design work could also be undertaken by local schools. Murals need not necessarily be painted directly on buildings but can also be placed on movable surfaces for ease of maintenance. Choose a consistent theme and create at least one within each pearl. Properties to consider include:
 - a. Wecoma – **3244 NE Hwy 101**, Robbens (1920).
 - b. OceanLake – **1430-1450 NE Hwy 101**, Mini Pet Mart/Fusion³⁸ Fitness (1940); **1435-1437 Hwy 101**, Jasmine Thai Restaurant (1946).
 - c. DeLake – **316 SW Hwy 101**, Oldeline Lanes (1928).
 - d. Nelscott – **3138 SW Hwy 101**, Foon Hing Yuen (1946).³⁹
 - e. Taft – **4910-4948 SW Hwy 101**, Ace Hardware (1935-1965).
 - f. Cutler City – **6305 Hwy 101**, Builders First Source (1964).
- iii. Fill gaps between buildings and vacant lots with mural art to activate the space and encourage feelings of pedestrian safety and walkable vibrancy and eliminate blight.⁴⁰ These spaces can also highlight buildings that used to stand in these spaces or general community history. The creation of small parklets developed by local designers or students can also enliven these spaces and feature historic context.

³⁷ <https://www.smartcitiesdive.com/ex/sustainablecitiescollective/enlivening-dead-city-spaces-street-art/177061/>

³⁸ See Appendix D, Figure 25

³⁹ See Appendix D, Figure 26

⁴⁰ <http://www.daytonoregon.org/art-murals/>

- iv. Build on the theme already established in OceanLake and Taft by (re)creating archways on side streets intersecting Hwy 101 for each of the pearls. Research indicates that both Cutler City and Wecoma both previously had such arches.⁴¹
 - v. Work with the Oregon Department of Transportation to lower speed limits along Hwy 101 where possible within the pearls. Doing so would increase pedestrian activity and cause motorists to literally slow down and see what the pearls have to offer.
- B. Emphasize a unified Lincoln City while highlighting neighborhood identity by focusing on the strengths of each pearl. Historical context along with a careful reading of the surveyed buildings (what styles remain where, when they were built, what they're used for, how they're distinct) can inform these strategies. Framework recommendations for each pearl include:
- i. Wecoma – The Gateway Pearl
 - a. Wecoma is a spread out, auto-oriented entry point to the city for most travelers, with most remaining buildings dating to the mid-century or later. Placemaking initiatives that emphasize the automobile would work well here.
 - b. Particularly important in Wecoma's history is the Pixie Kitchen, formerly located near **3517 Hwy 101** where Motel 6 now stands.⁴² The recent Kiwanis effort to restart PixieFest shows a continued interest in the memory of this local landmark. Work with Kiwanis to integrate the former location into festivities and call upon the imagery and strong association locals have with the demolished business in placemaking efforts in Wecoma.
 - ii. OceanLake – The Downtown Retail Pearl
 - a. OceanLake is the pearl with the closest resemblance to a traditional Main Street. It already benefits from excellent walkability, streetscape improvements (themed streetlights, decorative sidewalk pavers, ample trash bins), and a popular entertainment venue in the restored Bijou Theatre. Lean into this identity by continuing to improve the streetscape, restoring building facades, and encouraging compatible infill. Think of OceanLake as Lincoln City's downtown.
 - b. Many historic photos and postcards exist of OceanLake's commercial strip.⁴³ Find creative ways to display these historic photos in storefronts or permanent interpretive signage similar to that at the Bijou Theatre.

⁴¹ See Appendix D, Figure 27

⁴² See Appendix D, Figure 28

⁴³ See Appendix D, Figures 29, 30

- iii. DeLake – The Playground Pearl
 - a. North and South DeLake straddle the D River and provide easy access to Devil’s Lake and the State Recreation Area. Emphasize the link to these natural recreation areas and their proximity to the numerous and architecturally-varied historic tourist-oriented buildings, shopping, and lodging.
- iv. Nelscott – The Small Town Charm Pearl
 - a. The historic Nelscott Strip stretching from **3203-3305 Hwy 101** provides an excellent collection of early 20th century auto-oriented architecture that retains reasonable physical integrity and strong integrity of feeling and association with seaside resort tourism.⁴⁴ Think of this strip as the heart of the neighborhood while tying in the value of nearby bookstore, theater, and antique store buildings.
- v. Taft – The Oceanfront Heritage Pearl
 - a. Taft appears to have a strong sense of its history, with the presence of a character-defining archway along SW 51st St., multiple businesses advertising “Historic Taft,” numerous historic signs, and the presence of the historical society museum. Build on the strength of this interest by tying the walkability of 51st St. to the commercial core along Hwy 101 and encouraging compatible restoration of existing buildings. While this area retains a high density of buildings, walkability is hampered by limited crossings, empty lots, and building alterations incompatible with the historic context.
 - b. The Ace Hardware property and its neighbors from **4910-5030 SW Hwy 101** form the historic commercial core of the neighborhood, including the former roller rink and Lincoln Theater.⁴⁵ These buildings have been heavily altered and now serve different uses for hardware sales, housing, and non-profit offices. Work with property owners to improve these important facades and otherwise interpret the history of the block through murals, photographs, and signage.
- vi. Cutler City – The Natural Pearl
 - a. Cutler City’s historic building stock along Hwy 101 is limited, with its strength lying more in its cluster of seaside homes and natural areas. Using signage, including the re-creation of an archway at SW Jetty, to direct travelers to lodging to the west is in keeping with the commercial area’s historic function. The

⁴⁴ See Appendix D, Figure 31

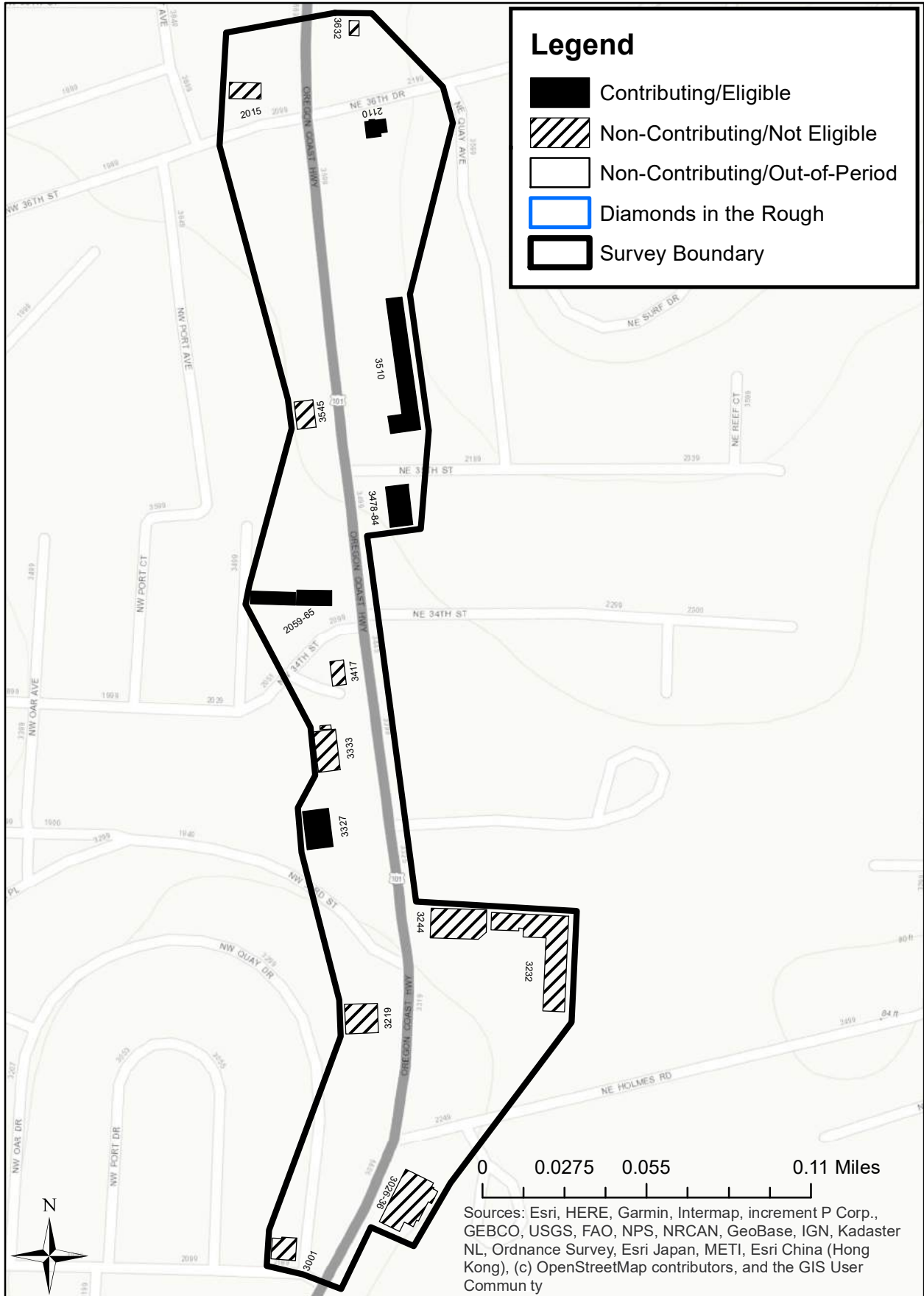
⁴⁵ See Appendix D, Figure 32

neighborhood's status as the rhododendron capital of the Oregon Coast also provides opportunities to integrate the flower into local branding.

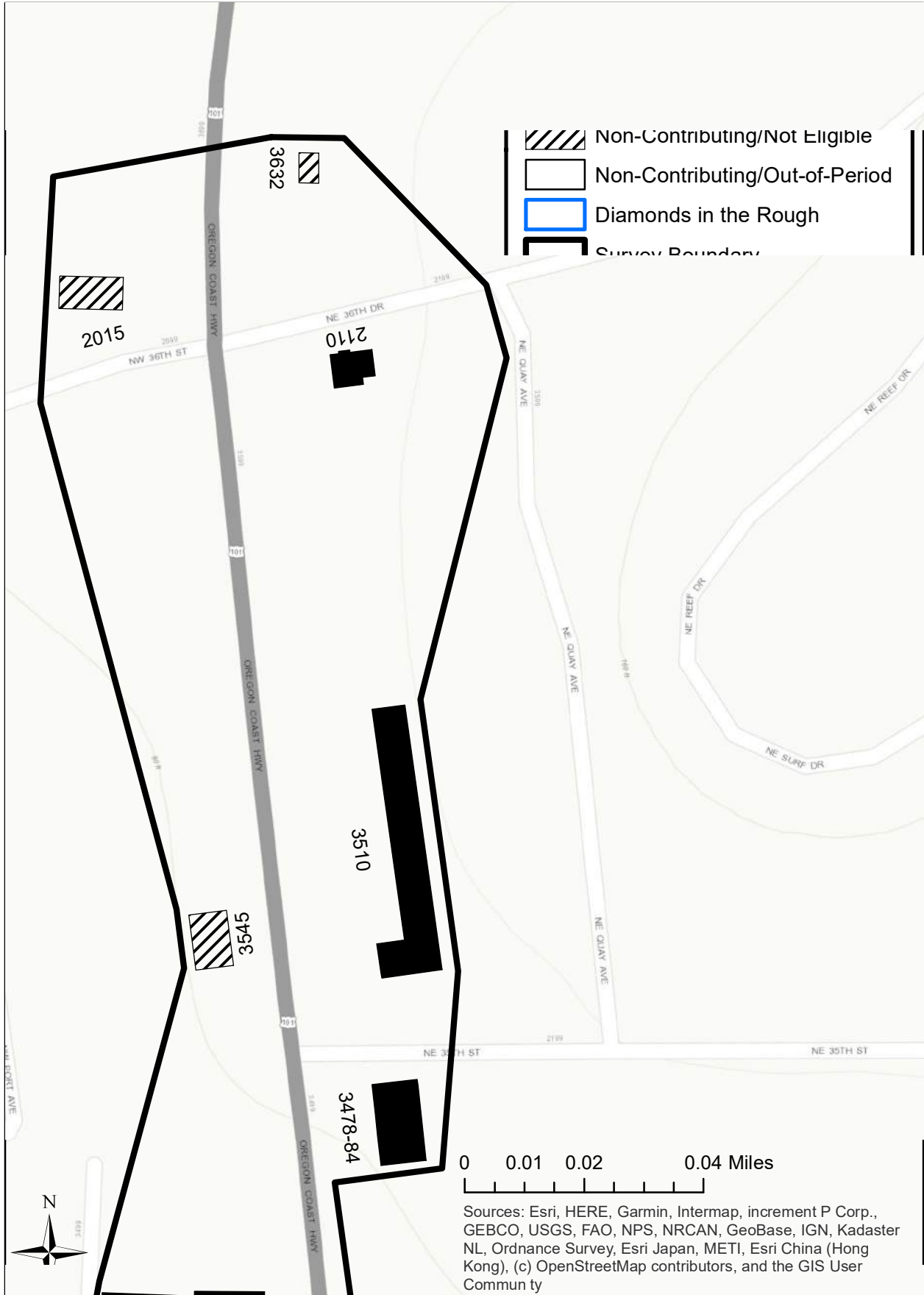
Bibliography

- “About Lincoln City.” Lincoln City Oregon. Accessed July 27, 2019, <https://www.lincolncity.org/about>.
- “D River State Recreation Site.” Oregon State Parks. Accessed July 27, 2019, https://oregonstateparks.org/index.cfm?do=parkPage.dsp_parkPage&parkId=154.
- Hall, Anne Jobbe. *Lincoln City and the Twenty Miracle Miles*. Charleston, SC: Arcadia Publishing, 2008.
- Hall, Anne. *Cutler City: Wild Rhododendron Capital of the Oregon Coast*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2007.
- . *Delake, Lincoln City’s Playground*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2009.
- . *Wecoma means welcome to the ocean!* Lincoln City, OR: Lincoln City Urban Renewal Agency, 2011.
- “History.” Explore Lincoln City. Accessed July 27, 2019, <https://www.oregoncoast.org/things-to-do/culture-history/history/>.
- Ranzetta, Kirk, ed. *US 101 Oregon Coast Highway Historic Context*. Portland, OR: AECOM for Oregon Department of Transportation, 2015.
- Wyatt, Steve M. *2002 Oceanlake Historic & Cultural Resource Inventory: Historic Context Statement for Lincoln City, Oregon*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2002.
- . *2005 Nelscott Historic & Cultural Resource Inventory: Historic Context Statement for Lincoln City, Oregon*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2005.
- . *Taft: The Transformation of a Waterfront Community to a Resort Town*. Lincoln City, OR: Lincoln City Urban Renewal Agency, 2001

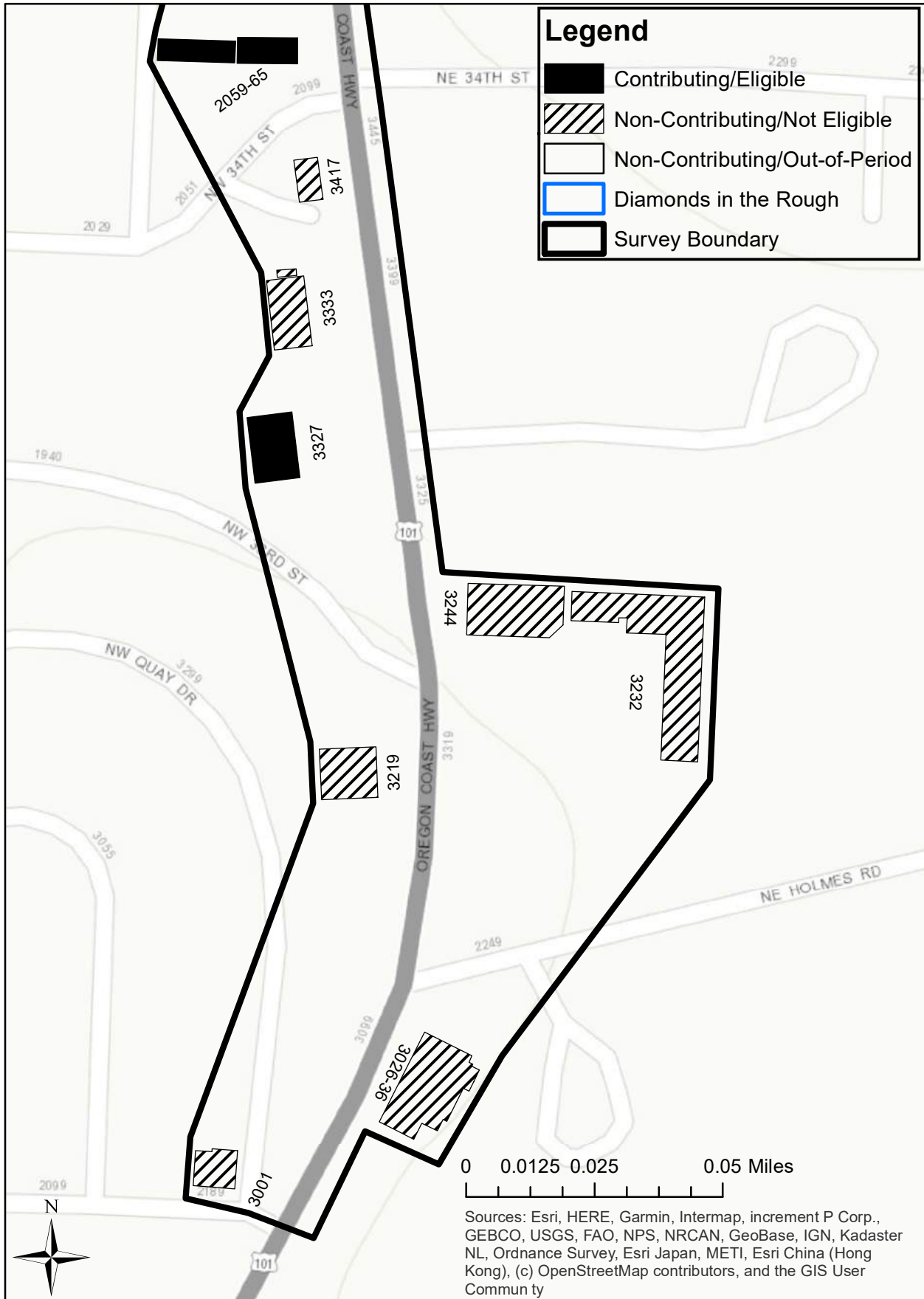
Wecoma: Whole



Wecoma: North

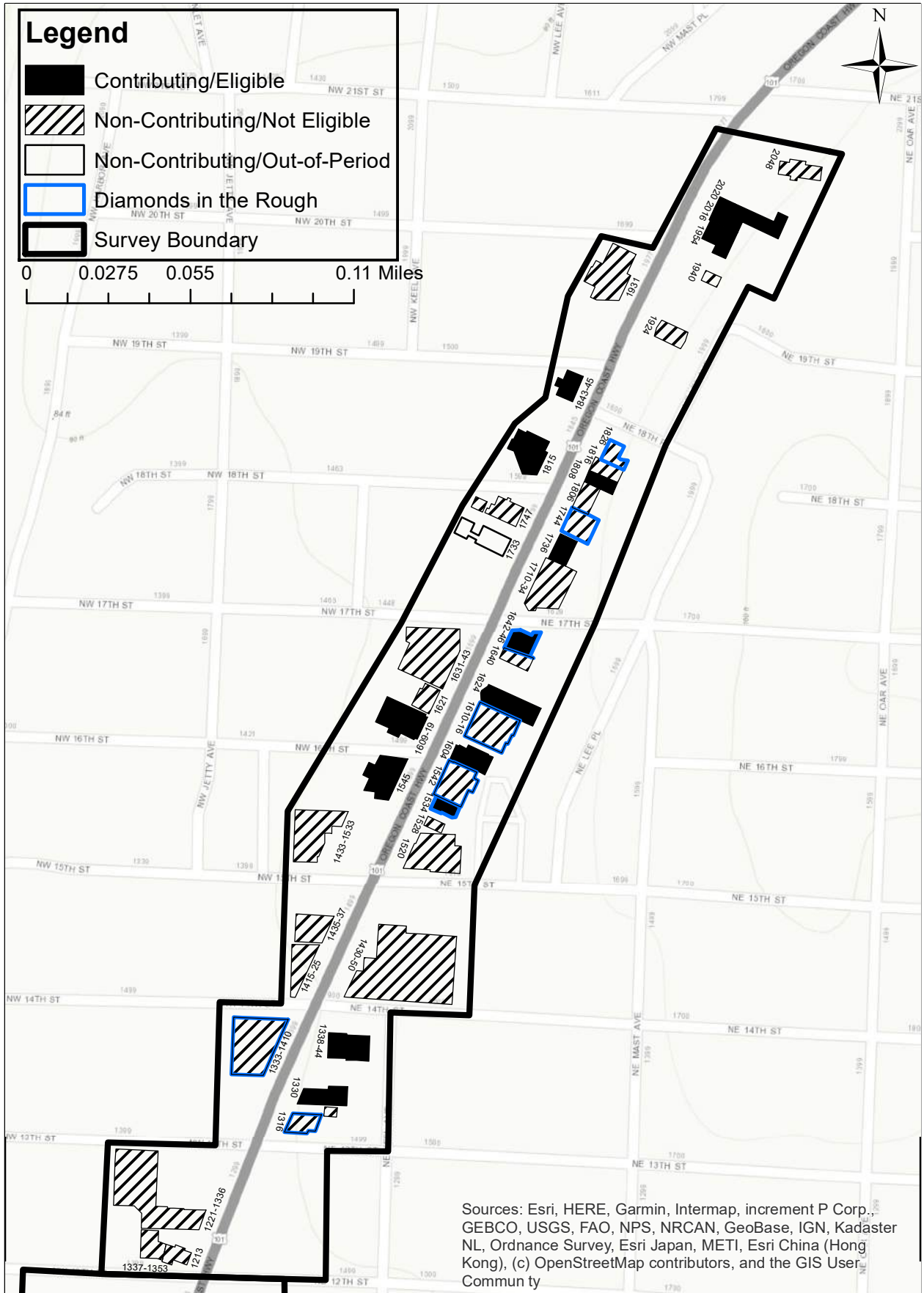


Wecoma: South

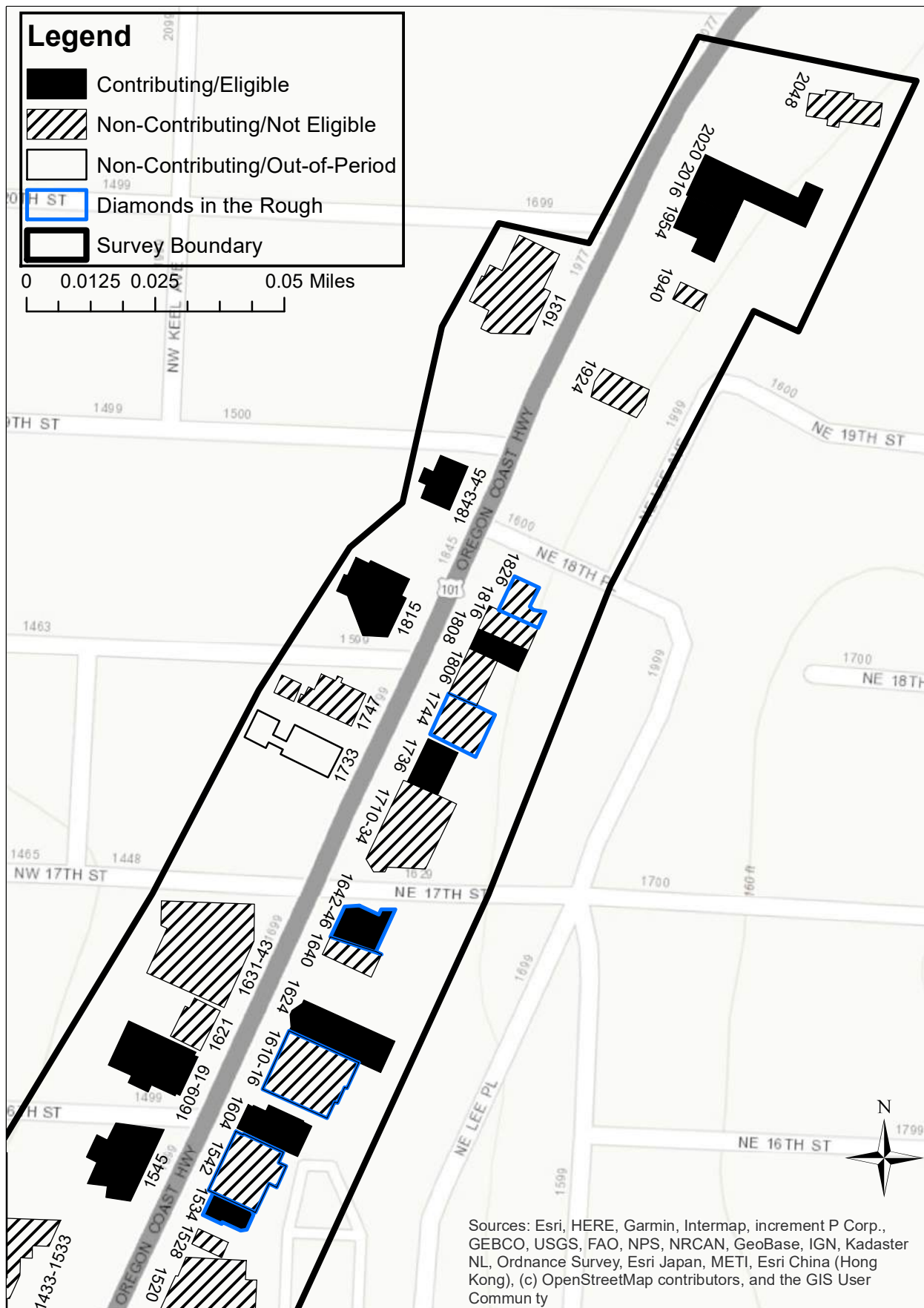


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

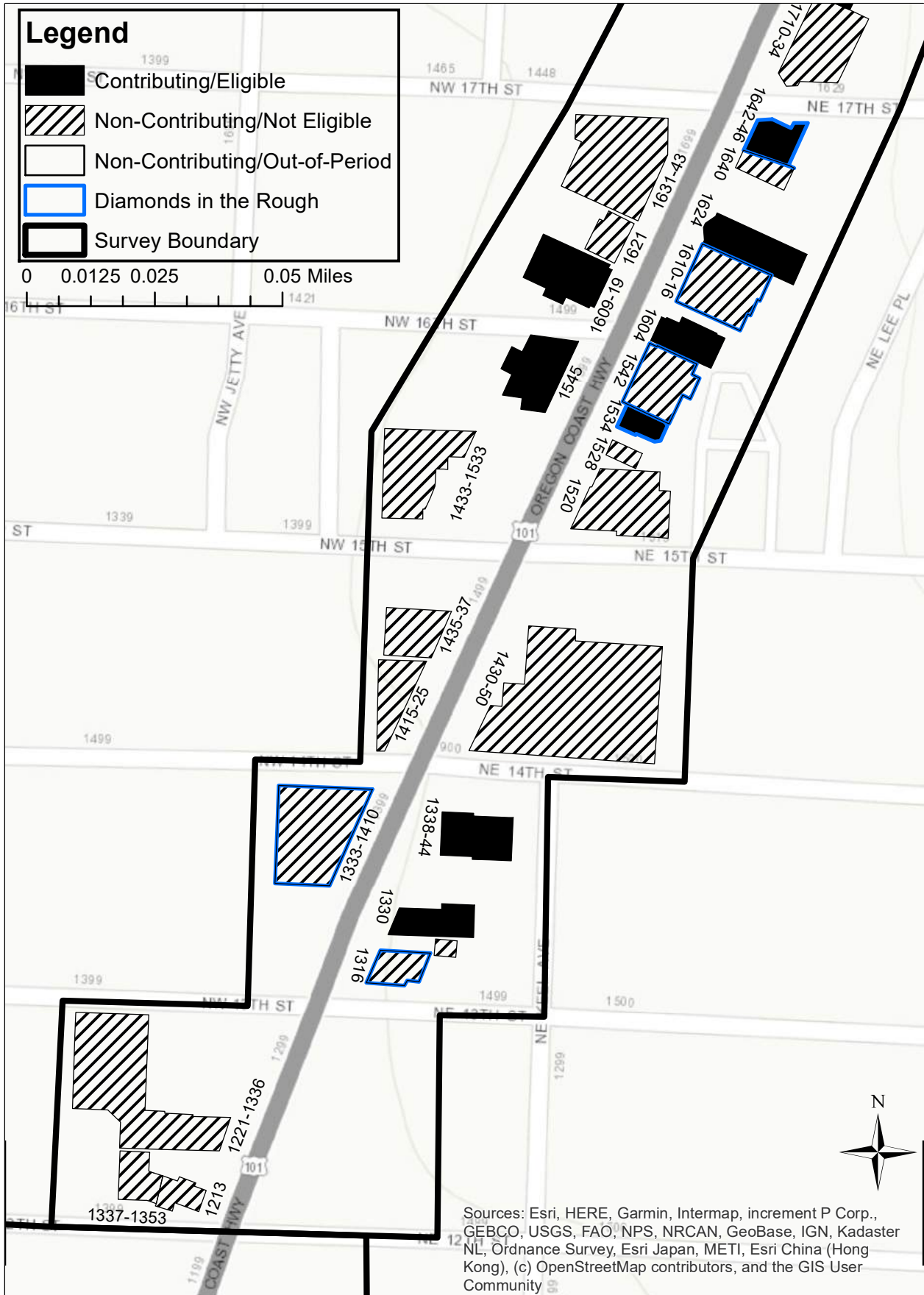
OceanLake: Whole



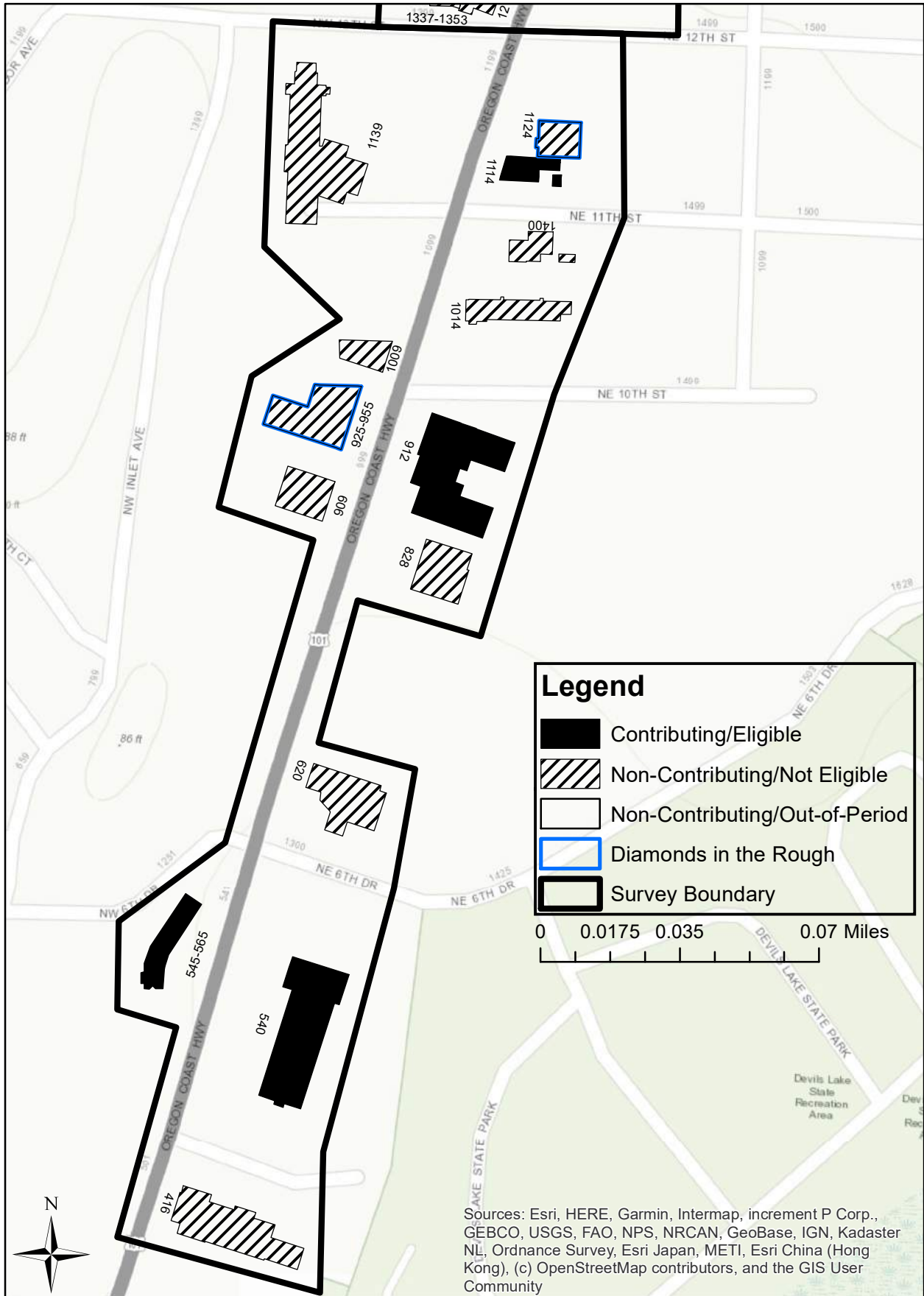
OceanLake: North



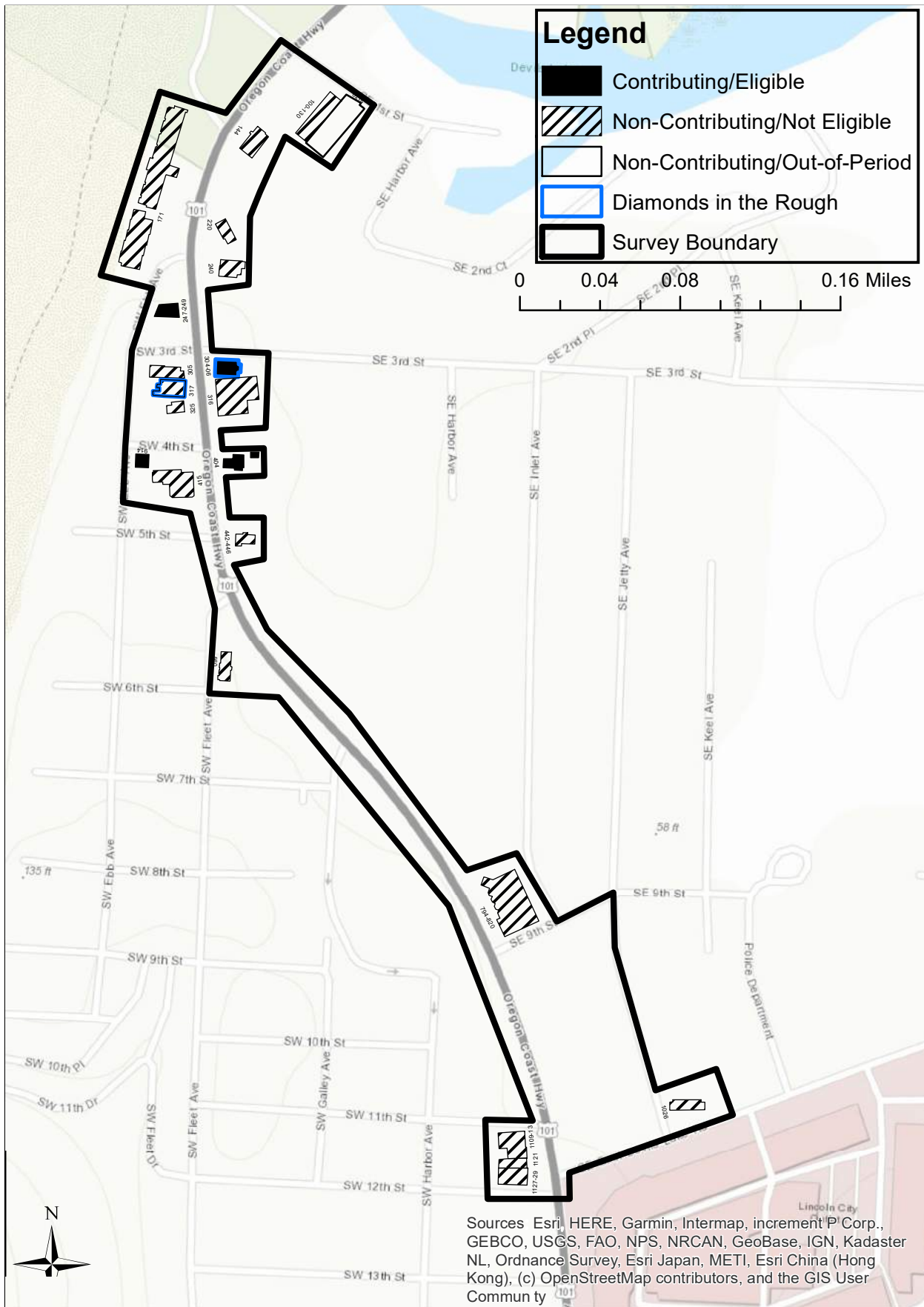
OceanLake: South



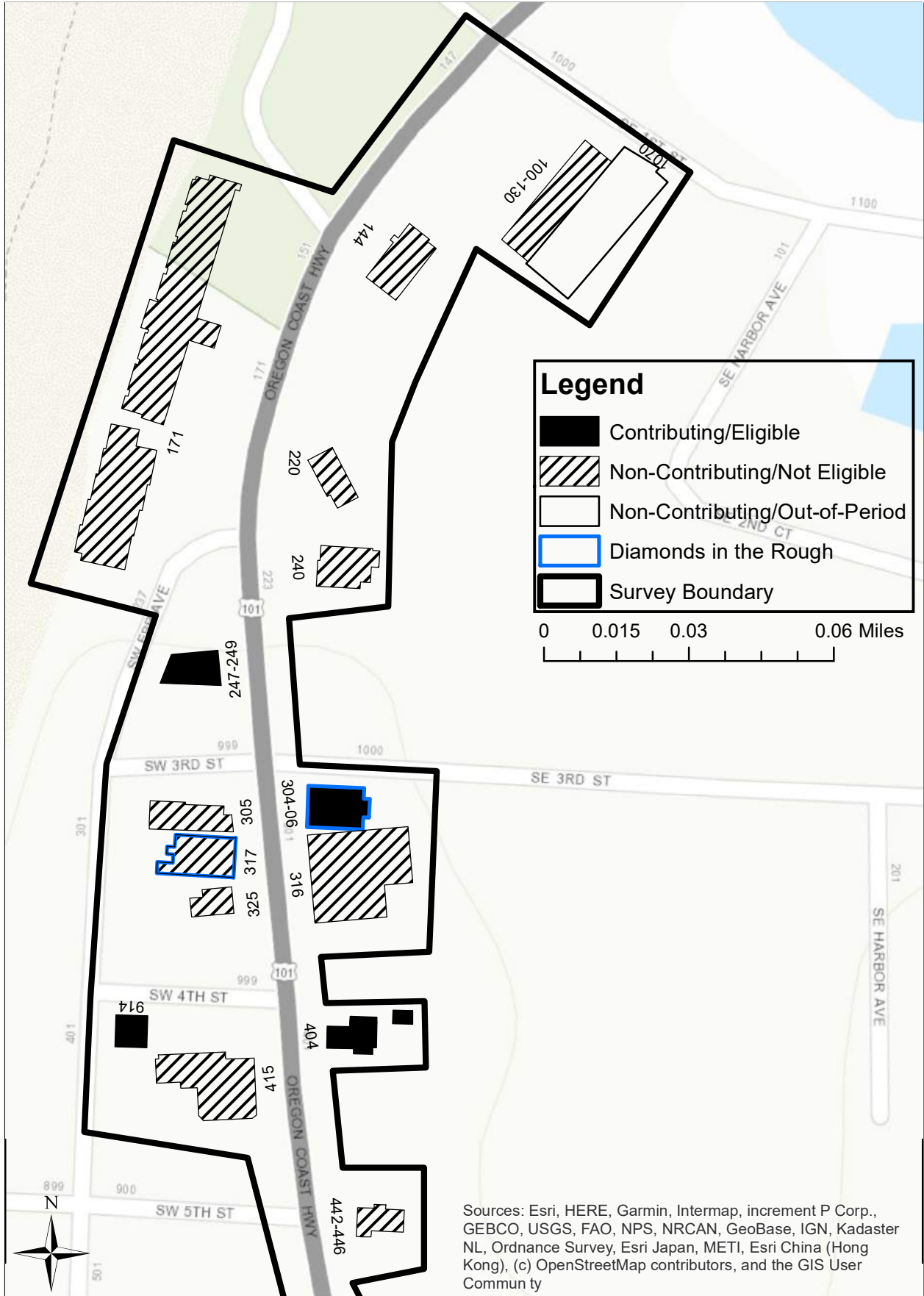
North DeLake: Whole



South DeLake: Whole

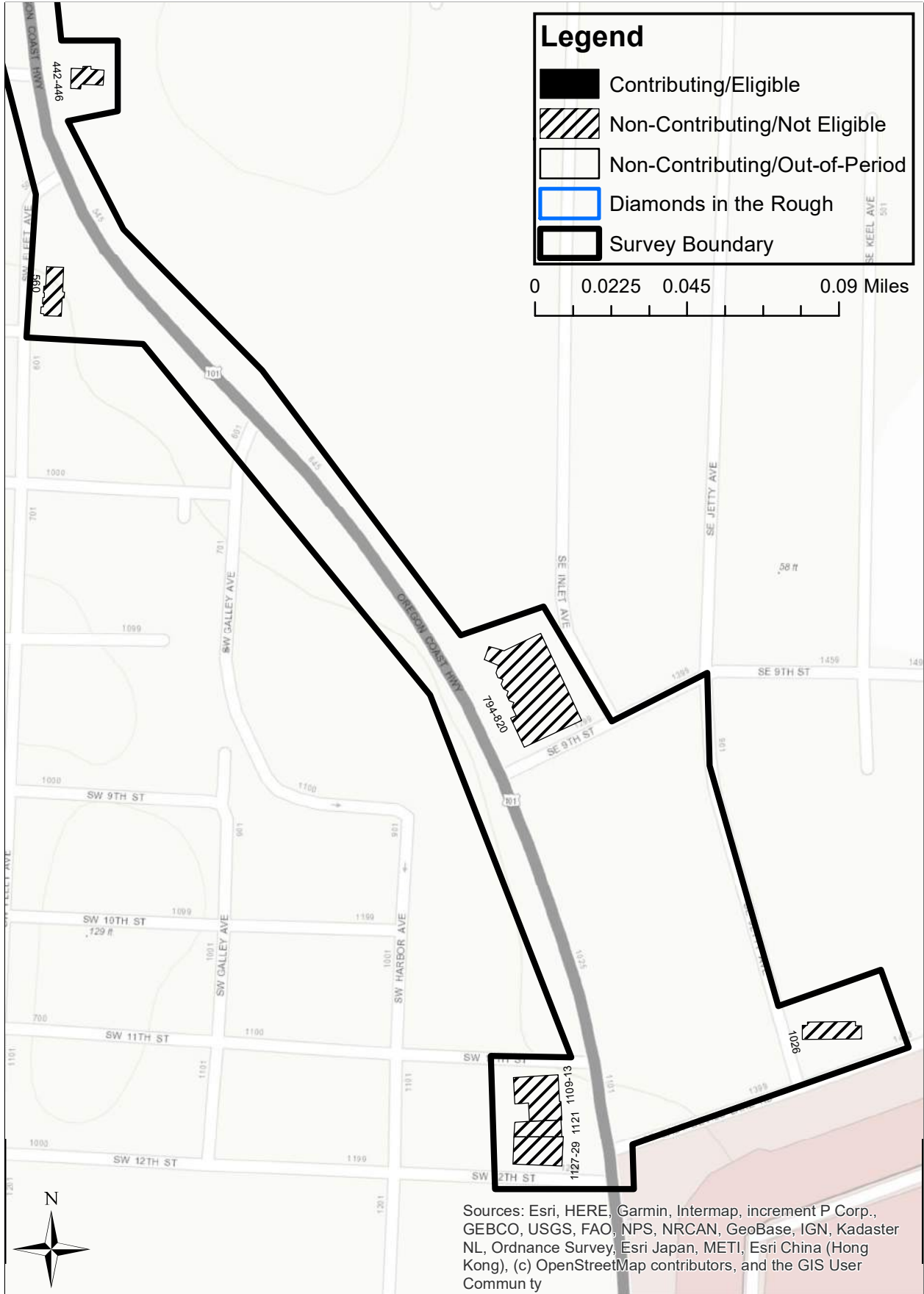


South DeLake: North



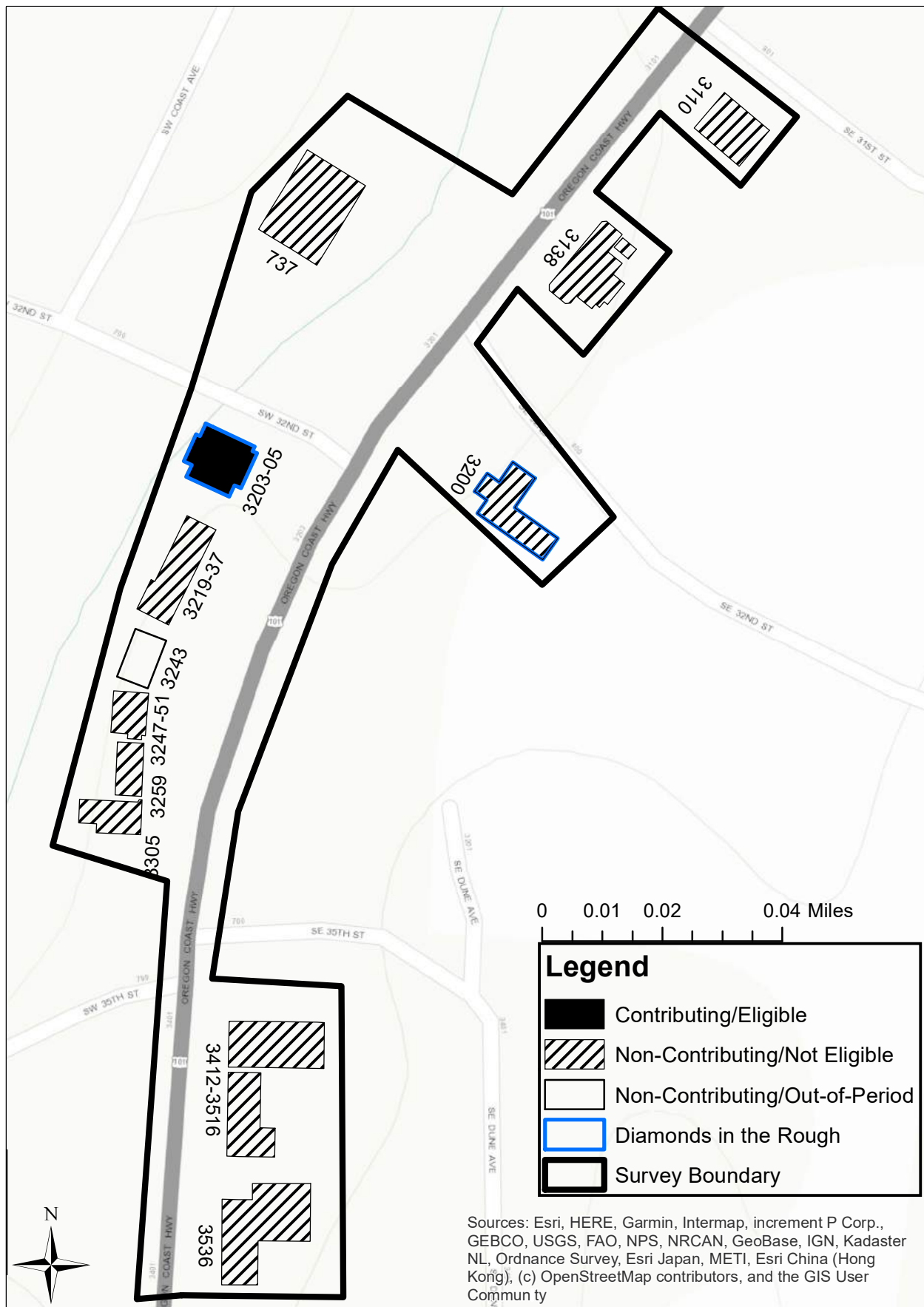
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

South DeLake: South



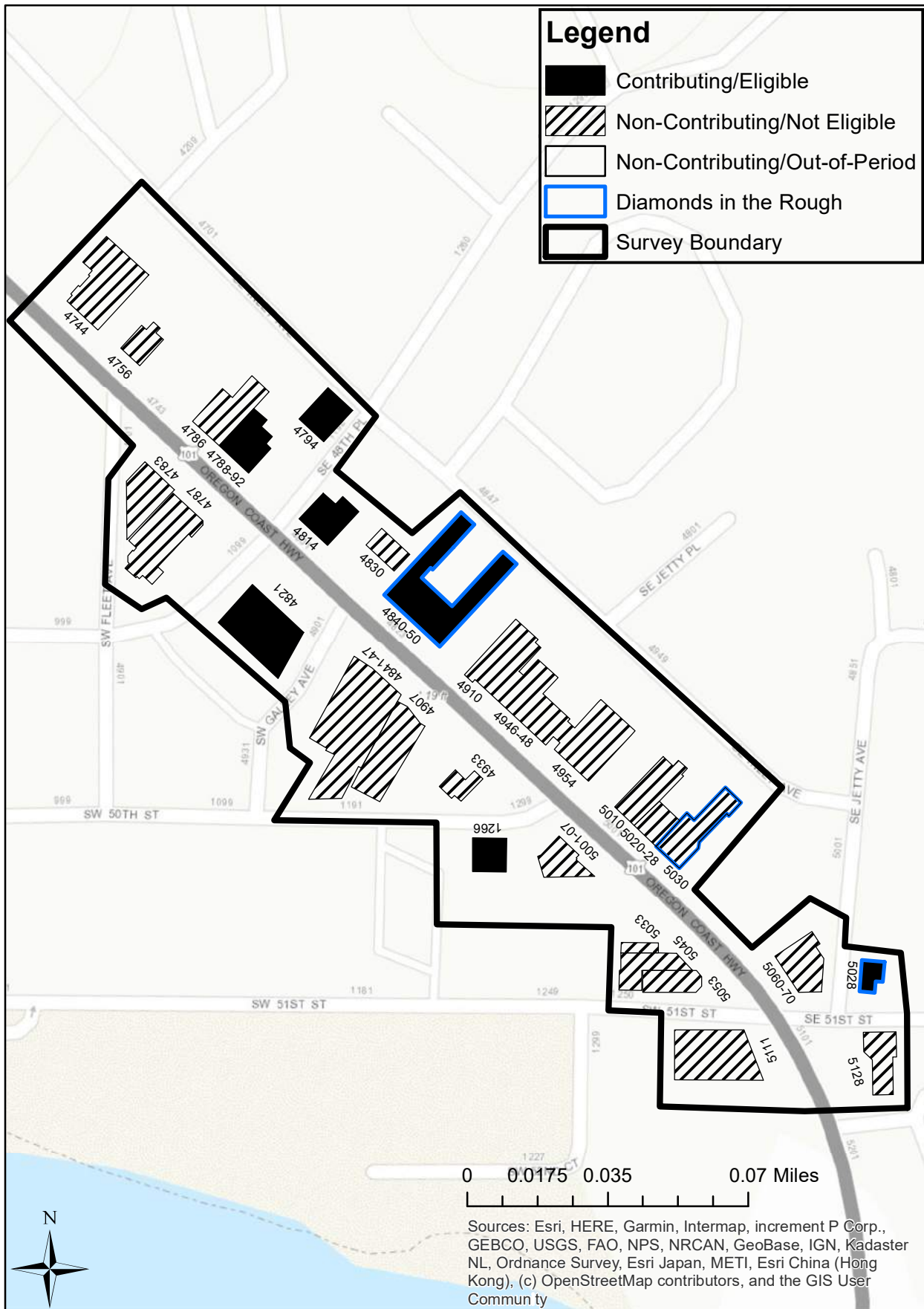
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Nelscott: Whole

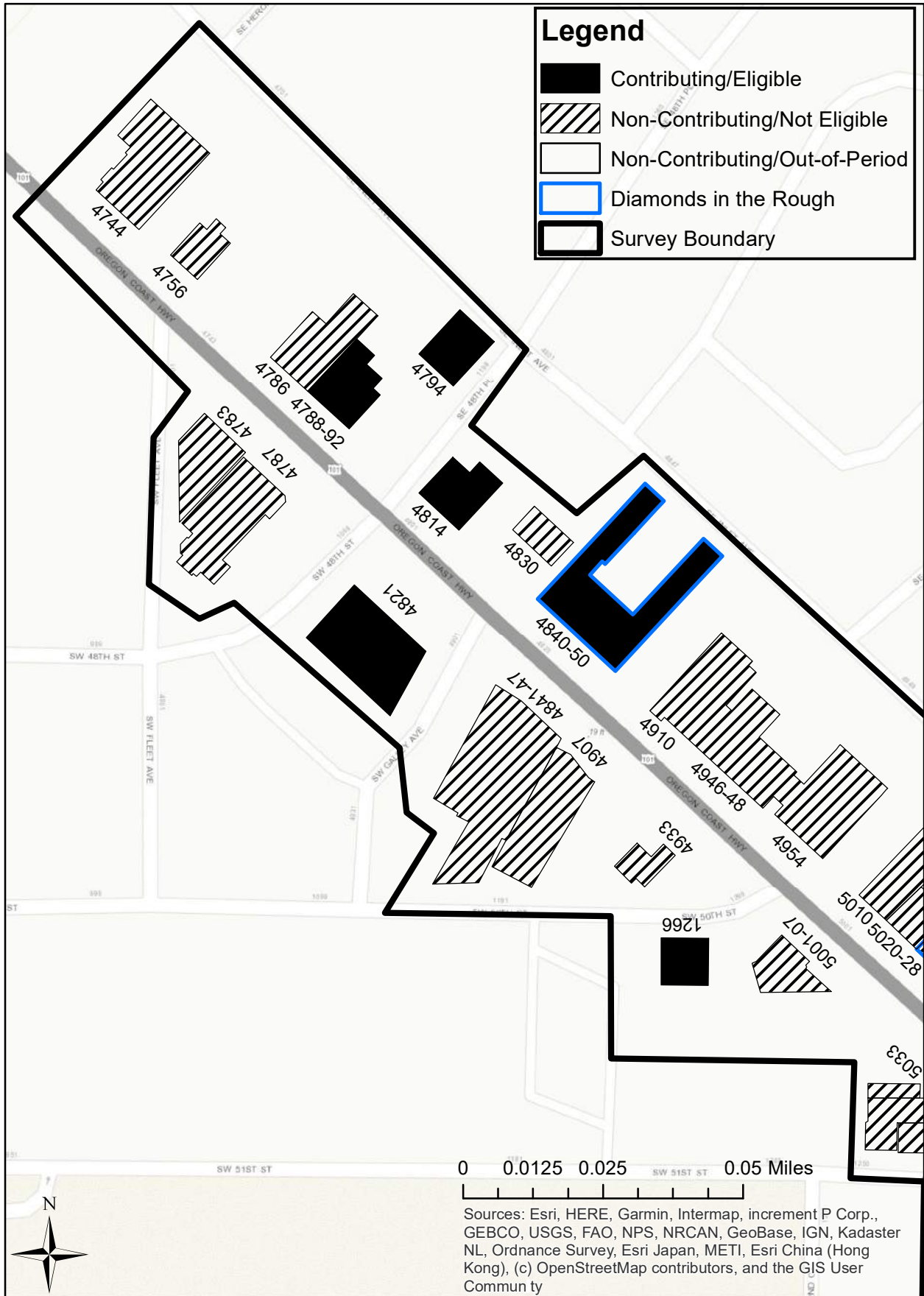


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

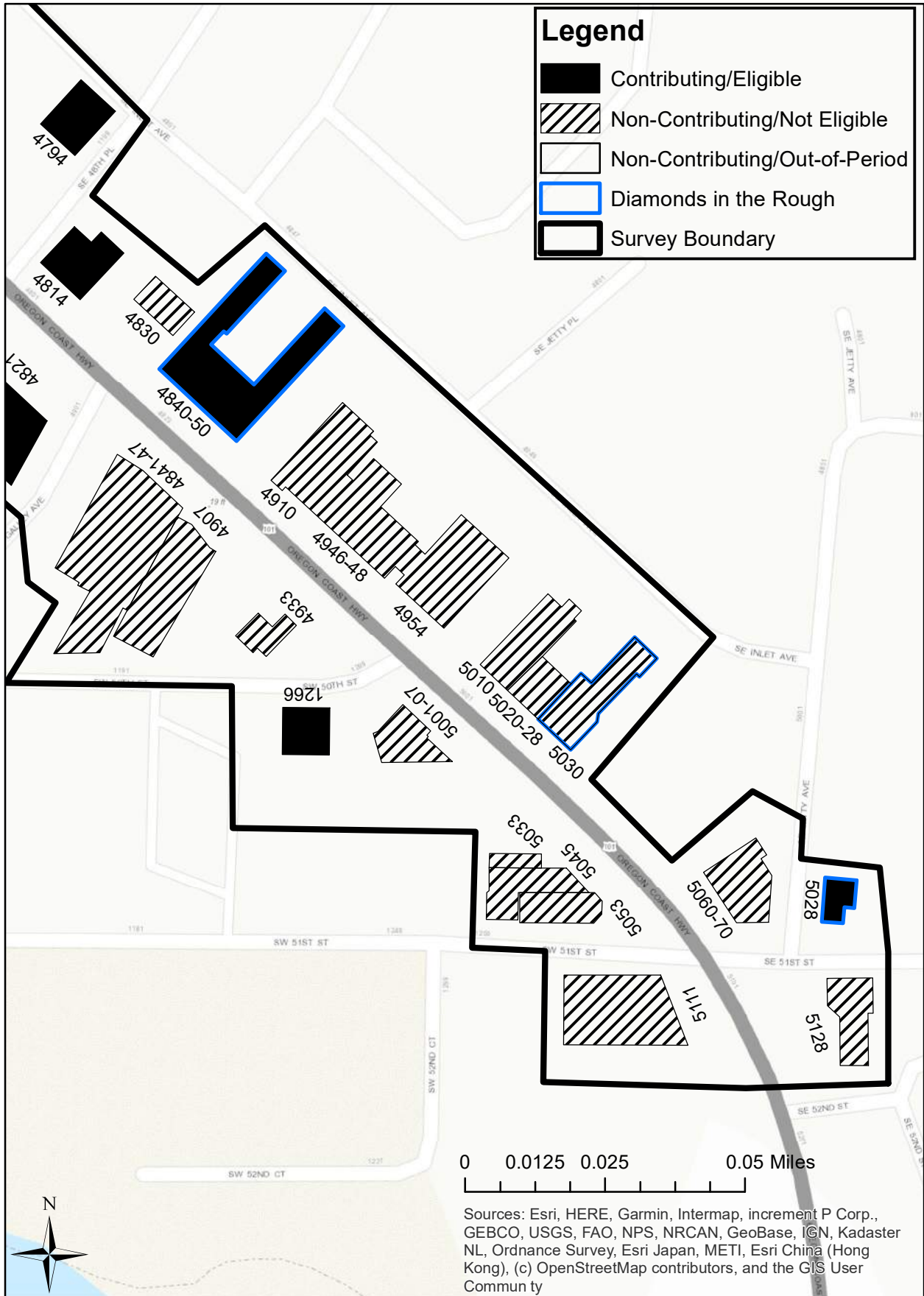
Taft: Whole



Taft: North



Taft: South



Historic Building Report/Counts

(All Properties Inventoried)

Evaluation Counts - 2019 Lincoln City MainStreet RLS

Evaluation	Quantity	% of Total
eligible/contributing	34	26%
eligible/significant	1	1%
not eligible/non-contributing	94	72%
not eligible/out of period	2	2%
Total:	131	

Construction Date Decade Counts - 2019 Lincoln City MainStreet RLS

Decade	Quantity	% of Total
1920s	19	15%
1930s	44	34%
1940s	24	18%
1950s	10	8%
1960s	26	20%
1970s	5	4%
1980s	2	2%
2010s	1	1%
Total:	131	

Original Use Counts - 2019 Lincoln City MainStreet RLS

Original Use	Quantity	% of Total
AGRICULTURE / SUBSISTENCE	1	1%
COMMERCE / TRADE	94	72%
DOMESTIC	17	13%
EDUCATION	1	1%
GOVERNMENT	3	2%
INDUSTRY/PROCESSING/EXTRACTION	3	2%
OTHER	1	1%
RECREATION & CULTURE	2	2%
RELIGION	1	1%
SOCIAL	1	1%
TRANSPORTATION	7	5%
Total:	131	

Material Counts - 2019 Lincoln City MainStreet RLS

Materials	Quantity	% of Total
BRICK	5	4%
CONCRETE	10	8%
METAL	5	4%
STONE	2	2%
STUCCO	10	8%
SYNTHETIC SIDING	32	24%
WOOD	67	51%
Total:	131	

Historic Building Report/Counts

(All Properties Inventoried)

Style Category Counts - 2019 Lincoln City MainStreet RLS

Style Categories	Quantity	% of Total
VICTORIAN ERA		
Italianate	1	
Shingle Style	1	
Stick	1	
Victorian Eclectic	1	
Category Total:	4	3%
OTHER		
Other / Undefined	7	
Utilitarian	9	
Category Total:	16	12%
MODERN PERIOD		
Art Deco	2	
Cape Cod (Type)	1	
Contemporary	6	
Minimal Traditional	3	
Modern Commercial (Type)	22	
Shed (Type)	1	
Category Total:	35	27%
LATE 20TH CENTURY		
Mansard	3	
Category Total:	3	2%
LATE 19TH/20TH CENT. PERIOD REVIVALS		
Arts & Crafts	1	
Colonial Revival	2	
Late 19th/20th Period Revivals: Other	1	
Tudor Revival	1	
Category Total:	5	4%
LATE 19TH/20TH CENT. AMER. MOVEMENTS		
Commercial (Type)	66	
Craftsman	2	
Category Total:	68	52%
Total:	131	

Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with 9 columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Rows include properties like Surf's Up Music Store, Vacant, Ocean Breeze Hotel, Order of the Eagles, Evergreen Home Loans, Meredith Lodging, Fire District No. 2, LC Collective, and The Eventuary Event Center.










Architectural Survey Data for 2019 Lincoln City MainStreet RLS Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date	
540 NE Highway 101 Delake Elementary School <i>Lincoln City Cultural Center</i>	1	ES	1927 1945	Standard Brick Rug Face Brick	Late 19th/20th Period Revivals:	School Horizontal School	6/25/2019		
<i>Comments: modern portico added to south entrance; southernmost windows on primary façade being actively repaired and replaced; decorative brick entry surrounds; infilled windows near south end of primary façade and on upper portion of south façade; central dorridor is oldest portion; closed as school in 2001; purchased by city in 2007</i>									
100-130 SW Hwy 101 <i>NW Winds; Cap'n Gulls; Snack Attack</i>	1	NC	1960 1984	Wood Sheet	Mansard Contemporary	Business Strip Development	6/25/2019		
<i>Comments: two distinct roof treatments between south third and north two-thirds (built this way according to historic photos); historic photos appear to show this building being constructed in the 1980s but assessor indicates 1960</i>									
144 SW Hwy 101 Golden Sampan Restaurant <i>Lee's Restaurant</i>	2	NC	c.1970	Vinyl Siding Corrugated metal	Mansard Other / Undefined	Restaurant Rectangular Block	6/25/2019		
<i>Comments: small apartment in rear second story addition; enclosed door visible on north elevation</i>									
171 SW Hwy 101 <i>D'Sands Motel</i>	3	NC	1972	Vinyl Siding	Commercial (Type)	Hotel Hotel Court	6/25/2019		
<i>Comments: Gable roof with sections and awnings. 3 main building sections. Doric columns support overhand over entryway.</i>									
220 SW Hwy 101 <i>Nauti Mermaid</i>	1	NC	1963	Wood Sheet Vinyl Siding	Modern Commercial (Type) Arts & Crafts	Restaurant Rectangular Block	6/25/2019		
<i>Comments: plywood bumpout addition to rear; vinyl siding addition to south as well, horizontal wood on north gable</i>									
240 SW Hwy 101 <i>Diva Spa</i>	1	NC	1960	Cement Fiber Siding Wood Sheet	Modern Commercial (Type) Arts & Crafts	Professional Rectangular Block	6/25/2019		
<i>Comments: large addition combines into one large building</i>									
247-249 SW Hwy 101 <i>Subway</i>	1	EC	1963	Concrete Block Stone:Other/Undefined	Commercial (Type) Art Deco	Restaurant Drive-In Restaurant	6/25/2019		
<i>Comments: Addition on south elevation. Shed roof. Large bay windows. Stone pillar columns. Porch overhand with triangle supports.</i>									
304-306 SW Hwy 101 <i>Vacant</i>	3	EC	1930	Standard Brick Stucco	Commercial (Type)	City Hall 2-Part Block	6/25/2019		
<i>Comments: front doors/side lights appear original</i>									
305 SW Hwy 101 <i>Driver Storage</i>	1	NC	1938	Horizontal Board	Commercial (Type)	Other Other/Undefined	6/25/2019		
<i>Comments: Single units with larger garage doors behind. Gable in rear.</i>									
316 SW Hwy 101 DeLake Bowl <i>Oldeline Lanes</i>	1	NC	1928 c.1938	Synthetic Stone Vinyl Siding	Utilitarian Commercial (Type)	COMMERCIAL: General Social/Amusement Hall	6/25/2019		
<i>Comments: entrance of aluminum trim</i>									






Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Includes rows for properties like 317 SW Hwy 101, 325 Hwy 101, 404 SW Hwy 101, etc., with associated photos on the right.

Architectural Survey Data for 2019 Lincoln City MainStreet RLS Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date	
909 Hwy 101 <i>Vacant</i>	1	NC	1925	Vinyl Siding Corrugated metal	Commercial (Type)	Restaurant 1-Part Block	6/25/2019		
<i>Comments: Large bay windows. Elevated door. Concrete overhanging eaves. Façade with parapet that steps down on side elevations.</i>									
925-955 NW Hwy 101 <i>Beach Babies; Barber Shop; Coast Clocks;</i>	1	NC	1925	Stone:Other/Undefined Cedar Shake Shingle	Commercial (Type)	Business 1-Part Block	6/25/2019		
<i>Comments: Multiple businesses in one building. Combination of stone and shingles on all buildings. Additions in the rear. Norther portion of the building has a beltcourse of key like ornamentation above bay windows. Shingle ornamentation on façade. Painted stone foundation.</i>									
934 NW Hwy 101 United Telephone <i>Century Link</i>	1	EC	c.1965	Synthetic Wood Siding Flagstone	Modern Commercial (Type)	Communications Facility Other Late 20th Century Type	6/25/2019		
<i>Comments: property consists of what appears to be 4 connected buildings: tall, narrow auditorium-style building to south; single story hardieplank central block addition; mid-century modern commercial block with primary entrance at intersection of Hwy 101 and NE 10th St; square stucco warehouse connected to primary entrance block to northeast; wire mesh sunscreens</i>									
1009 NW Hwy 101 <i>Reeds Taffy</i>	1	NC	1930	Vertical Board	Commercial (Type)	Business 2-Part Block	6/25/2019		
<i>Comments: Concrete Foundation. Gable roof to flat porch. Terrace with overhang. Entry with ornamentation</i>									
1014 NE Hwy 101 <i>City Center Motel</i>	2	NC	1940	Shingle Wood Sheet	Craftsman	Hotel Other Apt./Hotel Plan	6/25/2019		
<i>Comments: north-south "L" part of original motel block at east end of property removed in 2001 and replaced with separate east-west hotel block; traditional early automotive motel type with 1-story linear block fronted by period home/office</i>									
1109-1129 Hwy 101 <i>Unknown</i>	1	NC	1938 1988	Vinyl Siding Vertical Board	Commercial (Type)	COMMERCIAL: General Commercial/Industrial Block	6/25/2019		
<i>Comments: Multiple different sections of this building make it complex. Large gables with smaller subsequent gables between two main sections of building. Mix of materials.</i>									
1114 NE Hwy 101 Humble Pie Pizzeria <i>Tie Dye Pie Pizzeria</i>	1	EC	1957	Concrete Block Wood Sheet	Modern Commercial (Type)	Restaurant Other Commercial/Public	6/25/2019		
<i>Comments: hipped roof; outbuilding in rear; decorative quoining</i>									
1124 Hwy 101 <i>Vacant</i>	1	NC	1969	Wood Sheet Concrete Block	Utilitarian	Road Related (vehicular) Service Bay/Business	6/25/2019		
<i>Comments: sidelights may be original; garage door permanently closed with encompassed additional door also closed</i>									
1139 NW Hwy 101 <i>St. Augustine Catholic Church</i>	2	NC	1945	Vinyl Siding	Other / Undefined	Religious Facility Church/Meetinghouse	6/25/2019		
<i>Comments: Concrete foundation. Complex gable roof. Two large buildings. Stained glass windows. Dormers over entryways.</i>									

Architectural Survey Data for 2019 Lincoln City MainStreet RLS Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date	
1213 NW Hwy 101 <i>Yatai Sushi</i>	2	NC	1935	Horizontal Board	Commercial (Type) Art Deco	Single Dwelling Other Late 20th Century Type	6/25/2019		
<i>Comments: Large single light windows. Gable roof of asphalt shingles. Diamond ornamentation.</i>									
1221-1336 NW Hwy 101 <i>The Red Cock; In Stitches; Happy Trails</i>	1	NC	1938	Vertical Board Roman Brick	Commercial (Type)	Business Commercial/Industrial Block	6/25/2019		
<i>Comments: Rear addition. Irregular fenestration. Some roman brick at the foundation. Vinyl bay windows.</i>									
1316 Hwy 101 Oceanlake Meat Market <i>Oceanlake Vintage; Smart's Quality Meat</i>	1	NC	1935	Wood Sheet	Commercial (Type)	COMMERCIAL: General 1-Part Block	6/25/2019		
<i>Comments: large rear shed addition; original door; transom intact</i>									
1330 NE Hwy 101 <i>Cruise Inn</i>	1	EC	1950	Concrete Block	Modern Commercial (Type)	Restaurant 1-Part Block	6/25/2019		
<i>Comments: character defining angled entryway; decorative quoining; historic sign; large rear addition</i>									
1333-1410 NW Hwy 101 <i>Marci's Bar and Bistro; Tattoo; Sunray</i>	1	NC	1938 1946	Vertical Board	Commercial (Type)	Business 1-Part Block	6/25/2019		
<i>Comments: Broad overhang over entryways. Large bay windows with recessed entry. Original wood windows. Stone foundation. Rear additions. Metal channeling used on overhang.</i>									
1338-1344 NE Hwy 101 Lincoln T.V. System	1	EC	1966	Vertical Board Multi-Color Brick	Modern Commercial (Type) Arts & Crafts	Communications Facility Commercial/Industrial Block	6/25/2019		
<i>Comments: large pebbledash block to rear is original</i>									
1415-1425 Hwy 101 Leontine's Gift Shop <i>Prehistoric Fossils; Best Home Care</i>	1	NC	1946	Wood Sheet Stone:Other/Undefined	Commercial (Type)	COMMERCIAL: General 1-Part Block	6/25/2019		
<i>Comments: New stone foundation. Vinyl windows. CMU siding in some places. Recessed entry. Tile ornamentation on entry. Large bay windows.</i>									
1430-1450 NE Hwy 101 McCready's Lumber <i>Mini Pet Mart; Fusion Fitness; Garrigus</i>	1	NC	c.1928 1940	Corrugated metal Wood Sheet	Utilitarian	Lumber Industry Warehouse	6/25/2019		
<i>Comments: covered over door on west elevation; historic photos show the main block of this structure present in 1930</i>									
1433-1533 NW Hwy 101 <i>Enrique's Taqueria; Winddriven</i>	1	NC	1973	Wood Sheet Horizontal Board	Commercial (Type)	Business Commercial/Industrial Block	6/25/2019		
<i>Comments: Complex gable formation. Large bay windows. Large overhang over entryway. Breezeway between two major sections of building. Simple pole supports of overhang.</i>									
1435-1437 Hwy 101 Bishop's Variety Store <i>Jasmine Thai Restaurant; Mal Stores 5-10;</i>	1	NC	1946	Vinyl Siding Standard Brick	Commercial (Type)	Restaurant Other/Undefined	6/25/149		
<i>Comments: Brick at the foundation. Slight gable on the north end. Vinyl windows. Stepped roof and recessed entry.</i>									

Architectural Survey Data for 2019 Lincoln City MainStreet RLS Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date	
1520 NE Hwy 101 Oceanlake Garage <i>Granny's Attic; Miracle Mart; Beauty</i>	1	NC	c.1925 c.1955	Cement Fiber Siding Shingle	Shed (Type) Utilitarian	Road Related (vehicular) Shed	6/25/2019		
1528 NE Hwy 101 <i>Happy Hut; Pie Shop</i>	1	NC	1935	Vertical Board Horizontal Board	Commercial (Type)	Business Rectangular Block	6/25/2019		
1534 NE Hwy 101 Maynard's Café <i>James Fraser, Accountant</i>	3	EC	c.1926	Cedar Shake Shingle Horizontal Board	Commercial (Type) Shingle Style	Restaurant 2-Part Block	6/25/2019		
1542 NE Hwy 101 Oceanlake Dance Pavilion <i>Rocking Horse</i>	2	NC	1925 1946	Cement Fiber Siding Corrugated metal	Commercial (Type)	COMMERCIAL: General 2-Part Block	6/25/2019		
1545 Hwy 101 Family Federal <i>Washington Federal</i>	1	EC	1969	Vinyl Siding	Commercial (Type)	Business Other Late 20th Century Type	6/25/2019		
1604 NE Hwy 101 Johnson's Sweet Shop <i>Old Oregon Tavern</i>	1	EC	1926	Horizontal Board	Commercial (Type) Arts & Crafts	Restaurant Rectangular Block	6/25/2019		
1609-1619 NW Hwy 101 Ocean Lake Drugs <i>Coastal Temps; Carousel Gifts</i>	1	EC	1938	Wood Sheet	Commercial (Type)	COMMERCIAL: General 1-Part Block	6/25/2019		
1610-1616 NE Hwy 101 R&W Food Store <i>Sea the Light, Sea Wick Nautical &</i>	2	NC	1930	Horizontal Board Stucco	Commercial (Type)	COMMERCIAL: General 2-Part Block	6/25/2019		
1621 NW Hwy 101 Doc's Place <i>LCR Realty; Cowell's Tavern; The Red &</i>	1	NC	1938	Vinyl Siding	Commercial (Type)	Restaurant 1-Part Block	6/25/2019		
1624 NE Hwy 101 Lakeside Theatre <i>Bijou Theatre</i>	1	EC	1937	Concrete Block Stucco	Art Deco	Theater Theater	6/25/2019		

Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Includes rows for properties like 1631-1643 Hwy 101, 1640 NE Hwy 101, 1644-1646 NE Hwy 101, 1710-1734 NE Hwy 101, 1733 Hwy 101, 1736 NE Hwy 101, 1744 NE Hwy 101, 1747 Hwy 101, 1802-1806 NE Hwy 101, and 1808 Hwy 101. Each row includes detailed material and architectural notes and a small photograph of the building.

Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Rows include properties like 1815 NW Hwy 101, 1816 NE Hwy 101, 1826 NE Hwy 101, 1843-1845 Hwy 101, 1931 NW Hwy 101, 1940 NE Hwy 101, 1954 NE Hwy 101, 2016 NE Hwy 101, 2048 NE Hwy 101, 3001 NW Hwy 101, 3026-3036 NE Hwy 101.










Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Includes rows for properties like Nelscott Garage, Pilot House, Nelscott House Antiques, Nelscott Store, Nelscott Post Office, Lincoln City Feed Store, Main Auto Body, Robbens, Chocolate at the Beach, and Christmas Cottage. Each row includes a photo of the property.

Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Rows include properties like 3327 Hwy 101, 3333 Hwy 101, 3412-3516 SW Hwy 101, 3417 NW Hwy 101, 3478-3484 NE Hwy 101, 3510 Hwy 101, 3536 SW Hwy 101, 3545 NW Hwy 101, 3632 Hwy 101, and 3691 Hwy 101. Includes photos for several entries.

Architectural Survey Data for 2019 Lincoln City MainStreet RLS Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date	
4744 Hwy 101 Taft Athletic Club	2	NC	1930	Horizontal Board Standard Brick	Utilitarian	Clubhouse Single Crib Barn	6/24/2019		
<i>Comments: Wood portico over entryway. Brick and concrete foundation. Wood shingle gable with octagonal window in gable. Skylights at the roof apex. Addition on the north elevation. Two small rectangular windows in the frieze band on north elevation.</i>									
4756 SW Hwy 101 The CBD Spot	2	NC	1930	Shingle Horizontal Board	Commercial (Type)	Business 2-Part Block	6/24/2019		
<i>Comments: Painted shingles. Keystone above door in brick door surround. Vinyl windows.</i>									
4783 Hwy 101 Rejuvenation	1	NC	1963	Shingle Vinyl Siding	Modern Commercial (Type) Bungalow (Type)	Business Other Commercial/Public	6/24/2019		
<i>Comments: Rear addition. Low pitched roof. Asymmetrical roof gable. Concrete foundation. Semi-circle ornamentation on north elevation.</i>									
4786 Hwy 101 Oregon Beach Vacations	1	NC	1946	Synthetic Stone Stucco	Contemporary	Business 1-Part Block	6/24/2019		
<i>Comments: older aluminum overhang remains above pent roof at north end of Hwy 101 facade</i>									
4787 Hwy 101 Vacant	2	NC	1955 2010	Vinyl Siding	Other / Undefined Modern Period: Other	Single Dwelling Rectangular Block	6/24/2019		
<i>Comments: Three major building sections. Gambrel roof. Rear 2-story addition. Octagonal windows on south elevation</i>									
4788-4792 Hwy 101 Lincoln City Surf Shop	1	EC	1948	Stucco Wood Sheet	Art Deco International	Restaurant 1-Part Block	6/24/2019		
<i>Comments: visible roof is a false front of horizontal asbestos or pressed wood paneling with metal roof; angles aluminum windows are defining feature of period architecture; entrance to former third store in between existing stores now covered with fieldstone; Sanborn map indicates restaurant use as of 1951</i>									
4794 SW Hwy 101 Sports & Imports	1	EC	1965	Corrugated metal Roman Brick	Modern Commercial (Type) Utilitarian	Road Related (vehicular) Service Bay/Business	6/24/2019		
<i>Comments: small "building" at front of lot is impermanent shed</i>									
4814 SW Hwy 101 Shucker's Oyster Bar	1	EC	1963	Vertical Board Field Stone	Contemporary	Restaurant Other Commercial/Public	6/24/2019		
<i>Comments: historic Open sign; small addition in rear; 48th St side battened plywood</i>									
4821 Hwy 101 Glass Art Studio; Tom Liftin Motors	1	EC	1945	Standard Brick Horizontal Board	Commercial (Type) Romanesque	COMMERCIAL: General 1-Part Block	6/24/2019		
<i>Comments: Beltcourse of soldier coursed brick above windows and at the roofline. Instep above garage door. Rear addition. Parapet with metal flashing.</i>									



Architectural Survey Data for 2019 Lincoln City MainStreet RLS Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date	
4830 Hwy 101	1	NC	1942	Synthetic Wood Siding Concrete Block	Commercial (Type) Utilitarian	COMMERCIAL: General Rectangular Block	6/24/2019		
			<i>Volta</i>	<i>Comments: entrance on north side does not face street; short wall in front of building matches those at north and south ends of property attached to neighboring buildings</i>					
4840-4850 SW Hwy 101	2	EC	1950	Stucco	Commercial (Type)	COMMERCIAL: General 2-Part Block	6/24/2019		
			<i>Jak's Photo Studio; Sapphire Center</i> <i>Comments: presence of hooks indicates former canopy over storefronts; connection for former blade sign extant; doors may be original</i>						
4841-4847 SW Hwy 101	2	NC	1948	Stucco	Commercial (Type)	Business	6/24/2019		
Ocean Bay Furniture			c.1993	Vinyl Siding	Post-Modern	2-Part Block			
			<i>Flannigan's Glass Gallery, Coastal</i> <i>Comments: Large bay windows with angled recessed entry. Angular pattern on the second story with palladian window structure. Glass block ornamentation on north end of facade. Major addition that encompasses the IGA Village market.</i>						
4907 SW Hwy 101	2	NC	1948	Shingle	Other / Undefined	Fire Station	6/24/2019		
			2003		Post-Modern	Other/Undefined			
			<i>North Lincoln County Historical Museum</i> <i>Comments: One building with two different styles divided between businesses. Historical museum main, . Historical Museum - concrete pillars, angular ornamentation, broad overhang over entryway.</i>						
4910-4948 SW Hwy 101	1	NC	1965	Horizontal Board	Commercial (Type)	COMMERCIAL: General Commercial/Industrial Block	6/24/2019		
			<i>Ace Hardware</i> <i>Comments: three buildings (4910 Main building, 4946 addition to Main building, 4954 (former roller rink) all connected; 1965 listed by assessor as build date for main bldg and no date is given for addition</i>						
4933 Hwy 101	1	NC	1948	Shingle Horizontal Board	Commercial (Type)	Business Commercial/Industrial Block	6/24/2019		
			<i>Mor-Art: Glass Fusing Studio</i> <i>Comments: Entryway patterns irregular. Beltcourse of fishscale shingles. Multiple shingle patterns</i>						
4954 SW Hwy 101	1	NC	1935	Wood Sheet Cedar Rake Shingle	Arts & Crafts Utilitarian	COMMERCIAL: General Theater	6/24/2019		
			<i>Ace Hardware</i> <i>Comments: three buildings (4910 Main building, 4946 addition to Main building, 4954 former roller rink) all connected</i>						
5001-5007 Hwy 101	2	NC	1936	Shingle Standard Brick	Modern Commercial (Type)	Restaurant 1-Part Block	6/24/2019		
Morgan's Snug Harbor			<i>Snug Harbor Cocktails</i> <i>Comments: Vinyl windows. Overhand over entryway. Brick chimney. Patio on rear (west) elevation.</i>						
5010 SW Hwy 101	1	NC	1938	Horizontal Board Wood Sheet	Commercial (Type) Arts & Crafts	Theater Warehouse	6/24/2019		
Lincoln Theatre			<i>Ace Hardware; Linco Supply</i> <i>Comments: appears to currently be used for storage</i>						
5020-5028 SW Hwy 101	1	NC	1938	Vinyl Siding	Commercial (Type)	COMMERCIAL: General	6/24/2019		
Beauty Salon			1950			Other Apt./Hotel Plan			
			<i>Apartments</i> <i>Comments: building extends below street level; former storefronts converted to apartments; tax assessor date is 1950 but historic photos clearly show building existing prior to WWII</i>						

Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Table with columns: Address/Property Name, Ht, Eval/NR, Yr(s) Built, Materials, Arch Classifs/Styles, Orig. Use/Plan (Type), RLS / ILS Dates, Listed Date. Rows include properties like 'The Green Anchor', 'The Shop; Plumbing', 'Taft Home Bakery', etc., with associated photos.

Architectural Survey Data for 2019 Lincoln City MainStreet RLS
Oregon State Historic Preservation Office

Address/ Property Name	Ht	Eval/ NR	Yr(s) Built	Materials	Arch Classifs/Styles	Orig. Use/ Plan (Type)	RLS / ILS Dates	Listed Date
6255 SW Hwy 101 <i>Roby's Furniture & Appliance</i>	1	NP	2017	Wood Sheet Corrugated metal	Commercial (Type)	COMMERCIAL: General Warehouse	6/24/2019	
<i>Comments: board-formed concrete foundation present indicates part of building may be older</i>								
6305 Hwy 101 <i>Builders First Source</i>	1	NC	1964 c.1980	Vertical Board Corrugated metal	Commercial (Type)	COMMERCIAL: General Commercial/Industrial Block	6/24/2019	
<i>Comments: Low pitched roof. Rear side gable with asphalt siding. Front addition (circa 1980's). Channel roof; 3 different building materials. South portion of the building is a large warehouse that is connected to main building.</i>								
1026 SE Jetty <i>Trillium Natural Foods</i>	1	NC	1938	Cement Fiber Siding	Utilitarian	Business Rectangular Block	6/25/2019	
<i>Comments: wood window frames may be original; small additions on east and west sides</i>								
5028 SE Jetty <i>Vacant</i>	1	EC	1928	Cedar Shake Shingle Vertical Board	Commercial (Type) Utilitarian	COMMERCIAL: General 2-Part Block	6/24/2019	
<i>Comments: commercial turned residential (1951 Sanborn map indicates store); some doors/windows covered over on west side; windows appear original</i>								

Total Resources Identified: 131

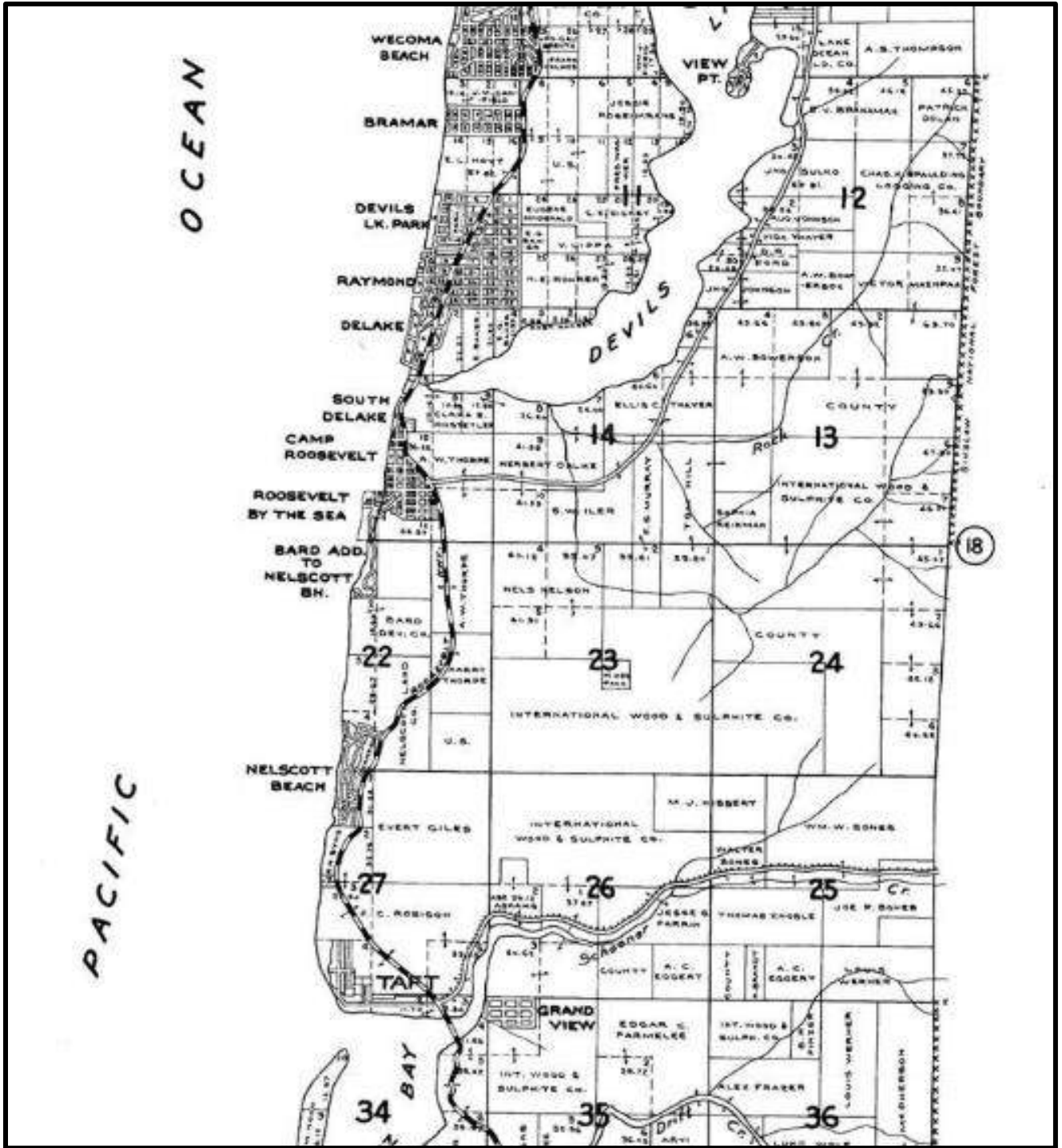


Figure 1 – 1930 Metsker Map, Township 7 S. Range 11 W.

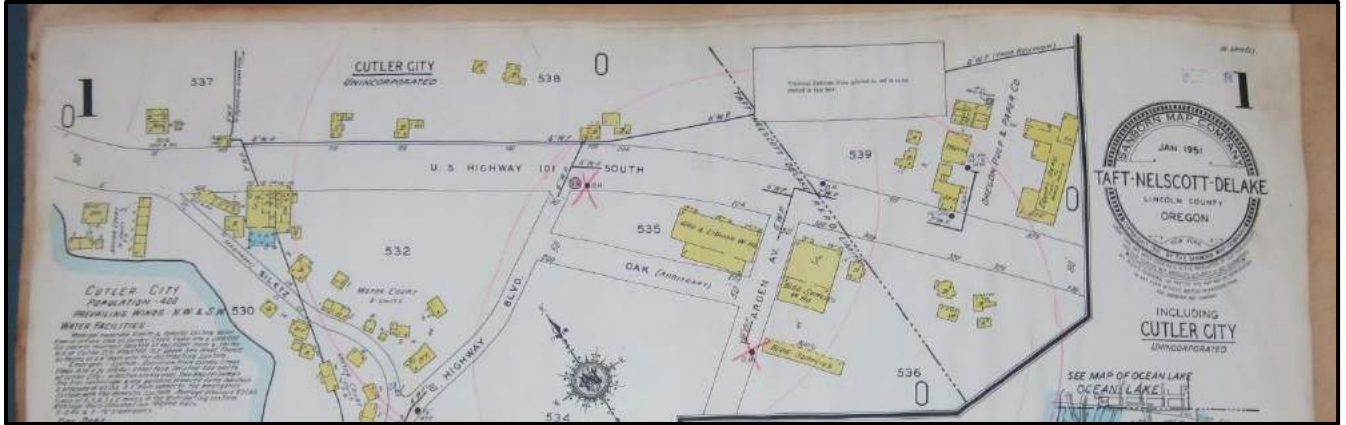


Figure 2 – 1951 Sanborn map, Cutler City



Figure 3 – 1951 Sanborn map, Taft



Figure 4 – 1951 Sanborn map, Nelscott

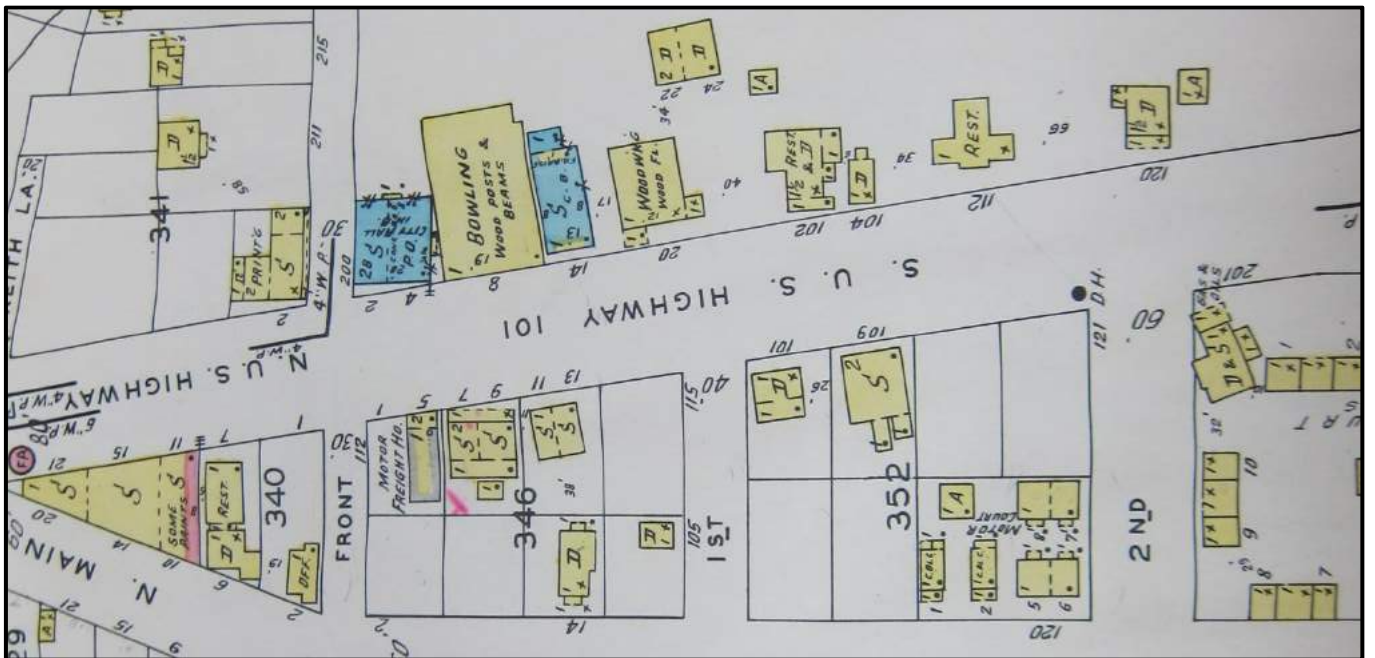


Figure 5 – 1951 Sanborn map, South DeLake



Figure 6 – 1951 Sanborn map, southern OceanLake

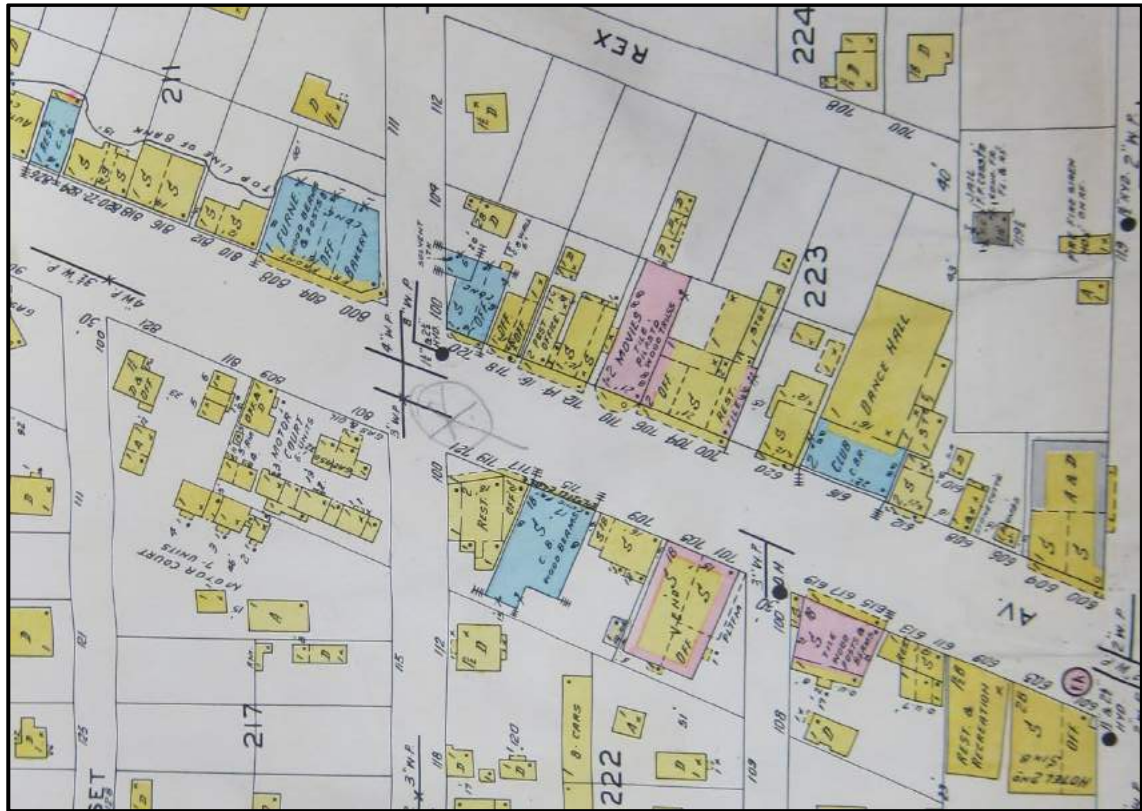


Figure 7 – 1951 Sanborn map, northern OceanLake

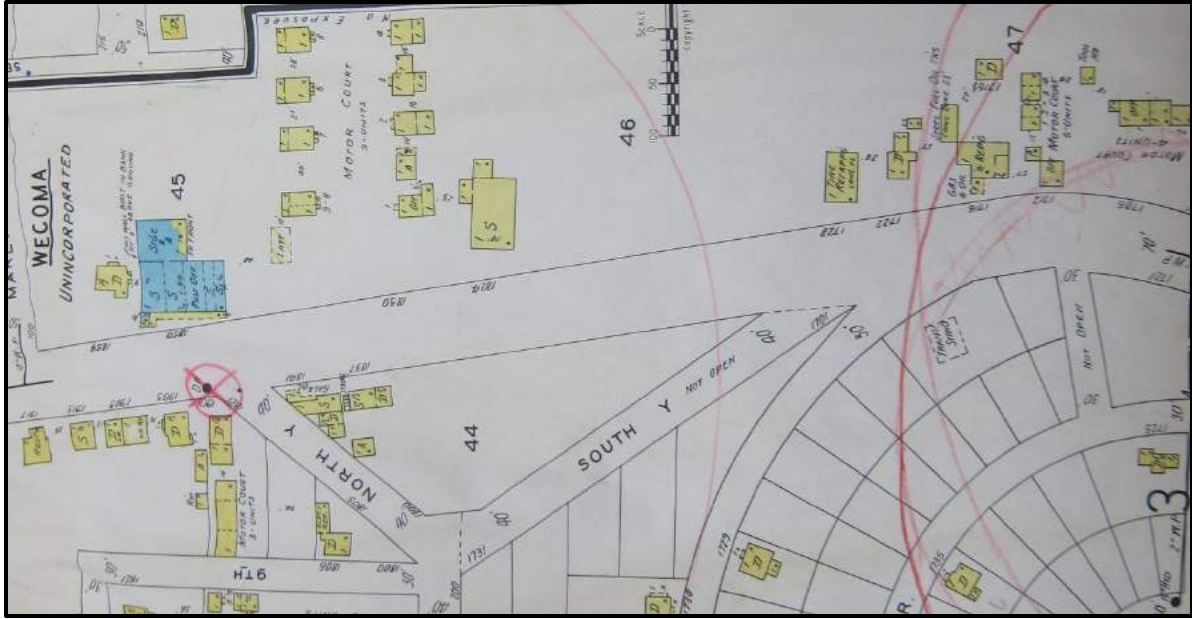


Figure 8 – 1951 Sanborn map, Wecoma



Figure 9 – Johnson’s Sweet Shop (currently Old Oregon Tavern) and Oceanlake Dance Hall (currently Rocking Horse) on left, 1926. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 10 – Nelscott Store (Mercantile), c. late 1920s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 11 – DeLake School (currently Lincoln City Cultural Center), c.1930s. Note south addition has already been added. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 12 – OceanLake from the current Happy Hut north past Old Oregon Tavern, including the now vacant former Maynard’s Café, c.1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 13 – OceanLake’s Lakeside Theatre (now Bijou), also showing Johnson’s (now Old Oregon Tavern), and Dance Pavilion (now Rocking Horse), c. early 1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 14 – R&W Food Store with original canopy (now Sea the Light, etc.), c.1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 15 – Downtown OceanLake looking south from current 17th St showing what is now The Grill at far left, c.1940s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 16 – Oceanlake Meat Market (currently Oceanlake Vintage), c.1930s, also visible is the original McCready’s Lumber building center right. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 17 – Cooper’s (currently Barefoot at the Beach) and McCullough’s Furniture (currently 101 Inspirations) in OceanLake, c.1950. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 18 – Lincoln City Art Center (currently Artists Co-op Gallery) in North DeLake, 1964. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 19 – Green Anchor Café (currently Family Promise) in Taft, c.1942. Also visible are the neighboring beauty salon (now apartments) and now demolished Pines Hotel. From *Lincoln City and the Twenty Miracle Miles*, Anne Jobbe Hall.



Figure 20 – Central in this south facing c.1940 Wecoma photo is the current Evergreen Home Loans property, used at the time as vacation cabins. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 21 – Seven Gables Cottages (now Shoppes) in North DeLake, c.1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 22 – The currently vacant Lincoln T.V. System building c.1966 is an excellent example of the exaggerated modern architectural style. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 23 – The Siberrian Café (now Psychic Jennifer) was an early and longstanding tourist stop in South DeLake; c.1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 24 – Cutler City Tavern (currently The Bay House) helps tell the story of early tourism in the region, c.1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 25 – The south elevation of OceanLake’s Mini Pet Mart (seen here c.1940s as McCready’s Lumber) presents an excellent opportunity to do placemaking with a welcoming mural. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 26 – The modern metal awning at Nelscott’s Foon Hing Yuen building (see here c.1946 as Pilot House Inn) presents another mural opportunity. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 27 – This c.1930s view of Cutler City shows the archway that once led onto SW Jetty Ave. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 28 – Wecoma’s Pixie Kitchen building has been replaced with Motel 6, but enthusiasm for the landmark restaurant remains strong. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 29 – Many postcard views of downtown OceanLake exist and can be creatively used today to highlight the neighborhood’s history, c.1930s. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 30 – A similar view, 1967. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.

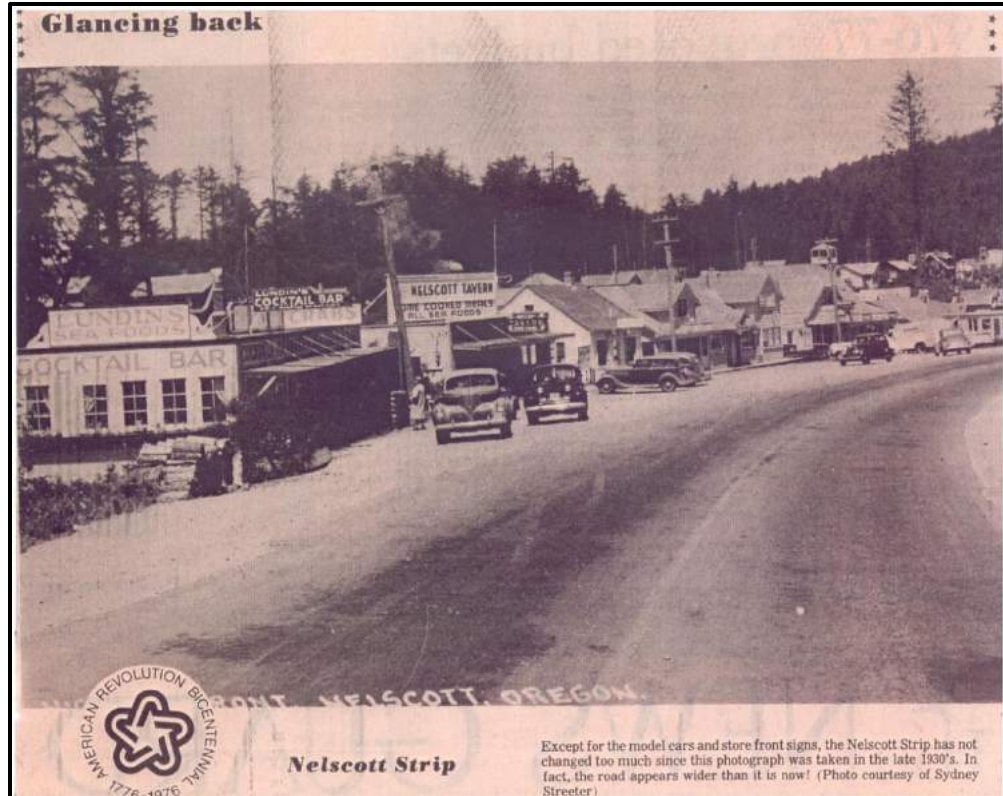


Figure 31 – The central core of the Nelscott Strip from this late 1930s view still exists and lends the neighborhood a unique charm. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.



Figure 32 – Ace Hardware currently occupies many of the existing buildings on the right side of this c. late 1930s view of downtown Taft. From the Collections of the North Lincoln County Historical Museum and Society, Lincoln City, Oregon.

LINCOLN COUNTY ESTUARY MANAGEMENT PLAN



SEPTEMBER 1982

ESTUARY MANAGEMENT PLAN

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PART I

INTRODUCTION

Four major estuaries and two minor estuaries are within the jurisdiction of Lincoln County. Of the major estuaries, Salmon River, Siletz Bay and Alsea Bay are of primary importance as recreation areas, while Yaquina Bay is one of three major estuaries on the Oregon Coast with an authorized deep water navigation channel and major port. In many ways, the County's estuaries serve as a focal point for the local economy.

Each year an increasing number of demands are placed on the estuaries by an expanding economic base and growing population. The ability of the estuary to accommodate these demands remains constant or diminishes. The result is often conflict between the various groups that want to use the resources of the estuary and the agencies responsible for managing those resources.

The responsibility for making decisions about the use of the land and water resources of estuarine areas falls to a wide variety of local, state and federal agencies. Each agency that has some authority uses a plan or written guidelines to make management decisions. The cities and county have comprehensive plans; the Corps of Engineers, U.S. Fish and Wildlife Service, Environmental Protection Agency, Oregon Department of Fish and Wildlife, Oregon Division of State Lands and other state and federal agencies each have their own regulations. The result is that the process for making decisions and obtaining permits is confusing, uncertain and often frustrating for the individuals involved.

The development of the Estuary Management Plan has been brought about through the combined efforts of local government, concerned citizens, industry and state and federal agencies working within the framework of the Oregon Coastal Zone Management Program. The emphasis of this program is to resolve conflicts over use and development of coastal resources through the development of coordinated comprehensive plans. As an element of these coordinated comprehensive plans, the Estuary Management Plan represents an overall management scheme for the resources of the estuaries which reflects not only local interests, but also incorporates the concerns of affected state and federal agencies. The product of this coordinated process is that the plan has a certain "predictability". An individual, a local city or county legislative body, a state or federal agency will be able to use this plan with the assurance that the management scheme within the plan will have the concurrence of all agencies involved in finalizing a decision.

The final decisions contained in this plan often reflect considerable compromise made by all parties involved. While it was not possible to completely satisfy all participating interests,

the concerns and viewpoints of all interests were thoroughly considered. A sincere effort was made to balance the sometimes conflicting needs to preserve dwindling natural resources and provide needed opportunities for economic growth and stability.

Content and Use of the Document

The estuary management plan provides an overall, integrated management scheme for estuarine aquatic areas in Lincoln County. Lincoln County retains overall responsibility for development and coordination of the Estuary Management Plan for estuaries in the county except for Depoe Bay, which is wholly within the jurisdiction of the City of Depoe Bay. City comprehensive plans incorporate relevant portions of the Estuary Plan. Amendments to any element of the plan will be coordinated by Lincoln County with the affected cities, ports, State and Federal agencies.

The plan contains comprehensive provisions for guiding estuarine development and conservation activities, from broad overall policies to site specific implementing measures.

The planning and decision making framework of the estuary management plan is contained within a concept of descending levels of policies. The concept recognizes that one set of policies applied to the entire estuary cannot provide the kind of guidance to individual property owners nor government in making decisions on permitting uses and activities on specific sites. Yet to develop policies only at the site specific level fails to recognize the implications of those policies to the total estuary. Policies, therefore, must begin with the total estuary and end with site specific guidelines. Each level of policy and the size of the area to which those provisions apply is more specific than the preceding level.

In the estuary management plan, three levels of policy are established:

Overall Management Policies

Overall estuary management policies are established for the entire county. These policies are very broad and general in nature and are designed to say, in essence, that "...this is how we expect to use the estuary..." and "...this is what we expect to achieve in using the estuary...".

Sub-Area Policies

The size and complexity of the Yaquina Bay estuary required a second level of policy; the Sub-Area Policy. The estuary has been divided into seven sub-areas, each representing a

common set of natural and man-related features. Sub-areas provide a basis for describing how different areas of the estuary presently function and how they should be planned to function in the future. Each sub-area is described in terms of its existing character; its major committed uses; its existing and potential conflicts. Policies are established for each sub-area on the management of the sub-area's natural resources and on development within the sub-area.

Management Units

The third level of policy in the estuary management plan is the management unit. This is the most specific policy level and is designed to provide specific implementing provisions for individual project proposals. Each unit is given a management classification (defined in Part IV) of Natural, Conservation or Development. These classifications are based on the resource characteristics of the units as determined through an analysis of resource inventory information. The classification carries with it a general description of intent and a Management Objective. Each management unit objective is implemented by a Permitted Use Matrix which specifies which uses and activities are either permitted, conditional or not allowed in the unit. Many management units also contain a set of Special Policies that relate specifically to that individual unit.

In addition to the three basic policy levels, the estuary management plan also contains a number of other sections, each with a specialized role in guiding overall estuary management.

Estuarine Use Standards

This part of the plan has detailed development standards for 14 categories of uses and activities (structures, dredging, log handling, etc.). These standards will be applied to all new uses and activities within the estuaries as a part of the plan implementation process.

Restoration and Mitigation

This section includes a general description of restoration, its relation to mitigation as required by Oregon Law, and an overall policy concerning restoration. It also contains locations and brief descriptions of potential restoration sites and projects in the estuaries. Also included in this section is a general assessment of estuarine mitigation needs and an identification of sites to be protected in fulfilling the mitigation planning requirements of Goal 16.

Future Development Sites

This part of the plan includes a summary of projected development needs and a summary of potential development sites. Its purpose is to address concerns which are presently beyond the scope of the specific management unit framework to provide general, long term direction to future development.

Log Storage and Transportation

Because of the importance of the lumber and wood products industry to the Yaquina Bay area, the historic dependence on the estuary for log storage and transportation, and the potential for serious adverse impacts on natural resources as a result of that storage, a special section of the plan was developed to address the issue. This section details the needs of the industry in relation to log storage and transportation, and it lays out a planning strategy to accommodate those needs while minimizing adverse resource impacts.

Plan Implementation

This section of the plan provides the administrative procedures for implementing the plan's substantive requirements. It describes the procedures for review of individual development proposals and the application of plan standards to such proposals. Also included is a procedure describing how the local review procedures for estuarine development proposals will be integrated with existing state and federal permit processes.

Dredge Material Disposal Plan

The Lincoln County Dredged Material Disposal Plan is a companion document to the Estuary Management Plan. It describes the location and procedures for use of dredged material disposal sites. Dredging needs over the next 20 years were estimated and sites located to handle the disposal of the material.

Resource Inventories

As part of Lincoln County's overall comprehensive plan, detailed resource inventories of the County's estuarine areas have been adopted. The information contained in the plan's management unit descriptions and resource capability assessments is based on factual base material drawn from these comprehensive resource inventories. The rationale for permitted use decisions and management classifications is contained in these brief factual base summaries; for detailed resource information and a bibliography of documents included in the inventory, the Lincoln County Comprehensive Plan Inventory should be consulted.

PART II

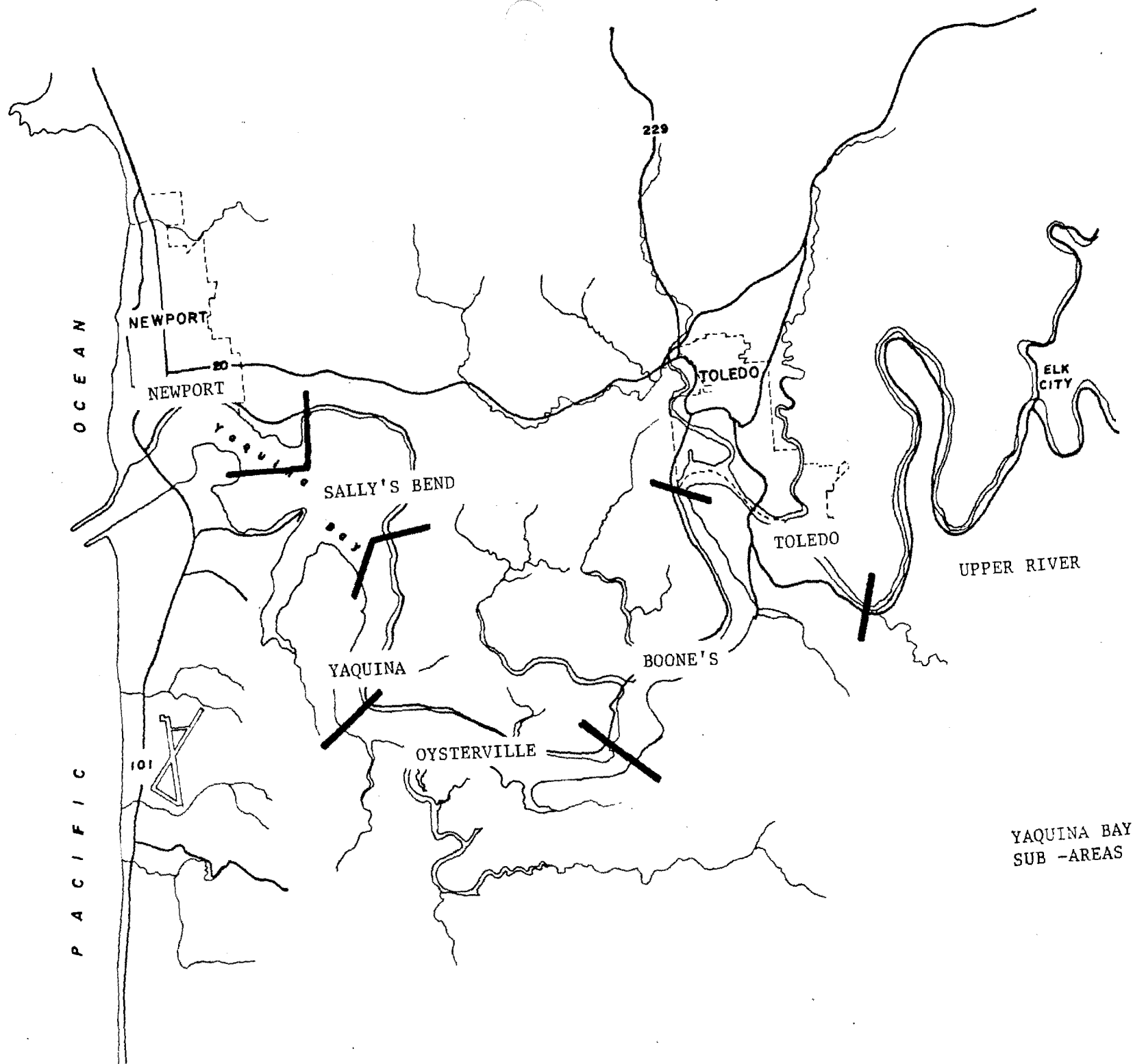
OVERALL MANAGEMENT POLICIES

OVERALL MANAGEMENT POLICIES

1. Lincoln County's estuaries represent an economic resource of regional importance. The overall management of each estuary shall ensure adequate provision for development, consistent with the Overall Oregon Estuary Classification and according to the following general priorities (from highest to lowest):
 - a. Uses which maintain the integrity of the estuarine ecosystem
 - b. Water dependent uses requiring an estuarine location
 - c. Water related uses which do not degrade or reduce natural estuarine resources and values
 - d. Non-dependent, non-related uses which do not alter, degrade or reduce estuarine resources or values and are compatible with existing and committed uses.
2. Lincoln County's estuaries support a variety of vitally important natural resource values. The overall management of each estuary shall include adequate provision for both conservation and preservation of natural resources.
3. Lincoln County's estuaries represent a recreational resource of both local and statewide importance. Management of each estuary shall protect recreational values and ensure adequate public access to the estuary.
4. Dredge, fill or other reduction or degradation of natural values by man shall be allowed only:
 - a. if required for navigation or other water dependent uses that require an estuarine location; and
 - b. if a public need is demonstrated; and
 - c. if no alternative upland locations exist; and
 - d. if adverse impacts are minimized as much as possible.
5. Actions which would potentially alter the integrity of estuarine ecosystem shall be preceded by a clear presentation of the impacts of the proposed alteration and a demonstration of the public's need and gain which warrant such modification or loss.

PART III

SUB-AREA POLICIES



PACIFIC OCEAN

NEWPORT

NEWPORT

229

TOLEDO

ELK CITY

SALLY'S BEND

TOLEDO

UPPER RIVER

YAQUINA

BOONE'S

101

OYSTERVILLE

PACIFIC

YAQUINA BAY
SUB -AREAS

NEWPORT SUB-AREA

Predominant Character

The Newport sub-area is a high intensity use area. It is the hub of commercial fishing, deep water shipping and tourist related commercial activities on Yaquina Bay. Adjacent shorelands are urban in character and the shoreline is more or less continuously altered throughout the sub-area. As a fully serviced urban area in close proximity to the harbor entrance and with shoreland access to the deepwater channel, the Newport sub-area represents the most important portion of the estuary for water dependent development.

Important resource values within the sub-area include eel grass and algal beds, shellfish beds and fish spawning and nursery areas.

Major Committed Uses

The sub-area contains a mix of water dependent, water related and non-water related uses. Industrial uses are concentrated at McLean Point (Northwest Natural Gas LNG tank and deepwater terminal facilities) and along the Newport waterfront. A recreational marina and a number of non-water related tourist oriented commercial uses also occur along the Newport waterfront. Major uses in the South Beach area include the OSU Marine Science Center, Oregon-Aqua foods salmon ranching facility and the South Beach Marina recreational complex. The sub-area takes in the entire authorized deep water channel, including the maintained jetties. Recreational use in the sub-area, including sport fishing, crabbing, clamming, diving and other activities, is heavy. Commercial harvest of fish and shellfish occurs at a number of locations within the sub-area.

Existing and Potential Conflicts

Several conflicts exist within the sub-area. Conflicts have developed between tourist oriented commercial uses and water dependent marine commercial and industrial uses in the Newport waterfront. These conflicts involve both competition for available space as well as use conflicts (e.g. traffic, parking, etc.) between established uses. As demand accelerates for both types of uses, conflicts may worsen. In the past, competition between recreational and commercial vessels for moorage has been a problem. Development of some 600 moorage spaces designed to accommodate recreational vessels at the South Beach Marina and re-development of the existing commercial moorage areas to handle the newer, larger commercial fishing boats should do much to alleviate this conflict. The demand for major development in aquatic areas poses a potential conflict with the protection of natural resources throughout the sub-area.

Sub-Area Policies

1. The primary objective in the Newport sub-area shall be to manage for the development of deep draft navigation, commercial fishery support facilities and other water dependent uses.
2. Non-water related uses shall not occupy estuarine surface area nor be located on shorelands with direct water access. However, limited non-water related uses may be permitted in keeping with the scenic and historic waterfront community on the north side of the sub-area.
3. Adverse impacts of development on natural resources and established recreational uses shall be minimized.

SALLY'S BEND SUB-AREA

Predominant Character

The Sally's Bend sub-area represents one of the most important natural resource areas of Yaquina Bay. It is essentially undeveloped and includes eel grass and algal beds, shellfish beds, fish spawning and nursery areas and wildlife habitats, all of major significance. The area's intertidal flats represent the largest tract in the estuary.

Major Committed Uses

The predominant use of the sub-area is for hunting, sport angling and recreational shellfish harvest. The sub-area also includes a portion of the navigation channel which supports medium draft commercial traffic. Adjacent shoreland uses consist primarily of low density housing and commercial forest management. Industrial uses are adjacent (though they do not extend into the sub-area) at McLean Point and South Beach. Portions of the sub-area have historically been used for log storage, though no current activities are present.

Existing and Potential Conflicts

No major conflicts exist within the sub-area, though potential for conflict is present at several locations. Demands for urban level development in the Idaho Point area (which is proposed for inclusion within the Newport urban growth boundary) may be incompatible with preservation of natural values in the adjacent portion of the estuary. Industrial development at McLean Point and in the Coquille Point area may impact important resource areas at Sally's Bend. If increases in deepwater shipping precipitate a demand for expansion of the current channel and turning basin, some loss of natural resource values would result from the required dredging. Owners of intertidal lands within the sub-area have identified desires for future use of these areas which may conflict with the preservation of natural resource values.

Sub-Area Policies

1. The primary objective in the Sally's Bend sub-area shall be to manage to preserve and protect natural resources.
2. It is recognized that some alteration of the sub-area may be required in conjunction with expansion and/or deepening of the deepwater channel and turning basin. Other alterations shall be limited to those necessary to maintain existing uses or those undertaken in conjunction with restoration projects.
3. To maintain recreational values, commercial shellfish harvest by mechanical means should not be permitted above extreme low water.
4. Low intensity land uses which do not adversely impact estuarine natural values shall be preferred on adjacent shorelands. Identified areas of important wildlife habitat shall be protected.

YAQUINA SUB-AREA

Predominant Character

The Yaquina sub-area is a mixture of high intensity recreational development (east shore) and areas of sparse or no development (west shore). The primary character of the area is derived from the concentration of commercial marinas and related uses along the east shore of the estuary. Major natural resources within the sub-area include important fish spawning and nursery areas, shellfish beds and eel grass and algal beds. Areas of important wildlife habitat are concentrated on the undeveloped west shore.

Major Committed Uses

On the east shore, between river mile 4.5 and 5.3, there are four developed marina facilities (use is approximately 90% recreational) providing slightly more than 300 moorage spaces. There are also two boat building and repair facilities in this area. Development of commercial fishing related marine industrial facilities at Coquille Point is pending. Rural residential use is also concentrated in the area along the east shore. The west shore is essentially undeveloped; most of the land is held in industrial forest ownerships and is managed for commercial timber production.

Existing and Potential Conflicts

The sub-area has characteristics which make it suitable for aquaculture. The sub-area also has a significant amount of high intensity development and potential for additional development. Conflicts will likely develop over demands for additional high intensity development and the need for maintenance of water quality for aquaculture (the east side of the estuary is currently closed to commercial shellfish harvest because of potential contamination). Conflicts may also develop along the east shore of the sub-area as recreational and marine-industrial interests compete for use of estuarine surface area and remaining shoreland back up space. Occupation of surface area by aquaculture activities may conflict with navigation and recreational activities. Lack of adequate facilities and services to the area may pose constraints on needed development.

Sub-Area Policies

1. It is recognized that demand for development in the lower estuary may exceed available space in the Newport urban area. Water dependent development should be accommodated along the east shore of the Yaquina sub-area when it can be demonstrated that such development cannot be accommodated within the urban area and is consistent with available levels of public facilities and services.
2. The portion of the sub-area west of the navigation channel shall be managed to conserve natural resources, protect water quality, and maintain overall suitability for aquaculture.
3. The potential within the sub-area for occupation of estuarine surface area by in-water structures is significant. Such occupation of surface area shall not interfere with the use of the navigation channel and should not unreasonably interfere with established recreational uses within the sub-area.
4. Shorelands on the east side of the sub-area shall be reserved for water dependent uses. On shorelands on the west side of the sub-area, low intensity natural resource uses shall be preferred.

OYSTERVILLE SUB-AREA

Predominant Character

The Oysterville sub-area is rural in character, with a mixture of low intensity development and natural resource areas. The predominant development in the area is for aquaculture uses. The natural resource areas include tide flats, extensive tracts of salt marsh, eel grass and algal beds, important fish spawning and nursery areas and major shellfish beds. Areas of important wildlife habitat occur throughout the sub-area, particularly on the south shore of the estuary.

Major Committed Uses

The predominant use within the sub-area is aquaculture. A large share of the estuarine area outside of the navigation channel is devoted to aquaculture. Portions of the sub-area have been used in the past for log storage. Recreational use of the sub-area (primarily boating and angling) is also extensive. Shoreland uses include landside facilities for aquaculture operations, scattered rural residences and commercial forest management activities.

Existing or Potential Conflicts

The Oysterville sub-area is relatively free of conflict. Potential conflict could develop if demand for increased recreational moorage facilities spills over from adjacent sub-areas. Such development could threaten existing and future aquaculture operations by adversely impacting water quality. Possible future log storage could conflict with existing aquaculture activities.

Sub-Area Policies

1. The Oysterville sub-area is the prime aquaculture area of Yaquina Bay. In light of the scarcity of such resources, maintaining suitability for aquaculture should receive top priority in the overall management of the sub-area.
2. The overall management of the Oysterville sub-area shall emphasize conservation of natural resources and maintenance of water quality. Natural resource values of major tracts of salt marsh and tide flats shall be preserved.
3. The recreational resources of the sub-area should be utilized by maintaining existing patterns of use. High intensity recreational development shall not be permitted.
4. In general, low intensity land uses such as forestry and low density housing shall be preferred in adjacent shoreland areas, consistent with the protection of significant wildlife habitat. It is recognized that some adjacent shoreland areas will also be needed for developed aquaculture facilities.

BOONE'S SUB-AREA

Predominant Character

The Boone's sub-area is a largely undeveloped portion of the estuary. Some minor alterations of the estuary are present, mostly in conjunction with the diking of marshlands and development for log storage. A variety of important natural resource values are associated with the sub-area, including tideflats, extensive salt marshes, eel grass and algal beds, fish spawning and nursery areas and shellfish beds of major importance. Adjacent shorelands include substantial area of important wildlife habitat.

Major Committed Uses

Major uses in the sub-area include in-water log handling and recreation. A substantial amount of estuarine surface area outside of the navigation channel is used for log storage. Log dumping and extensive log transportation activities also occur within the sub-area. Important recreational activities include boating, angling and water skiing. Shoreland uses consist primarily of dispersed rural residences, forestry and agriculture. A commercial moorage facility with capacity for 75 vessels occurs within the sub-area at river mile 10.7. The Toledo airport is located within the sub-area at river mile 11.1. A public boat launch is located adjacent to the Toledo Airport.

Existing or Potential Conflicts

There is an existing conflict within the sub-area between the grounding of log rafts in intertidal areas and the protection of natural resources. Potential conflicts could occur between intensified recreational use in the area and the extensive occupation of estuarine surface area by log handling activities. Expansion of existing log handling activities could have potential impacts on water quality. The possible expansion of the Toledo airport facility and the resulting fill that would be required would conflict with the preservation of productive salt marsh within the sub-area. In Boone and Nute sloughs, a potential conflict exists between the possible need for the area as a restoration/mitigation site and the demand to commit the area to land uses which would preclude its use for restoration/mitigation.

Sub-Area Policies

1. The emphasis in the Boone's sub-area shall be to manage to conserve and protect natural resources.
2. Water handling of logs in the Boone's sub-area is recognized as an appropriate and economically important use of the estuary. Continuation of water handling of logs shall be provided for in accordance with the Estuarine Use Standards set forth in this plan.
3. Establishment of new uses which would substantially degrade recreational values within the sub-area shall not be permitted.
4. Boone and Nute's sloughs shall be protected from land uses which would preclude their potential use as a restoration/mitigation site.
5. Low intensity land uses such as forestry, agriculture and low density housing shall be preferred in adjacent shoreland areas. Such uses shall be consistent with the protection of significant wildlife habitat.

TOLEDO SUB-AREA

Predominant Character

The Toledo sub-area is a mix of high intensity industrial development and undeveloped areas which are rural in character. The character of the sub-area is defined primarily by the concentration of wood products related industrial uses along the urban waterfront. Natural resources of major significance include anadromous fish migration routes, wetlands, and some areas of important wildlife habitat.

Major Committed Uses

A portion of the Toledo sub-area is committed to high intensity industrial uses, primarily lumber and wood products manufacture. These industrial uses are served by medium draft navigation, mostly log towing and barge traffic. Substantial estuarine surface area is committed to log storage. Recreational use in the sub-area is light.

Existing or Potential Conflicts

No major conflicts exist within the sub-area. Intensified industrial development could potentially have adverse impacts on water quality. Demand for industrial expansion may also potentially conflict with protection of fish and wildlife habitat in the area.

Sub-Area Policies

1. The portion of the Toledo sub-area within the Toledo Urban Growth Boundary shall be managed for continued development of water-dependent and water-related industrial uses. Restoration and maintenance and expansion of existing non-water related uses shall be permitted.
2. Effects on water quality must be carefully considered in the process of industrial expansion in order to minimize adverse impacts, both within the sub-area and on areas down-river.
3. Areas of significant habitat and major marshes shall be protected.
4. If not needed for water-dependent development, the diked areas along Depoe and Olalla Sloughs should be protected as potential restoration sites.

UPPER RIVER SUB-AREA

Dominant Character

The Upper River sub-area is a largely undeveloped rural environment. Only minor commercial navigation and channel improvements occur in this sub-area and overall alteration of the river is minimal. While river flows are subject to tidal influence, the river environment is predominantly fresh-water. Shoreland areas are characterized by scattered areas of diked marshlands, and a narrow floodplain grading into steep forested uplands.

Major Committed Uses

Major uses in the Upper River sub-area include small scale agricultural operations, high intensity commercial forest management activities and recreational activities (primarily angling for anadromous fish). No commercial or industrial uses are located within the sub-area.

Existing or Potential Conflicts

No major conflicts exist within the sub-area. Some potential for conflict exists with pressures for additional river front residential development within the sub-area. Such development may precipitate demand for construction of individual docks and moorage, shoreline stabilization and other activities which may conflict with conservation of estuarine resources and established recreational uses.

Sub-Area Policies

1. The primary objective in the Upper River sub-area shall be to manage to conserve and protect natural resources. Uses which require minimal or no alteration to the estuary shall be preferred.
2. Increased public recreational access to the estuary shall be encouraged.
3. Natural resource based uses (e.g. forestry and agriculture) shall be preferred in adjacent shoreland areas.
4. The proliferation of individual single purpose docks and piers within the sub-area shall be restricted by encouraging community facilities at appropriate locations.

PART IV

MANAGEMENT CLASSIFICATION & PERMITTED USE DEFINITIONS

CLASSIFICATION SYSTEM

In order to maintain a diversity of values and resources, the estuary has been divided into management units. A management unit is a discrete geographic area defined by physical, biological and cultural characteristics within which certain management objectives and priorities are promoted or encouraged.

Each individual management unit is assigned a classification which defines a management objective and provides a general policy framework for the unit. The management unit classification system consists of three management classifications: Natural, Conservation and Development. The classifications are defined below in terms of the general attributes and characteristics of geographic areas falling into each category. The management objective for each classification is also stated.

1. Natural Management Units. Natural management units are those areas which are needed to assure the protection of significant fish and wildlife habitats, of continued biological productivity within the estuary, and of scientific, research, and educational needs. These shall be managed to preserve the natural resources in recognition of dynamic, natural, geological and evolutionary processes. Such areas shall include, at a minimum, all major tracts of salt marsh, tideflats and seagrass and algae beds.

Permissible uses in natural areas shall be undeveloped low-intensity water-dependent recreation; research and educational observation, navigational aides, such as beacons and buoys; protection of habitat, nutrient, fish, wildlife and aesthetic resources, and passive restoration measures; and where consistent with the resource capabilities of the area and the purpose of this management unit, aquaculture; communication facilities; and active restoration measures.

MANAGEMENT OBJECTIVE: To preserve, protect and where appropriate enhance these areas for the resource and support values and functions they provide.

2. Conservation Management Units. Conservation management units shall be designated for long-term uses of renewable resources that do not require major alteration of the estuary except of the purpose of restoration. These areas shall be managed to conserve the natural resources and benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, and aquaculture. They

shall include tracts of significant habitat smaller or of less biological importance than those in (1) above, and oyster and clam beds. Partially altered areas or estuarine areas adjacent to existing development of moderate intensity shall also be included in this classification unless otherwise needed for preservation or development consistent with the overall Oregon Estuary Classification.

While the general purpose and intent of the conservation classification is as described above, the application of this classification to specific areas may be adjusted by special policies applicable to individual management units in order to accomodate needs for natural preservation.

Permissible uses in conservation areas shall be those allowed in (1) above; active restoration measures; aquaculture; and communication facilities. Where consistent with resource capabilities of the area and the purposes of this management unit, high-intensity water-dependent recreation; maintenance dredging of existing facilities; minor navigational improvement; mining and mineral extraction; water-dependent uses requiring occupation of water surface area by means other than fill; and bridge crossings, shall be appropriate.

MANAGEMENT OBJECTIVE: To conserve, protect and where appropriate enhance renewable estuarine resources for long term uses and to manage for uses which do not substantially degrade the natural or recreational resources or require major alterations of the estuary.

3. Development Management Units. Development management units shall be designated to provide for navigation and other identified needs for public, commercial, industrial water dependent uses, consistent with the level of development or alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, subtidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary.

While the general purpose and intent of the development classification is as described above, the application of this classification to specific areas may be adjusted by special policies applicable to individual management units in order to accomodate needs for natural resource preservation.

Permissible uses in areas managed for water-dependent activities shall be navigation and water-dependent commercial and industrial uses. Where consistent with the resource capabilities and the purposes of this management unit, water-related and non-dependent, non-related uses not requiring fill; mining and mineral extraction; and activities identified in (1) and (2) above, shall also be appropriate.

MANAGEMENT OBJECTIVE: To provide for water dependent and water related development.

PERMITTED USE DEFINITIONS

In addition to the management unit classification, each management unit is more explicitly defined in terms of permitted uses and activities by means of a permitted use matrix. The matrix for each unit lists uses and activities and categorizes them as follows:

Permitted with Standards (P): Permitted as consistent with the management objective of the classification. Permitted uses must conform to the Estuarine Use Standards set forth in the plan and also to any policies specific to the individual management unit. Some permitted uses (most notably dredge and fill activities) must still be subjected to the resource capability test through the state and federal permit processes. For specific requirements see Part X; Plan Implementation.

Conditional (C): Permitted only after a case review of the proposed use and issuance of a local conditional use permit (in addition to relevant state and federal permits). A conditional use shall be permitted provided that:

- a. it is compatible with the management objective and definition of the management classification
- b. it complies with the applicable Estuarine Use Standards set forth in this plan
- c. it complies with the management objective and policies of the individual management unit
- d. it is consistent with the resource capabilities of the area
- e. the cumulative impacts of the proposed use have been considered.

Not Allowed (N): Not permitted. Activity or use can only be allowed upon adoption of a plan amendment by the governing body.

PART V
ESTUARINE USE STANDARDS

ESTUARINE USE STANDARDS

The following standards will be applied to all new uses and activities in Lincoln County's estuaries. All estuarine uses that involve dredging, fill, structures, shoreline stabilization (except vegetative) or other alteration waterward of Mean Higher High Water or the line of non-aquatic vegetation are currently regulated either at the state level (State Removal/Fill Law, ORS 541,695), federal level (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act) or both. Certain other uses such as energy facility siting, aquaculture, and exploration for oil, gas, or geothermal energy are further regulated by additional state or federal permits. To minimize duplication of local, state, and federal permits, the estuarine use standards will be applied through local review of the appropriate state and/or federal permits. In addition to the standards set forth herein, all uses and activities must further comply with applicable state and federal regulations governing water quality, resource protection, and public health and safety.

Structures

Definition: Structures include all constructed, man-made facilities which extend into the estuary; fixed or floating.

Structures do not include log rafts or new land created from submerged or submersible lands (see fill). Structural types include:

Docks: A fixed or floating decked structure against which a boat may be berthed temporarily or indefinitely.

Pier: A structure extending into the water from solid land generally to afford passage for persons or goods to and from vessels, but sometimes to provide recreational access to the estuary.

Wharf: A structure built alongside a waterway for the purpose of receipt, discharge and storage of goods and merchandise from vessels.

Piling: A long, slender stake or structural element of steel, concrete or timber which is driven, jetted, or otherwise embedded into the bed of the estuary for the purpose of supporting a load.

Dolphin: A group of piles driven together and tied together so that the group is capable of withstanding lateral forces from vessels or other floating objects.

Jetty: An artificial barrier used to change littoral drift to protect inlet entrances from excessive sedimentation and to direct and confine the stream of tidal flow. Usually constructed at the mouth of a river or estuary to help deepen and stabilize a channel.

Groin: A shore protection structure (usually perpendicular to the shoreline) to trap littoral drift or retard erosion of the shoreline. Generally constructed of rock or other solid material.

Pile Dike: Flow control structures analagous to groins, but constructed from closely spaced piling connected by timbers.

Breakwater: An offshore barrier, sometimes connected to the shore at one or both ends to break the force of waves. Used to protect harbors and marinas, breakwaters may be constructed of rock, concrete, piling or may be floating structures.

1. The siting and design of all structures shall be chosen to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics and patterns of erosion and accretion.
2. Materials to be used for structures shall be clean and durable so as to allow long term stability and minimize maintenance. Materials which could create water quality problems or which will rapidly deteriorate are not permitted.
3. The development of structures shall be evaluated to determine potential conflicts with established water uses (e.g. navigation, recreation, aquaculture, etc.). Such conflicts shall be minimized to the extent feasible.
4. Occupation of estuarine surface area by structures shall be limited to the minimum area practical to accomplish the proposed use.
5. Where feasible, breakwaters of the floating type shall be preferred over those of solid construction.
6. Floating structures shall not be permitted in areas where they would regularly contact the bottom at low water (i.e. shall be located waterward of Mean Lower Low Water). Exceptions may be granted for structures of limited area which are necessary as part of an overall approved project where grounding would not have significant adverse impacts.
7. Individual single purpose docks and piers for recreational and residential uses shall be permitted only when it has been demonstrated that there are no practical alternatives (e.g. mooring buoys, dry land storage etc.). Community facilities or other structures common to several uses are encouraged at appropriate locations.
8. Piers, docks and similar facilities for individual recreational or residential uses shall meet each of the following requirements:
 - a. No dock, pier or similar facility shall extend into any watercourse more than 25' beyond MLLW unless it can be demonstrated that additional extension is essential to accomplish the intended purpose of the structure.

- b. No individual private recreational dock, pier or similar facility shall extend into any watercourse more than 5% of the width thereof (as measured perpendicular from MLLW on one side of the watercourse to MLLW on the opposite side) unless it can be shown that additional extension is essential to accomplish the intended purpose of the structure.
9. Docks and similar facilities shall have the long dimension running parallel to the channel unless future development will result in pier construction or moorages being connected, necessitating facility design perpendicular to the channel.

Dredging

Definition: The removal of sediment or other material from the estuary usually for the purpose of deepening a channel, mooring basin or other navigation area.

1. All dredging in the estuary shall be conducted in such a manner so as to minimize:
 - a. Adverse short term effects such as pollutant release, dissolved oxygen depletion and disturbance of important biological communities.
 - b. Adverse long term effects such as loss of fish habitat and tidelands, loss of flushing capacity, destabilization of bottom sediments, and biologically harmful changes in circulation patterns.
 - c. Removal of material in wetland and productive shallow submerged lands.
2. Dredging shall be permitted only:
 - a. For navigation or navigational access; or
 - b. In conjunction with a permitted or conditionally permitted water dependent use; or
 - c. As part of an approved restoration project; or
 - d. For mining or mineral extraction as provided for in the Mining and Mineral Extraction Standards; or
 - e. For an approved public use, such as bridge crossings, submerged utility crossings, etc.
3. Local governments shall rely on the Division of State Lands to administer the provisions of ORS Ch. 541 requiring the mitigation of adverse impacts of dredging in intertidal and tidal marsh areas.

Shoreline Stabilization

Definition: The stabilization or protection from erosion of the banks of the estuary by vegetative or structural (rip rap or bulkheads) means.

1. Shoreline stabilization procedures shall be confined to to those areas where:
 - a. Active erosion is occurring which threatens existing uses or structures; or
 - b. New development or re-development of water dependent or water related uses requires protection for maintaining the integrity of upland structures or facilities.
2. The following, in order, are the preferred methods of shoreline stabilization:
 - a. Vegetative or other non structural
 - b. Vegetated rip rap
 - c. Unvegetated rip rap
 - d. Bulkheads.

Structural shoreline stabilization methods shall be permitted only where a higher priority method is not feasible.

3. Materials to be used must be clean and of a non-erodable quality that will allow long term stability and minimize maintenance. Materials which could create water quality problems or which will rapidly deteriorate are not permitted.
4. Minor modification of the bankline profile may be permitted on a case-by-case basis. These alterations shall the purpose of gaining additional upland area.
5. Shoreline stabilization structures shall be designed and located so as to minimize adverse impacts on aquatic life and habitat, circulation and flushing characteristics, and patterns of erosion and accretion.
6. The use of bulkheads shall be limited to "development" and "conservation" management units.

Fill

Definition: Placement of material in the estuary to create new shoreland area.

1. Fill shall be permitted only in conjunction with a water dependent use which requires an estuarine location and for which no feasible alternatives (e.g. construction on piling) or upland locations exist.
2. All fill projects shall be designed and placed so as to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics, erosion and accretion patterns, navigation and recreation.
3. Fill materials which could create water quality problems or which will rapidly deteriorate are not permitted.
4. When available from an authorized dredging project, dredged materials shall be preferred over upland materials for approved fill projects.
5. As an integral part of the fill process, new fills placed in the estuary shall be protected by approved methods of bank stabilization to prevent erosion.
6. Local governments shall rely on the Division of State Lands to administer the provisions of ORS Ch. 541 requiring the mitigation of adverse impacts of filling in intertidal or tidal marsh areas.
7. In the design of fill projects, provision of public access to the estuary shall be encouraged to the extent compatible with the proposed use.

Marina and Port Facilities

Definitions: Marina: A small harbor, boat basin or moorage dockage for recreational craft.

Port Facilities: Facilities which accommodate and support commercial fishery and navigation activities, including terminals and boat basins and moorage for commercial vessels, barges and oceangoing ships.

1. All structures, fills, dredging or shoreline stabilization measures undertaken in conjunction with marina or port facility development must comply with applicable standards set forth in this plan.
2. Provision must be made in the design of marina and port facilities to ensure adequate flushing for the maintenance of water quality.

3. Open moorage shall be preferred over covered or enclosed moorage except for repair or construction facilities.
4. Multi-purpose and cooperative use of moorage, parking, cargo handling and storage facilities shall be encouraged.
5. In the development of new port marina facilities, maximum feasible public access shall be encouraged, consistent with security and safety requirements.

Aquaculture

Definition: The raising, feeding, planting and harvesting of fish, shellfish or marine plants, including facilities necessary to engage in the use.

1. All structures located in conjunction with aquaculture operations shall be subject to the standards set forth in this plan for structures.
2. Water diversion structures or man-made spawning channels shall be constructed so as to maintain minimum required stream flows for aquatic life in the adjacent streams.
3. The potential impacts of introducing a new fish or shellfish species (or race within a species) shall be carefully evaluated in light of existing aquatic life and potential fish and shellfish production in the stream, estuary and ocean.
4. Aquaculture facilities shall be located far enough from any sanitary sewer outfalls to prevent any potential health hazard.

Mineral and Aggregate Extraction

Definition: The removal for economic use of minerals, petroleum resources, sand, gravel or other materials from the estuary.

1. All mineral and aggregate removal projects shall be conducted in such a manner so as to minimize:
 - a. Adverse short term effects such as pollutant release, dissolved oxygen depletion, excessive turbidity, and disturbance of important biological communities.
 - b. Adverse long term effects such as loss habitat and tidelands, loss of flushing capacity, destabilization of bottom sediments and biologically harmful changes in circulation patterns.

2. Removal of aggregate materials from the estuary shall be allowed only after a clear demonstration that comparable materials are not available from local upland sources.
3. Unless part of an approved fill project, spoils and stock-piles shall be placed beyond the reach of high water and in such a manner that sediment will not enter or return to the waterway.
4. Riparian vegetation shall be retained to the optimum degree possible. Disturbed shoreline areas shall be re-vegetated.

Dikes

Definition: An earthen embankment or ridge constructed to restrain high waters. New diking is placement of dikes on area which (1) has never been previously diked; or (2) has previously been diked but all or a substantial part of the area is presently subject to tidal inundation and tidal marsh has been re-established.

1. Existing functional dikes and tide gates may be maintained and repaired as necessary to fulfill their original purpose.
2. New dikes or expanded dikes in estuarine areas shall be allowed only:
 - a. As part of an approved fill project; subject to the standards for fill; and
 - b. If appropriate mitigation is undertaken in accordance with relevant state standards.
3. Dikes constructed to retain fill materials shall be considered fill and are subject to standards for fill.
4. The outside face of new dikes shall be protected by approved shoreline stabilization procedures.

Outfalls

Definition: An outlet through which materials are discharged into the estuary. Outfalls include sanitary (sewer) discharges, storm drainage facilities and industrial waste discharges.

1. As applicable, the standards for dredging, shoreline stabilization and placement of structures as set forth in this plan must be complied with in the installation of outfalls.
2. Outfalls shall not be allowed in poorly flushed areas of the estuary, unless all state and federal water quality standards can be met.

Submerged Crossings

Definition: Power, telephone, water, sewer, gas or other transmission lines which are constructed across the estuary, usually by embedding into the bottom of the estuary.

1. Trenching or other bottom disturbance undertaken in conjunction with installation of a submerged crossing shall conform to the standards for dredging as set forth in this plan.
2. Submerged crossing shall be designed and located so as to eliminate interference with present or future navigational activities.
3. Submerged crossings shall be designed and located so as to ensure sufficient burial or water depth to avoid damage to the crossing.

Restoration

Definition: Replacing or restoring original attributes or amenities such as natural biological productivity or cultural and aesthetic resources which have been diminished or lost by past alterations or activities. Active restoration involves the use of specific remedial action such as removing dikes, installing water treatment facilities, etc. Passive restoration is the use of natural processes, sequences or timing to bring about restoration after the removal or reduction of adverse stresses.

1. Restoration in areas designated for development shall be undertaken only if it is likely that the project will not conflict with or be destroyed by existing or subsequent development.
2. All restoration projects shall be designed so as to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics, erosion and accretion patterns, navigation and recreation.

Excavation

Definition: Excavation of shorelands to create new estuarine surface area directly connected to other estuarine waters.

1. Creation of new estuarine surface area shall be allowed only for navigation, other water dependent use, or restoration.
2. All excavation projects shall be designed and located so as to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics, erosion and accretion patterns, navigation and recreation.
3. Excavation of as much as is practical of the new water body shall be completed before it is connected to the estuary.
4. In the design of excavation projects, provision of public access to the estuary shall be encouraged to the extent compatible with the proposed use.

Dredged Material Disposal

Definition: The deposition of dredged material in estuarine areas or shorelands.

1. Disposal of dredged materials should occur on the smallest possible land area in order to minimize the quantity of land that is disturbed. Clearing of land should occur in stages on an as needed basis.
2. Dikes surrounding disposal sites shall be well constructed and large enough to encourage proper "ponding" and to prevent the return of suspended sediments into the estuary.
3. The timing of disposal activities shall be coordinated with the Department of Environmental Quality and the Department of Fish and Wildlife to ensure adequate protection of biologically important elements such as fish runs, spawning activity, etc. In general, disposal should occur during periods of adequate river flow to aid flushing of suspended sediments.
4. Disposal sites which will receive materials with toxic characteristics shall be designed to include secondary cells in order to achieve good quality effluent. Discharge from the sites should be monitored to ensure adequate cell structures have been constructed and are functioning properly.
5. Revegetation or other stabilization of disposal sites shall occur as soon as is practicable in order to stabilize the site and retard wind erosion.

6. Outfalls from dredged material disposal sites shall be located and designed so as to minimize adverse impacts on aquatic life and habitats and water quality.
7. General priorities for dredged material disposal sites shall be (in order of preference):
 - a. Upland or approved fill project sites
 - b. Approved offshore disposal sites
 - c. Aquatic areas

The Lincoln County Dredge Material Disposal Plan should be consulted for information concerning specific disposal sites and further policy recommendations.

Water Handling of Logs

Definition: Water handling of logs is the combined process of log dumping, storage, transportation, millside handling and takeout as logs are placed into the water and moved to a final processing site.

1. Water handling of logs shall be conducted in such a manner to insure that violations of water quality standards do not result from such activities.
2. New free fall log dumps shall not be permitted. All new log dumps and shipside unloading shall employ easy let-down devices.
3. The inventory of logs in the estuary for any purpose shall be the lowest practical number for the shortest practical time considering log availability and market conditions.
4. The inventory of logs in areas where grounding will occur shall be the lowest practical number for the shortest practical time considering log availability, market conditions.
5. Best practical bark and wood debris control, collection and disposal methods shall be employed at log dumps, shipside unloading areas, raft building areas and millside handling and takeout areas.

PART VI

MANAGEMENT UNITS / PERMITTED USE MATRIX

MANAGEMENT UNIT 1

Description

Management unit 1 consists of the area between the navigation channel and the north jetty west of the Highway 101 bridge. Natural resources of importance include shellfish beds, fish spawning and nursery areas and wildlife habitat. Of special importance are areas used by ling cod for spawning and a major algae bed. Primary uses in the area are medium and shallow draft navigation and recreation (angling, boating, diving). Alterations include the north jetty, rip-rapped shoreline east of the jetty, and piling dolphins at the base of the bridge footings. (See maps for location of resources and uses)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

The major algal bed in this unit is a sensitive habitat area of special value. Other habitats, while of major importance, are less susceptible to disturbance from minor alterations. Low intensity alterations such as piling, dolphins and rip-rap have occurred in this area in the past without significant damage to resource values. Similar activities of this nature in conjunction the uses contemplated in unit 1 will constitute minor alterations consistent with the resource capabilities of the area.

Management Objective

Management unit 1 shall be managed to conserve shellfish beds, fish spawning and nursery areas and other natural resources. Navigation improvements necessary for the maintenance of the harbor entrance and channel shall be provided for.

Special Policies

1. The algal bed within management unit 1 as defined by the Oregon Department of Fish and Wildlife Habitat Classification Map shall be preserved.
2. It is recognized that navigation improvements (including jetty maintenance) will be required within Management unit 1.

MANAGEMENT UNIT 2

Description

Management unit 2 contains the area between the south jetty and the navigation channel west of the third (westernmost) groin. Natural resources of importance include shellfish beds, algal beds, fish spawning and nursery areas and waterfowl habitat. Major uses in the unit are shallow draft navigation and recreational activities, including fishing, diving and boating. Alterations in the area include the south jetty, navigation aids and a submerged crossing. (See maps for location of resources and uses)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management unit 2 is a predominantly subtidal area situated in a high energy marine environment. Substrates in this area are primarily coarse marine sands and rocks. Kelp and other algal species cover the rocky areas around the jetty and groins, though the unconsolidated sand areas are generally devoid of larger plants. Development which threatens water quality or seriously disrupts benthic habitats (i.e. major dredging or filling) can have major impacts in marine subsystems. Minor structural alterations such as piling, dolphins and bank stabilization result in only short term disturbances and may enhance fish habitat by providing cover and substrate for algal species. Such minor alterations are consistent with the resource capability of Management Unit 2.

Management Objective

Management unit 2 shall be managed to conserve shellfish beds, algal beds, fish spawning and nursery areas and other natural resources. Navigation improvements necessary for the maintenance of the harbor entrance and channel shall be provided for.

Special Policies

1. It is recognized that navigation improvements (including jetty maintenance) will be required within Management Unit 2.

MANAGEMENT UNIT 3

Description

Management unit 3 consists of the area between the navigation channel and the south shore from the third jetty groin to the South Beach Marina breakwater. The area has a number of important characteristics including tideflats, eelgrass beds, significant shellfish beds, important fish spawning and nursery areas, and important waterfowl habitat. Major uses within the unit are shallow draft navigation and recreation (clam digging, fishing, boating). Some minor commercial shellfish harvest takes place in the unit. Alterations include the south jetty, groins, the South Beach Marina breakwater, piling, a pier structure, the bridge crossing, navigation aids and rip-rapped shorelines. (See maps for location of resources and uses)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management unit 3 is similar in character to management unit 2, though it has a larger intertidal area, and larger and more important shellfish beds. It is also more extensively altered as a result of jetty improvements, the bridge crossing and construction on the South Beach Marina. These structural alternatives have created diverse fish habitat as well as substrate for algal species. Further minor structural alterations such as piling, dolphins or recreational piers would be consistent with the existing character and resource capability of the area.

Management Objective

Management unit 3 shall be managed to conserve natural resources of importance. Navigation improvements necessary for the maintenance of the harbor entrance and channel shall be provided for.

Special Policies

1. Major clam beds are located within the management unit 3. These clam beds shall be protected.
2. It is recognized that navigation improvements (including jetty maintenance) will be required in management unit 3.

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PERMITTED USE MATRIX

Management Unit No. Yaquina 3
 Classification Conservation (1)

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

	Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial / Recreational															
N															
N															
N															
N															
C	P	N	N	P	P	P	C	N	N	N	P	P	P	P	P
Industrial															
N															
N															
C	N	N	N	P	P	P	C	N	N	N	C	C	C	C	C
C	N	N	N	P	P	P	N	N	N	N	N	N	C	C	C
N															
N															
N															
N															
N															
Public															
P	P	N	N	N	N	P	N	N	N	N	P	N	P	P	P
P	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
C	C	N	N	P	P	P	N	C	C	N	N	N	C	C	C
C	P	N	C	P	P	P	C	C	C	N	N	N	P	P	P
C	C	N	N	P	P	P	N	C	C	N	N	N	C	C	C
N															
Port Facilities															
N															
N															
N															
P	C	N	N	P	P	P	C	C	C	N	N	N	C	C	2
C	N	N	N	P	P	P	C	N	N	N	N	N	P	P	P
Restoration															
N															
N															

MANAGEMENT UNIT 4

Description

Management unit 4 is the Corps of Engineers authorized deep-water channel including the turning basin up to the urban growth boundary. Natural resources within the unit include fish spawning and nursery areas, and important shellfish beds. Major uses within the unit include navigation (shallow, medium and deep draft), recreation (fishing, crabbing, boating) and commercial harvest. Alterations include piling, submerged crossings and the bridge crossing. Of special importance is the maintenance dredging of the federally authorized channel and turning basin. (See maps for locations of resources and uses)

Classification: Development

This unit has been classified as development, because of the dredging required to maintain the deep-water channel and turning basin.

Resource Capability

Management unit 4 is an area of diverse marine influenced habitats, including some major shellfish beds. The area is periodically dredged for maintenance of the federally authorized channel, and resources present are subject this regular disturbance.

Management Objective

Management unit 4 shall be managed to protect and maintain the channel and turning basin for deep-draft navigation.

Special Policies

1. Adverse impacts of mining, mineral extraction or other dredging operations within management unit 4 on existing commercial clam harvest shall be minimized.

PERMITTED USE MATRIX

Management Unit No. Yaquina 4
 Classification Development

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

	Special Policy	Dolphins	Pilings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)	
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
P	Log dumping														X	
N	Log storage															
C	Mining														X	
C	Oil or Gas Extraction														X	
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings														X	
C	Submerged crossings														X	
C	Bridge crossings														X	
C	Storm water outfall														X	
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement														X	
C	Aquaculture Facilities														X	
Restoration																
N	Active															
N	Passive															

MANAGEMENT UNIT 5

Description

Management unit 5 consists of the area along the north shore of the bay from the bridge to McLean Point. It includes the Port of Newport moorage basins, the dredged water front in the Newport urban area, and the terminal facilities at McLean Point. Natural resources of importance include tideflats, eelgrass and shellfish beds, and fish spawning and nursery areas. This portion of the estuary is used intensively for shallow and medium draft navigation, moorage of small and large boats and for recreation. Other significant uses include a terminal operation, research activities, U.S. Coast Guard Station, and commercial harvest. The shoreline and aquatic areas are significantly altered with rip-rap, bulkheads, piers and wharves, piling, floating docks, dredging and other activities. (See maps for location of resources and uses)

Classification: Development

This unit is classified as development because of the port's development needs and the water dependent uses along the waterfront.

Resource Capability

Management unit 5 is the most extensively altered area in the estuary. Plans for redevelopment of existing facilities in this area call for further alterations including major dredging and construction activities. Given the nature of existing development and resources in this area, continued development for water dependent uses will be consistent with the capabilities of this unit.

Management Objective

Management unit 5 shall be managed to provide for the development of Port Facilities and other water-dependent uses fronting on the water. Uses shall be in keeping with the unique mixed use character of the Newport waterfront.

Special Policies

1. Important shellfish beds are located in management unit 5. Adverse impacts on these shellfish beds from future development shall be minimized.
2. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys or dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 5. Multiple use facilities common to several users are encouraged where practical.

YAQUINA BAY

PERMITTED USE MATRIX

Management Unit No. Yaquina 5
 Classification Development (1)

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
P	Water dependent	P	C	P	C	P	P	C	C	C	P	P	P	P	P	P	
C	Water related	P	N	N	N	N	P	N	C	C	C	C	C	C	C	C	
N	Non-water related																
N	Marina																
P	Boat launching	P	N	P	C	P	P	C	N	N	P	P	P	P	P	P	
Industrial																	
N	Log dumping																
N	Log storage																
C	Mining																
C	Oil or Gas Extraction	N	N	N	P	P	P	C	N	N	N	C	C	C	C	C	
P	Industrial outfalls	P	N	N	P	P	P	C	N	N	N	N	N	N	N	N	
P	Marine ways	P	N	P	P	P	P	N	N	N	P	P	P	P	P	P	
P	Water dependent industrial	P	C	P	P	P	P	C	C	C	P	P	P	P	P	P	
C	Water related industrial	P	N	N	N	N	P	N	C	C	C	C	C	C	C	C	
N	Non-water related industrial																
Public																	
P	Overhead crossings	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2
P	Submerged crossings	P	N	N	P	P	P	N	C	C	N	N	N	N	C	C	
C	Bridge crossings	P	N	P	P	P	P	C	C	C	N	N	N	N	P	P	3
P	Storm water outfall	P	N	N	P	P	P	N	C	C	N	N	N	N	P	P	
N	Sanitary outfall																
Port Facilities																	
P	Deep draft (over 23')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
P	Medium draft (10'-22')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
P	Shallow draft (0-9')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
P	Navigation improvement	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
C	Aquaculture Facilities	P	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
Restoration																	
N	Active																
N	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 6

Description

Management unit 6 consists of the area between the navigation channel and the port breakwater, from the Highway 101 bridge east to the turning basin. It is a predominantly subtidal area with a number of important resource characteristics. These include eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Major uses in the unit include recreation (fishing, boating, crabbing), medium and shallow draft navigation and commercial harvest activities. Alterations within the unit include the port breakwater, pilings and navigation aids. (See maps for location of resources and uses)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management unit 6 is a subtidal area at the upper end of the marine subsystem. It supports a variety of important resources which could be adversely impacted by major fill, removal or other aquatic alterations. Important uses in the unit such as navigation and recreation require a largely unobstructed surface area. For these reasons, alterations consistent with the resource capability of this unit are limited to minor structural alterations such as piling and dolphins. Any removal activities should be evaluated on a case by case basis.

Management Objective

Management unit 6 shall be managed to conserve natural resources and to provide for uses compatible with existing navigation and recreation activities.

Special Policies

1. The shellfish beds to the south of the port breakwater as defined by the publication "Subtidal Clam Populations: Distribution, Abundance and Ecology" (OSU Sea Grant, May 1979) are considered a resource of major importance.

PERMITTED USE MATRIX

Management Unit No. Yaquina 6
 Classification Conservation

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy	
Commercial /Recreational																		
C	Water dependent	X	N	N	N	N	P	N	N	N	N	N	N	N	N	P	P	
N	Water related																	
N	Non-water related																	
N	Marina																	
N	Boat launching																	
Industrial																		
N	Log dumping																	
N	Log storage																	
C	Mining	X	N	N	P	P	P	C	N	N	N	C	C	C	C	C		
C	Oil or Gas Extraction	X	N	N	P	P	P	N	N	N	N	N	N	N	C	C		
N	Industrial outfalls																	
N	Marine ways																	
N	Water dependent industrial																	
N	Water related industrial																	
N	Non-water related industrial																	
Public																		
P	Overhead crossings	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	I
P	Submerged crossings	X	N	N	P	P	P	N	N	N	N	N	N	N	C	C		
C	Bridge crossings	X	N	C	P	P	P	C	N	N	N	N	N	P	P			
C	Storm water outfall	X	N	N	P	P	P	N	C	C	N	N	N	C	C			
N	Sanitary outfall																	
Port Facilities																		
N	Deep draft (over 23')																	
N	Medium draft (10'-22')																	
N	Shallow draft (0-9')																	
P	Navigation improvement	X	N	N	P	P	P	C	C	C	N	N	N	P	P			
C	Aquaculture Facilities	X	N	N	C	C	P	N	N	N	N	N	N	C	C			
Restoration																		
N	Active																	
P	Passive	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 7

Description

Management unit 7 consists of the aquatic area between the navigation channel and the south shore, from the Highway 101 bridge east to the small boat pier at the Marine Science Center. It includes the South Beach Marina and the OSU Marine Science Center facilities. The majority of the unit is sub-tidal and includes eelgrass and shellfish beds, and fish spawning and nursery areas. Major uses in the area are medium and shallow draft navigation, moorage, aquaculture (salmon ranching), commercial harvest and recreation. Alterations include pilings, piers and wharves, breakwaters, floating docks, rip-rapped shorelines, dredging and other activities. (See maps for location of resources and uses)

Classification: Development

This unit has been classified as development because of the existing and proposed South Beach Marina and OSU Marine Science Center facilities on and near shore.

Resource Capability

Management unit 7 includes the developed area along the south shore of the Newport sub-area, corresponding to management unit 5 on the north shore. Based on the nature of the resources present in this area and the level and intensity of existing development, continued development of water dependent uses and structural alterations such as piling, piers, shoreline stabilization etc. are consistent with the resource capabilities of this area. Major fill and removal activities should be evaluated on an individual basis.

Management Objective

Management unit 7 shall be managed to provide for water dependent development compatible with existing uses and consistent with the resource capabilities of the area.

Special Policies

1. Eelgrass beds, shellfish beds, and fish spawning and nursery areas are located within management unit 7. Adverse impacts of future development on these resources shall be minimized.
2. Marina related development undertaken as a part of the approved South Beach Marina project shall be permitted.
3. Development of deep and medium draft port facilities shall be a permitted use only outside of the existing South Beach Marina boat basin.

4. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as buoys and dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 7. Multiple use facilities common to several users are encouraged where practical.

PERMITTED USE MATRIX

Management Unit No. Yaquina 7
 Classification Development

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pillings	Dolphins	Special Policy
Commercial /Recreational																	
P	Water dependent	P	C	P	P	P	P	C	C	C	P	P	P	P	P	P	
C	Water related	P	C	N	N	N	P	N	C	C	C	C	C	C	C	C	
N	Non-water related																
C	Marina	P	C	P	P	P	P	P	P	N	P	P	P	P	P	P	2
P	Boat launching	P	N	P	P	P	P	C	N	N	N	N	P	P	P	P	
Industrial																	
N	Log dumping																
N	Log storage																
C	Mining	N	N	N	P	P	P	C	N	N	N	C	C	C	C	C	
C	Oil or Gas Extraction	N	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
C	Industrial outfalls	P	N	N	P	P	P	N	N	N	N	N	N	N	N	N	
P	Marine ways	P	N	N	P	P	P	C	N	N	P	P	P	P	P	P	
P	Water dependent industrial	P	C	P	P	P	P	C	C	C	P	P	P	P	P	P	
P	Water related industrial	P	N	N	N	N	P	C	N	N	C	C	C	C	C	C	
N	Non-water related industrial																
Public																	
n	Overhead crossings																
p	Submerged crossings	P	N	N	P	P	P	N	C	C	N	N	N	C	C	C	1
n	Bridge crossings																
p	Storm water outfall	P	N	N	P	P	P	N	C	C	N	N	N	C	C	C	
n	Sanitary outfall																
Port Facilities																	
p	Deep draft (over 23')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	3
p	Medium draft (10'-22')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	3
p	Shallow draft (0-9')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
p	Navigation improvement	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
C	Aquaculture Facilities																
Restoration																	
N	Active																
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 8

Description

Management unit 8 is a subtidal area between the navigation channel and the intertidal flats of the Idaho Point/King's Slough area. It contains eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Use within the unit consists of medium and shallow draft navigation, commercial harvest and recreation. Existing alterations are limited to navigation aids. (See maps for location of resources and uses)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management unit 8 is an important resource area. Shallow portions of this subtidal unit support eelgrass beds; major shellfish beds are also located in this area. Alterations in this area are limited to navigation aids (pile supported). Because of the area's proximity to the deep water turning basin, it may be needed as a site for temporary log raft anchorage. The piling and rafts should have no significant adverse impacts on resources in this area so long as they are sited to avoid grounding. If this activity is conducted under conditions to minimize occupation of surface area, minimize conflicts with recreational use and avoid grounding, it will be within the resource capabilities of the area.

Management Objective

Management unit 8 shall be managed to conserve natural resources such as eelgrass and shellfish beds. Navigation improvements found to be necessary for the maintenance of the deep water channel shall be provided for.

Special Policies

1. Temporary moorage of log rafts in management unit 8 shall conform to the following standards:
 - a. Whenever feasible, individual logs shall be bundled, but shall always be held in rafts.
 - b. The number of log rafts moored at any time shall be the lowest practical number for the shortest practical time considering log supply and tidal cycles.

Management Unit 8
(cont'd)

- c. Water surface area occupied by temporary moorage shall not at any time exceed seven (7) acres.
- d. Temporary moorage sites shall be occupied no more than two weeks in any six consecutive weeks.
- e. Dolphins shall be sited and moorage conducted so that log rafts will not ground at low water.
- f. As much as practical, shipment and movement of logs shall be timed to minimize conflicts with recreational uses in the area.

MANAGEMENT UNIT 9

Description

Management unit 9 includes the tideflats between the Marine Science Center and Idaho Point, all of King Slough and the intertidal area at the mouth of the slough. This is one of the largest tideflats in the estuary with a number of natural resource values of major significance, including eelgrass beds, low salt marsh, fish spawning and nursery areas and waterfowl habitat. The area is used extensively for recreational purposes, primarily angling, clamming and waterfowl hunting. A small marina development is present at Idaho Point. Most of the intertidal area of King Slough is privately owned and has been used historically for log storage. Alteration to the unit is minimal, with a few scattered piling and limited areas of rip-rapped shoreline.

Classification: Natural

This unit has been classified natural in order to preserve the natural resources of the unit.

Resource Capability

Management unit 9 is a highly sensitive area with resource values of major importance the estuarine ecosystem. In order to maintain resource values, alterations in this unit should be kept to a minimum. Minor alterations which result in temporary disturbances (e.g. limited dredging for submerged crossings) would be consistent with resource values in this area; other more permanent alterations should be reviewed individually.

Management Objective

Management unit 9 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Limited maintenance dredging and other maintenance activities may be permitted for the maintenance of the existing marina in management unit 9. Expansion of this use or establishment of new marina uses is not permitted.
2. Major portions of management unit 9 are held in private ownership. Because the preservation of critical natural resources requires that uses in this area be severely restricted, public acquisition of these privately owned lands is strongly encouraged.

PERMITTED USE MATRIX

Management Unit No. Yaquina 9
 Classification Natural

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pillings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related																
N	Marina	N	N	N	C	N	N	N	N	N	N	N	N	N	N	N	Z
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
P	Submerged crossings	N	N	N	P	N	P	N	N	N	N	N	N	N	N	N	I
N	Bridge crossings																
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	N	N	N	N	P	N	N	N	N	N	N	N	N	C	C	
Restoration																	
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 10

Description

Management unit 10 includes the Sally's Bend area between Coquille Point and McLean Point. The unit consists of a major tideflat which supports eelgrass, shellfish and algal beds, fish spawning and nursery areas and wildlife habitat, all of major significance. Uses in the area are limited to shallow and medium draft navigation, recreational use and some minor commercial harvest. A number of minor alterations are present, including piling, dredging, and rip-rapped shorelines.

Classification: Natural

This unit has been classified natural in order to preserve natural resources in the unit.

Resource Capability

Management unit 10 is similar in character and resource values to management unit 9. Due to the importance and sensitive nature of the resources in this area, permitted alterations should be limited to those which result in only temporary disturbances. (several submerged crossings have been located in this area) More permanent alterations should be reviewed for consistency with the resource capabilities of the area.

Management Objective

Management unit 10 shall be managed to preserve and protect natural resources and values.

Special Policies:

1. A portion of management unit 10 has been identified as a potential future development site. Development of the area within the identified "resource line" shall require a clear demonstration of need, evaluation of alternative sites, consideration of long term consequences and a finding of compatibility with adjacent uses in order to justify the needed plan amendment and Goal 16 exception. See FUTURE DEVELOPMENT SITES section.

PERMITTED USE MATRIX

Management Unit No. Yaquina 10

Classification Natural

- P = Permitted w/standards
- C = Conditional
- N = Not Allowed
- X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
P	Submerged crossings	N	N	N	P	N	P	N	N	N	N	N	N	N	N	N
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	N	C	C
Restoration																
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 12

Description

Management unit 12 is the Corps of Engineers authorized navigation channel from the turning basin to the upstream extent of dredging at Toledo. Natural resources of major significance in the unit are shellfish beds and fish spawning and nursery areas. The channel is used extensively for shallow and medium draft navigation, including log towing. Other uses include recreation, commercial harvest and aquaculture. Alterations within the channel include maintenance dredging and several minor alterations such as piling, submerged crossings and navigation aids.

Classification: Development

This unit has been classified development as it is the federally authorized navigation channel.

Resource Capability

Resources within management unit 12 are subject to periodic major alterations as a result of maintenance dredging activities. Resource values are limited to those capable of reestablishing after these periodic disturbances. Other alterations need to be limited in order to maintain clear navigation.

Management Objective

Management unit 12 shall be managed to maintain navigational access to upriver areas above the turning basin.

Special Policies:

1. Bridge crossing construction shall be permitted only for maintenance or replacement of the existing Butler Bridge crossing.
2. The provisions of Goal 16 which require major natural resources to be placed in Natural or Conservation classifications and those which require navigation channels to be placed in a Development classification are in conflict in the case of management unit 12. A long established commitment and major public investment to maintain the area for navigational purposes indicate an overriding need to designate the area for development.

MANAGEMENT UNIT 13

Description

Management unit 13 is the water area between the navigation channel and the west shore, from the King Slough tide flats to River Bend. This mostly sub-tidal unit contains shellfish beds, fish spawning and nursery areas and important wildlife habitat. Uses in the area consist primarily of shallow and medium draft navigation, commercial harvest, and recreational boating and fishing. The area has natural characteristics which make it suitable for aquaculture. Alterations in the unit are limited to a few piling and navigation aids.

Classification: Conservation

This unit is a partially altered area with some important resource characteristics which qualify for conservation management.

Resource Capability

Unit 13 is part of the bay subsystem as described in the ODFW Habitat Classification System. This is a relatively protected area which provides a transition zone between marine and fresh water. It is within that portion of Yaquina Bay which is suitable for oyster culturing operations. Those minor alterations which will not jeopardize the suitability of the area for aquaculture are consistent with the resource capability of this area. Shoreline stabilization and dredging activities should be reviewed to assure consistency with this resource capability.

Management Objective

Management unit 13 shall be managed to conserve natural resources, protect water quality and to provide for aquaculture related development.

PERMITTED USE MATRIX

Management Unit No. Yaquina 13
 Classification Conservation

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial / Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
C	Mining		N	N	P	P	P	N	N	N	N	N	N	C	C	
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	C	C	
C	Submerged crossings	P	N	N	P	P	P	N	N	N	N	N	N	N	N	
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
C	Navigation improvement	N	N	N	C	C	P	N	N	N	N	N	N	N	N	
P	Aquaculture Facilities	C	N	N	P	P	P	C	N	N	N	P	P	P		
Restoration																
N	Active															
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 14

Description

Management unit 14 is the area between the navigation channel and the east shore from Coquille Point to River Bend. Natural resources include fish spawning and nursery areas, eelgrass and shellfish beds, tideflats, and wildlife habitat (all minor significance). The predominant uses in the unit are small boat moorage, medium and shallow draft navigation and recreation. Major alterations are present in the form of piling and floating docks in conjunction with marina development. Additional alterations include fills, dredging, navigation aids, and stabilized (bulkheads and rip-rap) shorelines.

Classification: Development

Unit 14 is a deep water area close to shore with existing development of moderate intensity and thus is classified for development management.

Resource Capability

Numerous major alterations have occurred in this area in conjunction with past developments, including dredging, intertidal fills and structures such as piers and docks. This unit also has natural deep water adjacent to developable shorelands, one of the last such areas in the estuary. Development of these areas for water dependent uses will be consistent with the characteristics and capabilities of this unit.

Management Objective

Management unit 14 shall be managed to provide for water dependent development consistent with available levels of services and backup space.

Special Policies

1. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys and dry land storage) to docks and piers for commercial and industrial use are not feasible in Unit 14. Multiple use facilities common to several users are encouraged where practical.

PERMITTED USE MATRIX

Management Unit No. Yaquina 14

Classification Development

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial / Recreational																
P	Water dependent	P	C	P	P	P	P	C	C	C	P	P	P	P	P	P
C	Water related	P	C	N	N	N	P	N	C	C	C	C	C	C	C	C
N	Non-water related	C														
C	Marina	P	C	P	P	P	P	P	P	N	P	P	P	P	P	P
P	Boat launching	P	N	P	P	P	P	C	N	N	N	P	P	P	P	P
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
C	Oil or Gas Extraction	N	N	N	P	P	P	N	N	N	N	N	N	N	C	C
C	Industrial outfalls	P	N	N	P	P	P	N	N	N	N	N	N	N	N	N
P	Marine ways	P	N	N	P	P	P	C	N	N	P	P	P	P	P	P
P	Water dependent industrial	P	C	C	P	P	P	P	P	P	P	P	P	P	P	P
C	Water related industrial	P	C	N	N	N	P	N	N	C	C	C	C	C	C	C
N	Non-water related industrial															
Public																
C	Overhead crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	C	C
C	Submerged crossings	P	N	N	P	P	P	N	C	C	N	N	N	N	C	C
N	Bridge crossings															
C	Storm water outfall	P	N	N	P	P	P	N	C	C	N	N	N	N	C	C
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	P	N	N	P	P	P	P	P	P	P	P	P	P	P	P
P	Aquaculture Facilities	P	N	P	P	P	P	C	N	N	P	P	P	P	P	P
Restoration																
N	Active															
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 15

Description

Management unit 15 consists of Parker Slough east of County Road 515. Natural resources of major significance in the unit include salt marsh, wildlife habitat and fish spawning and nursery areas. Uses within the unit are limited to some shallow draft navigation and minor recreational activity. Only minor alterations are present; these consist of piling and a small area of rip-rapped shoreline.

Classification: Natural

This unit is classified natural in order to preserve important resource values associated with the intertidal flats and tidal marsh areas.

Resource Capability

This unit is an essentially undisturbed slough sub-system. Alterations have occurred at the mouth of the slough through the construction of the county road and the subsequent bridging of the road dike. This bridge crossing spans the main sub-tidal channel of the slough, and is supported by piling and rip-rapped shorelines. Alterations of this nature in conjunction with the maintenance or replacement of this bridge crossing will occur in the least sensitive portion of this unit and are necessary to maintain the tidal circulations and other resource capabilities of the remainder of the unit.

Management Objective

Management unit 15 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction may be permitted only for maintenance or replacement of the existing crossing.

PERMITTED USE MATRIX

Management Unit No. Yaquina 15
 Classification Natural

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pillings	Dolphins	Special Policy
Commercial / Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
C	Bridge crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P	L
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
Restoration																	
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 16

Description

Management unit 16 consists of the area between the navigation channel and the north shore of the bay from River Bend east to Grassy Point. Natural resources of significance in the unit include shellfish beds, fish spawning and nursery areas and wildlife habitats. This unit represents a portion of the prime aquaculture area of the estuary. Other uses in the unit include recreation, shallow draft navigation, and some minor log handling activities. Alterations within the unit include piling, floating docks, pier structures and rip-rapped shorelines.

Classification: Conservation

This unit is an area suitable and needed for aquaculture and related activities and is thus classified conservation in order to manage for long term uses of renewable resources.

Resource Capability

Unit 16 has been used for decades as a commercial oyster growing area. Water quality and other characteristics make this area especially suitable for such use. Numerous minor alterations needed for these commercial aquaculture operations have taken place in this area. These include piling, piers, floating docks and stabilized shorelines. Similar types of minor alterations are necessary for the operation of the oyster industry and are consistent with the resource capabilities of this unit.

Management Objective

Management unit 16 shall be managed to maintain and enhance natural resources and aquaculture opportunities and to provide for aquaculture related development.

Special Policies:

1. Aquaculture facilities may include receiving, processing and retail sales facilities.

MANAGEMENT UNIT 17

Description

Management unit 17 consists of the area between the navigation channel and the south shore of the bay from River Bend east to Grassy Point. Natural resources of significance include shellfish beds, fish spawning and nursery areas and wildlife habitat. This unit represents a portion of the prime aquaculture area of the estuary. Other uses in the unit include shallow and medium draft navigation, recreation, commercial harvest and some minor log handling activities. Overall level of alteration is minor with some piling, floating docks and rip-rapped shorelines.

Classification: Conservation

This is an area suitable and needed for aquaculture and related activities and is thus classified conservation in order to manage for long term uses of renewable resources.

Resource Capability

Unit 17 has been used for decades as a commercial oyster growing area. Water quality and other characteristics make the area especially suitable for such use. Numerous minor alterations needed for these commercial aquaculture operations have taken place in this area. These include piling, piers, floating docks and stabilized shorelines. Similar types of minor alterations will be necessary for the continued operation of the oyster industry and are consistent with the resource capabilities of this unit.

Management Objective

Management unit 17 shall be managed to maintain and enhance natural resources and aquaculture opportunities and to provide for aquaculture related development.

Special Policies:

1. Aquaculture facilities may include receiving, processing, and retail sales facilities.

PERMITTED USE MATRIX

Management Unit No. Yaquina 17
 Classification Conservation

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pillings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related	C														
N	Marina															
C	Boat launching	N	N	N	N	N	N	N	N	N	N	N	C	C	N	
Industrial																
N	Log dumping															
N	Log storage															
C	Mining	N	N	N	P	P	P	N	N	N	N	N	N	C	C	
C	Oil or Gas Extraction	N	N	N	P	P	P	N	N	N	N	N	N	C	C	
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	C	C	
C	Submerged crossings	C	N	N	P	P	P	N	C	C	N	N	N	C	C	
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
C	Navigation improvement	N	N	N	P	P	P	N	N	N	N	N	N	N	N	
P	Aquaculture Facilities	P	N	N	P	P	P	C	N	N	N	P	P	P	P	1
Restoration																
C	Active	C	N	N	P	P	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 18

Description

Management unit 18 includes the salt marsh complex and intertidal area of McCaffery Slough. This is an important natural resource area, with a large salt marsh providing important primary productivity and extensive wildlife habitat. Use in the area is confined to some limited low intensity recreational activities. Most of the aquatic area and wetlands of this unit remain essentially unaltered.

Classification: Natural

As a major tract of tidal marsh, this unit is classified in order to preserve its essential resource characteristics.

Resource Capability

The McCaffery Slough area provides major resource values in the form of primary productivity and wildlife habitat. This is a sensitive area and alterations should be limited to those activities which do not disrupt the flow of these major resource values. Minor structural alterations such as piling or navigation aids would not significantly degrade productivity or wildlife habitat and are consistent with the resource capabilities of this area.

Management Objective

Management unit 18 shall be managed to preserve and protect natural resources and values.

PERMITTED USE MATRIX

Management Unit No. Yaquina 18
 Classification Natural

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Special Policy	Dolphins	Pillings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
P	Overhead crossings															
N	Submerged crossings					N	N	N	N	N	N	N	N	N	N	C
N	Bridge crossings															C
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement					N	N	N	N	N	P	N	N	N	N	N
C	Aquaculture Facilities					N	N	N	N	N	P	N	N	N	N	C
Restoration																
N	Active															
P	Passive					N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 19

Description

Management unit 19 includes all of the salt marsh area of Poole's Slough. This area is part of the largest and most diverse salt marsh complex in the estuary and provides an extensive area of significant wildlife habitat. Uses in this area include shallow draft navigation, aquaculture activities, and recreational use.

Management unit 19 also includes the main sub-tidal channel of Poole's Slough. This area is presently used for oyster culture and some limited development of facilities is present. The channel is also used for shallow draft navigation in conjunction with aquaculture operations. This area is partially altered, with docks, piling and other minor structural improvements.

Classification: Natural

This area is a major tract of tidal marsh and is classified natural in order to preserve important resource values.

Resource Capability

Unit 19 provides a large area of tidal marsh and the associated resource values, particularly primary productivity and wildlife habitat. Alterations which do not significantly impact these values (e.g. piling, navigation aids and other minor structural alterations) are consistent with the resource capabilities of this area.

The sub-tidal portion of Poole's Slough is composed primarily of fine organic sediments, and many areas of the channel provide protected rearing sites for juvenile fishes and crabs, as well prime growing areas for oysters. Structural alterations which do not unduly impede circulation, occupy excessive surface area or adversely affect water quality are consistent with the resource capabilities of this unit. Other activities such as fill or removal can potentially disrupt these resource values, and should be reviewed for consistency with the area's resource capabilities.

Management Objective

Management unit 19 shall be managed to preserve and protect natural resources and values.

Special Policies

1. A Goal 16 exception has been taken to allow aquaculture development in unit 19 at a level of intensity greater than that normally permitted in a natural management unit. New dredge and fill activities for aquaculture development shall be limited to those activities specifically authorized by the exception statement (see appendix C). Any alterations proposed which are not included within the scope of the exception statement and are not consistent with the resource capabilities and management objective of this unit may only be permitted upon the adoption of appropriate revisions to the exception through the plan amendment process.
2. The proposed goal exception will be a phased development (see exception statement). Phases II and III of the project are to be undertaken in accordance with the need justification set forth in the exception statement. Additional expansion for uses other than the proposed seed nursery operation is not permitted under the provisions of this exception.
3. The proposed project size is felt to be adequate to provide seed nursery production for Yaquina Bay (with the possible eventuality of providing seed to other currently un-utilized grounds in other local estuaries). Additional similar projects shall require further justification of need based on an analysis of seed market conditions, demand, oyster production opportunities, etc.
4. Mitigation for adverse impacts of dredge and fill activities in the tidal marsh area will be required. The nature and extent of mitigation required and final site selection shall be addressed during the Fill and Removal permit process.

PERMITTED USE MATRIX

Management Unit No. Yaquina 19
 Classification Natural

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Special Policy	Dolphins	Pilings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
P	Overhead crossings	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P
N	Submerged crossings															
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	C	N	P	P	P	P	P	N	N	N	N	N	P	P	P
Restoration																
N	Active															
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 20

Description

Management unit 20 is comprised of Winant Slough and Johnson Slough on the north side of the estuary. These small sloughs include salt marshes, tideflats, and wildlife habitats which are of major significance. Use in the sloughs is limited to minor recreational activity. Small areas of rip-rapped shoreline and pilings at the mouths of the sloughs represent the only alterations present.

Classification: Natural

Management unit 20 is considered to be a major tract of tidal marsh and is classified natural in order to protect essential resource values.

Resource Capability

Areas included within Unit 20 are important components of the estuarine system, in that they include tracts of productive tidal marsh and intertidal channels which have remained essentially unaltered. This is a sensitive area and should remain largely free of alterations, except for minor structural alterations which will not adversely impact tidal flow or the productive value of the marsh areas. Particularly important are minor piling and bank stabilization activities associated with the maintenance of the bridge crossings at the mouths of the sloughs. Such activities may be essential to the maintenance of the resource functions and capabilities of these areas.

Management Objective

Management unit 20 shall be managed to preserve and protect the resource values of the salt marshes, tideflats and wildlife habitats.

Special Policies:

1. Bridge crossing construction will be permitted for maintenance or replacement of the existing crossing.
2. Johnson Slough has been designated as future development site for aquaculture. It is anticipated that the nature and intensity of this development will require a goal exception and plan amendment.

PERMITTED USE MATRIX

Management Unit No. Yaquina 20
 Classification Natural

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Dikes (new)	Shoreline stabilization (structural)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related																
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
C	Bridge crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P	L
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
N	Navigation improvement																
C	Aquaculture Facilities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C
Restoration																	
N	Active																
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 21

Description

Management unit 21 consists of Flesher Slough and the tideflats at the slough mouth down to MLLW. The unit contains salt marsh and wildlife habitat of major significance. Uses within the unit include limited shallow draft boat traffic and some recreational activity. The slough has been altered near its mouth by the road crossing. The dike on which the road crosses has a small culvert through it which allows only limited flushing of the slough.

Classification: Natural

This area is a major intertidal tract and is classified natural in order to preserve natural resource values.

Resource Capability

Flesher Slough is an important intertidal flat and tidal marsh area. Substrates in the slough are mostly fine grained organic materials, and small tracts of eelgrass are present near the mouth of the main slough channel. The slough mouth has been severely altered by placement of fill for the county road dike. Currently, the small culvert through which the slough fills and drains allows very limited tidal circulation. Removal activities to install additional culverts or the construction of a bridge crossing would greatly improve circulation and productivity of this area. These activities undertaken for the purpose of restoration would result in short term disturbance in the area, but long term benefits will more than offset these minor alterations.

Management Objective

Management unit 21 shall be managed to protect and, where appropriate, enhance the natural resources and values.

Special Policies:

1. Construction of a bridge crossing at the mouth of Flesher Slough would improve flushing of the slough and aid in its productivity. Such activity would be considered an active restoration measure consistent with purposes and resource capabilities of this unit. Bridge crossing construction will be limited to that associated with an approved restoration project.

PERMITTED USE MATRIX

Management Unit No. Yaquina 21
 Classification Natural

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

	Special Policy	Dolphins	Pilings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)										
Commercial/Recreational																									
N	Water dependent																								
N	Water related																								
N	Non-water related																								
N	Marina																								
N	Boat launching																								
Industrial																									
N	Log dumping																								
N	Log storage																								
N	Mining																								
N	Oil or Gas Extraction																								
N	Industrial outfalls																								
N	Marine ways																								
N	Water dependent industrial																								
N	Water related industrial																								
N	Non-water related industrial																								
Public																									
N	Overhead crossings																								
N	Submerged crossings																								
P	Bridge crossings									P	N	N	P	N	P	N	N	N	N	N	N	P	P	I	
N	Storm water outfall																								
N	Sanitary outfall																								
Port Facilities																									
N	Deep draft (over 23')																								
N	Medium draft (10'-22')																								
N	Shallow draft (0-9')																								
P	Navigation improvement									N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities									N	N	N	N	C	P	N	N	N	N	N	N	N	C	C	
Restoration																									
P	Active									P	N	N	P	N	P	N	N	N	N	N	N	N	P	P	I
P	Passive									N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 22

Description

Management unit 22 consists of the salt marsh and tideflat area which is known locally as Busher Flats. The unit contains both salt marsh and wildlife habitat of major significance. Uses within the unit are limited to some shallow draft boat traffic and minor recreational use. The area is basically unaltered, with the exception of a few abandoned piling.

Classification: Natural

This unit is classified natural in order to preserve the resource values of the major tracts of tideflats and salt marsh.

Resource Capability

Busher Flats is an important resource area, with numerous values including productive intertidal and shallow subtidal areas, tidal marsh and important waterfowl habitat. Alterations which would occupy or remove significant amounts of intertidal surface area could have negative impacts on these resource values and their contribution to the estuarine system. However, limited minor alteration such as piling or navigation aids would not be significant impact on these values and are within the resource capabilities of this area.

Management Objective

Management unit 22 shall be managed to preserve the resource values associated with the important tideflats, salt marsh and wildlife habitat present within the unit.

PERMITTED USE MATRIX

Management Unit No. YAQUINA 22
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial / Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related																
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
N	Bridge crossings																
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	C	P	N	N	N	N	N	N	N	C	C	C
Restoration																	
N	Active																
p	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 23

Description

Management unit 23 shall be managed to preserve, protect and, where appropriate, enhance the natural values of its salt marsh and wildlife habitat.

Classification: Natural

This unit is a major tract of tidal marsh and is classified natural to preserve its important resource values.

Resource Capability

As a major tract of tidal marsh, this unit should be kept free of alterations which might result in channelization or disruption of tidal flow, destruction of wetland vegetation, or excessive soil disturbance. Minor structural alterations such as piling or navigation aids would be consistent with the maintenance of the area's resource values, particularly those activities which would be associated with improving tidal circulation for that portion of this unit north of County Road 515.

Management Objective

Management unit 23 shall be managed to preserve, protect and, where appropriate, enhance the natural values of its salt marsh and wildlife habitat.

Special Policies:

1. Improvement of tidal flow to those marsh areas north of Yaquina Bay road is considered to be active restoration consistent with the purposes and resource capabilities of this unit. Alterations for active restoration shall be limited to those in conjunction with the above described project.

PERMITTED USE MATRIX

Management Unit No. YAQUINA 23
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
N	Submerged crossings															
P	Bridge crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N
N	Aquaculture Facilities															
Restoration																
P	Active	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 24

Description

Management unit 24 includes the area between the navigation channel and the north shore from Grassy Point east to Criteser's Moorage. This unit contains a number of natural resources of major significance including eel grass and shellfish beds, fish spawning and nursery areas, tideflats and wildlife habitat. Medium and shallow draft navigation and recreational activity are the major uses within the unit. Alterations include riprapped shorelines, piling, navigation aids and dikes and tide-gates (at the mouth of Boone and Nute Sloughs).

Classification: Natural

This unit is classified natural in order to preserve the important diversity of natural resources values in the area.

Resource Capability

Unit 24 is an area of diverse resource values, including productive intertidal and shallow sub-tidal areas, shellfish beds, fish spawning and nursery areas and eelgrass beds. The nature of the resources in this is such that minor structural alterations such as piling or small docks which do not occupy excessive surface area or significantly effect circulation patterns would not have serious impacts on the functional characteristics of the area. Likewise, temporary minor disturbances such as dredging for submerged crossings would not be inconsistent with this area's resource capabilities.

Management Objective

Management unit 24 shall be managed to preserve natural resources such as shellfish beds, productive tideflats and wildlife habitat.

PERMITTED USE MATRIX

Management Unit No. YAQUINA 24
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
	Non-water related industrial																
Public																	
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
C	Submerged crossings	C	N	N	P	N	P	N	N	N	N	N	N	N	C	C	
N	Bridge crossings																
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	C	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
Restoration																	
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 25

Description

Management unit 25 takes in the area between the navigation channel and the south shore from the upriver end of management unit 22 up to the Toledo city limits. This unit has shellfish beds, fish spawning and nursery areas and wild-life habitat, all of major significance. Major uses within the unit include in water log handling (storage, rafting and towing), recreation, and medium and shallow draft navigation. Numerous minor alterations are present within the unit. They include dredging, rip-rap, bulkheads, piers, wharves, floating docks, piling, and a boat launching ramp.

Classification: Conservation

As a partially altered area adjacent to development of moderate intensity, this unit is classified conservation in order to conserve resource values and manage for development which requires only minor alterations.

Resource Capability

Unit 25 is an area with a number of important resource characteristics; however the area has a number of significant alterations at several locations, including the Port of Toledo public boat launch facility, the Georgia-Pacific log dump and substantial log storage areas. Portions of this unit adjacent to the Toledo airport and the existing port facility are suitable for water dependent uses. Minor structural alterations such as piers, piling, docks and shoreline stabilization in conjunction with water dependent uses would not have significant adverse effects and would be similar to the existing development in this area.

Sites within unit 25 have been designated for expanded in-water log storage. These sites were selected based on proximity to existing storage sites and potential to minimize adverse impacts associated with grounding. The storage authorized is essentially temporary in nature, and any adverse resource impacts would be reversed when storage is discontinued. For these reasons, this activity is considered to consistent with the resource capabilities of this area.

Management Objective

Management unit 25 shall be managed to conserve natural resources and to provide for identified needs for water handling of logs.

Special Policies

1. Temporary moorage of log rafts in management unit 25 shall conform to the following policies:
 - a. Whenever feasible, individual logs shall be bundled but shall always be held in rafts.
 - b. The number of log rafts moored at any time shall be the lowest practical number for the shortest practical time considering log supply and tidal cycles.
 - c. Water surface area occupied by temporary moorage shall not at any time exceed (7) acres.
 - d. Temporary moorage sites shall be occupied no more than two weeks in any six consecutive weeks.
 - e. Dolphins shall be sited and moorage conducted so that grounding of log rafts is minimized.
 - f. As much as practical, shipment and movement of logs shall be timed to minimize conflicts with recreational uses in the area.
2. New log storage will be permitted in those authorized interim storage sites as specified in the Log Storage and Transportation section.
3. A portion of management unit 25 adjacent to the Toledo Airport has been identified as a potential future development site. See FUTURE DEVELOPMENT SITES section.

MANAGEMENT UNIT 27

Description

Management unit 27 is a large salt marsh area immediately east of the mouth of Nute's Slough. The salt marsh and wildlife habitat within this unit are considered to be of major significance. The unit also includes a small tideflat area which supports important shellfish beds. Use within the unit is confined to recreational activities. A small portion of this unit is diked by a road crossing, but culverts allow the free flow of tidal waters into this area.

Classification: Natural

As a major tract of tidal marsh, this unit is classified natural in order to preserve critical resource values.

Resource Capability

Unit 27 is an important area for primary productivity and wildlife habitat values. This is a highly sensitive area and the resource values can be subject to disturbance from structural developments or alterations. Minor structural improvements for needed public uses such as navigation aids would be consistent with the resource capabilities of this unit.

Management Objective

Management unit 27 shall be managed to preserve and protect the resource values of the salt marsh and tidal flats within the unit.

PERMITTED USE MATRIX

Management Unit No. YAQUINA 27
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Dikes (new)	Shoreline stabilization (structural)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related																
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
N	Bridge crossings																
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	C	C	C	C		
Restoration																	
N	Active																
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 28

Description

Management unit 28 consists of three small sloughs along the south shore of the bay west of the Toledo airport. These sloughs contain important salt marshes, and provide fish spawning and nursery areas and wildlife habitat of major significance. Minor recreational activity is the only current use within this unit. All three sloughs are partially closed off at the mouth by road crossings but piling bridges or culverts allow the sloughs to fill and drain with the tides.

Classification: Natural

These areas are classified natural in order to preserve the diversity of important resource values present.

Resource Capability

The areas contained in unit 28 are typical of the small sloughs found in the middle section of the estuary. The areas are primarily intertidal flats, with low and high tidal marshes around the fringes. In addition to their value for productivity, these sloughs provide a protected environment for rearing of juvenile fishes and crabs as well as valuable waterfowl feeding and resting sites. Because of these important resource values, alterations should be limited to minor structural types in association with low intensity uses.

Tidal circulation is currently impeded in these areas as a result of road construction activities. The construction of bridge crossings or the placement of additional culverts to enhance tidal circulation would improve resource values and would be consistent with the areas' resource capabilities.

Management Objective

Management unit 28 shall be managed to preserve, protect and where appropriate, enhance the natural resources and values.

Special Policies:

1. Bridge crossing construction may be permitted for maintenance of existing crossings or for active restoration of flushing action in these sloughs. Such activity is consistent with the purpose and resource capabilities of this unit.

PERMITTED USE MATRIX

Management Unit No. YAQUINA 28
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Dikes (new)	Shoreline stabilization (structural)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related																
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
P	Bridge crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P	I
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Restoration																	
P	Active	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 30

Description

Management unit 30 takes in the area between the navigation channel and the north shore from Criteser's Moorage east of the Toledo city limits. Some shellfish beds, fish spawning and nursery areas and wildlife habitat are found within the unit, though they are of minor significance. Uses within the unit include a moorage facility for small boats, medium and shallow draft navigation and in-water log handling activities. Significant numbers of pilings and dolphins used for log storage are present, as well as a number of other more minor alterations including maintenance dredging, rip-rap, piers and floating docks.

Classification: Conservation

This is a partially altered area and is classified conservation in order to provide for uses which require only minor alterations and are consistent with the conservation of natural resources.

Resource Capability

Unit 30 is an area with a number of alterations, including docks, piers and maintenance dredging at Criteser's Moorage, and several extensive log storage areas. Some area adjacent to Criteser's Moorage is suitable for expansion of water dependent uses. Minor structural alterations such as piers, piling and docks in conjunction with water dependent uses would not have significant adverse effects and would be similar to existing development in this area.

Sites within unit 30 have been designated for expanded in-water log storage. These sites were selected based on proximity to existing storage sites and potential to minimize adverse impacts associated with grounding. The storage authorized is essentially temporary in nature, and adverse resource impacts would be reversed when storage is discontinued. For these reasons, this activity is considered to be consistent with the resource capabilities of this area.

Management Objective

Management unit 30 shall be managed to provide for continuation of existing water dependent uses, including identified needs for water handling of logs, consistent with the conservation of natural resources.

Special Policies

1. New log storage will be permitted in those authorized interim sites as specified in the Log Storage and Transportation section.

PERMITTED USE MATRIX

Management Unit No. Yaquina 30
 Classification Conservation

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

	Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pillings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related	C														
C	Marina	P	N	P	P	P	P	P	C	N	N	C	P	P	P	
C	Boat launching	P	N	N	P	P	P	N	N	N	N	N	C	C	C	
Industrial																
N	Log dumping															
P	Log storage	N	N	N	N	N	P	N	N	N	N	N	N	N	P	P
C	Mining	N	N	N	P	P	P	N	N	N	N	N	N	C	C	
C	Oil or Gas Extraction	N	N	N	P	P	P	N	N	N	N	N	N	C	C	
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	P	N	N	P	N	P	N	N	N	N	N	N	N	P	P
C	Submerged crossings	N	N	N	P	N	P	N	N	N	N	N	N	N	N	
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
C	Navigation improvement	N	N	N	P	P	P	N	N	N	N	N	N	N	N	
P	Aquaculture Facilities	P	N	N	C	P	P	C	N	N	N	P	P	P	P	
Restoration																
C	Active	C	N	N	P	P	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 31

Description

Management unit 31 consists of the area north of the navigation channel from the Toledo city limits upstream to the mouth of Mill Creek. It includes Depoe and Ollala Sloughs up to the tidegates. Natural resources present within the unit include marsh, tideflat, fish migration, spawning and nursery areas and wildlife habitat, all of minor significance. Uses of major significance within the unit include log storage and handling, medium draft navigation and terminal operations. The unit has a number of significant alterations, including bulkheads, piling, piers, dikes, overhead crossings and maintenance dredging.

Classification: Development

This is an area of minimal biological sensitivity and is designated development to provide for uses requiring alteration of the estuary.

Resource Capability

Unit 31 fronts on the industrialized urban waterfront at Toledo. This is a significantly altered area with numerous established water dependent uses including port facilities, boat building operations and water dependent wood products related activities. Biological values in this area are of minor significance. Maintaining the navigation channel free of obstructions will protect the migration routes of anadromous fish through this area. Competing uses for the limited surface area of this unit should be evaluated for compatibility.

Management Objective

Management unit 31 shall be managed to provide for continued development of water dependent and water related uses, including identified need for water handling of logs and barge traffic.

Special Policies:

1. New log storage will be permitted in those authorized interim storage sites as specified in the Log Storage and Transportation section.
2. Expansion or re-location of the existing sanitary outfall must comply with Department of Environmental quality requirements.
3. Major areas of shoreland north of the river and adjacent

to Olalla and Depot Sloughs are committed to industrial activity considered non-water dependent. However, water-front water-dependent activities are an integral part of these overall operations and shall be recognized as such.

4. New boat moorage, boat works, boat repair and associated water-dependent and water related commercial and industrial activity will be encouraged on Tokyo Slough and on other sites with direct access to navigable water. Docks for small boats will be allowed on a limited basis, only when they can be shown to be compatible with adjacent industrial activity, such as upstream of Depot Slough or when compatible with existing large vessel moorage and industrial activity on the river.
5. Areas suitable for barge/rail/highway transshipment will be protected for water-dependent development, to assure such facilities are available in the future and to maintain Toledo's unique advantages as a transshipment point.
6. The Port of Toledo will be encouraged to maintain its existing dock and marine ways at the foot of main street, for transfer of cargo and for boats seeking a downtown moorage.
7. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys and dry land storage) to docks and piers for commercial and industrial uses are not feasible in unit 31. Multiple use facilities common to several users are encouraged where practical.

PERMITTED USE MATRIX

Management Unit No. Yaquina 31
 Classification Development

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
P	Water dependent	P	N	P	P	P	P	P	N	N	N	P	P	P	P	P	
C	Water related	P	N	N	N	N	P	P	N	N	N	P	P	P	P	P	
N	Non-water related	C															
C	Marina	P	N	P	P	P	P	P	P	P	N	P	P	P	P	P	4
C	Boat launching	P	N	P	P	P	P	P	N	N	N	N	P	P	P	P	4
Industrial																	
C	Overhead Crossings	C	N	N	N	N	P	P	N	N	N	N	N	N	N	P	P
P	Log dumping	P	N	P	P	P	P	P	P	P	N	C	C	C	C	P	P
P	Log storage	N	N	N	N	P	P	P	N	N	N	N	N	N	N	P	1
C	Mining	N	N	N	P	P	P	P	C	N	N	N	C	C	C	C	
C	Oil or Gas Extraction	N	N	N	P	P	P	P	N	N	N	N	N	N	N	C	C
C	Industrial outfalls	P	N	N	P	P	P	P	N	N	N	N	N	N	N	N	
P	Marine ways	P	N		P	P	P	P	C	P	P	P	P	P	P	P	
P	Water dependent industrial	P	P	P	P	P	P	P	C	C	C	P	P	P	P	P	3
C	Water related industrial	P	N	N	N	N	P	P	N	N	N	P	P	P	P	P	
N	Non-water related industrial	C															
Public																	
C	Overhead crossings	C	N	N	N	N	P	P	N	N	N	N	N	N	N	P	P
C	Submerged crossings	C	N	N	P	P	P	P	N	C	C	N	N	N	C	C	
C	Bridge crossings	P	N	P	P	P	P	P	C	C	C	N	N	N	P	P	
P	Storm water outfall	C	N	N	P	P	P	P	N	C	C	N	N	N	C	C	
C	Sanitary outfall	P	N	N	P	P	P	P	N	N	N	N	N	N	N	N	2
Port Facilities																	
N	Deep draft (over 23')																
P	Medium draft (10'-22')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	
P	Shallow draft (0-9')	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	5
P	Navigation improvement	P	C	P	P	P	P	P	P	P	P	P	P	P	P	P	6
N	Aquaculture Facilities																
Restoration																	
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 32

Description

Management unit 32 consists of the area south of the navigation channel from the Toledo city limits up to just above the mouth of Mill Creek. The unit contains some marsh, tideflats, and wildlife habitat, but these resources are considered to be of minor significance. Medium and shallow draft navigation and log storage and handling constitute the major uses within the unit. The unit has been significantly altered by structures and other activities, including bulkheads, piling, piers, floating docks, dikes and overhead crossings and is considered committed to development uses.

Classification: Development

This is an area of minimal biological sensitivity needed for uses requiring alteration of the estuary.

Resource Capability

Unit 32 is a partially altered area which borders the south shoreline of the Toledo urban area. Substantial log storage areas are present in this unit and expanded storage is anticipated during the planning period. Boat building operations and attendant alterations are also present in this unit. Some additional shoreland area is available for water dependent and water related uses and the general range of alterations needed for these uses should be provided for in this area.

Management Objective

Management unit 32 shall be managed to provide for water dependent and water related development, including identified needs for water handling of logs.

Special Policies

1. New log storage will be permitted in those authorized interim storage sites as specified in the Log Storage and Transportation section.
2. Water dependent and water related industrial/commercial uses will be encouraged on shoreland north and south of the Butler Bridge, where city facilities can be made available and access to the navigation channel is convenient.
3. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys and dry land storage) to docks and piers for commercial and industrial use are not feasible in Unit 32. Multiple use facilities common to several users are encouraged where practical.

PERMITTED USE MATRIX

Management Unit No. Yaquina 32
 Classification Development

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
P	Water dependent	P	N	P	P	P	P	N	N	N	P	P	P	P	P	P	2
C	Water related	P	N	N	N	N	P	N	N	N	P	P	P	P	P	P	2
N	Non-water related	C															
C	Marina	P	N	P	P	P	P	P	P	N	P	P	P	P	P	P	
C	Boat launching	P	N	P	P	P	P	N	N	N	N	P	C	P	P		
Industrial																	
C	Overhead Crossings	C	N	N	N	N	P	N	N	N	N	N	N	N	P	P	
P	Log dumping	P	N	P	P	P	P	N	N	N	C	C	C	C	C		
P	Log storage	N	N	N	N	N	P	N	N	N	N	N	N	N	P	P	1
C	Mining	N	N	N	P	C	P	C	N	N	N	C	C	C	C		
C	Oil or Gas Extraction	N	N	N	P	C	P	C	N	N	N	C	C	C	C		
C	Industrial outfalls	N	N	N	P	C	P	N	N	N	N	N	N	C	C		
P	Marine ways	P	N	P	P	P	P	C	P	P	P	P	P	P	P		
P	Water dependent industrial	P	P	P	P	P	P	C	C	P	P	P	P	P	P	2	
P	Water related industrial	P	N	N	N	N	P	N	N	N	P	P	P	P	P	2	
N	Non-water related industrial	C															
Public																	
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	N	P	P	
P	Submerged crossings	C	N	N	P	P	P	N	C	C	N	N	N	C	C		
C	Bridge crossings	P	N	P	P	P	P	C	C	C	N	N	N	P	P		
P	Storm water outfall	C	N	N	P	P	P	N	C	C	N	N	N	P	P		
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
P	Medium draft (10'-22')	P	C	P	P	P	P	P	P	P	P	P	P	P	P		
P	Shallow draft (0-9')	P	C	P	P	P	P	P	P	P	P	P	P	P	P		
P	Navigation improvement	P	C	P	P	P	P	P	P	P	P	P	P	P	P		
N	Aquaculture Facilities																
Restoration																	
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 33

Description

Management unit 33 consists of a marsh area immediately north of the Toledo airport. This is a tidal marsh and wildlife habitat of major significance. No uses are established in this unit at the present time. Alteration of the unit is minimal, with a few piling present. The northern portion of this unit is an area which has been diked in the past, but has reverted to tidal marsh due to beaches in the dike.

Classification: Natural

As a major tract of tidal marsh, this area is classified natural to preserve important resource values.

Resource Capability

Unit 33 is a tidal marsh area, portions of which are partially diked. Some piling and other minor structural alterations are present in the area and have had no apparent adverse effects. Similar minor structures for needed public uses such as navigation aids would be consistent with the area's resource capabilities.

Management Objective

Management unit 33 shall be managed to preserve and protect the natural resource values of the productive tidal marsh and wildlife habitat.

Special Policies:

1. The possibility of using a portion of management unit 33 for log storage is currently being studied. If it is found to be feasible to use this site as an alternative to continued in water log storage, appropriate plan amendments shall be undertaken to permit this use.
2. Use of the northern portion of management unit 33 for restoration shall not be permitted prior to the completion of feasibility studies for its use as a log storage site.

PERMITTED USE MATRIX

Management Unit No. YAQUINA 33
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
N	Submerged crossings															
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N
Aquaculture Facilities																
N	Aquaculture Facilities															
Restoration																
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N
C	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2

MANAGEMENT UNIT 34

Description

Management unit 34 includes the entire upper river from just above the mouth of Mill Creek up to the head of tide. Important natural resources in this unit include marshes, wildlife habitats and fish spawning and nursery areas. Uses within this unit include shallow draft navigation and recreation. This unit is of special importance as a major sport angling area for anadromous fish. Overall alteration of the unit is minimal and is comprised mainly of scattered rip-rap, dikes and floating docks.

Classification: Conservation

Resource Capability

Management unit 34 includes all of the riverine subsystem of the Yaquina Bay Estuary, as described in the ODFW estuarine habitat classification system. This unit has the character of a tidal river, with very narrow intertidal shores and a relatively broad channel area. Management recommendations made by ODFW for similar riverine areas suggest that the development of public marinas and boat launching ramps are in keeping with the resource capabilities of the area as such facilities will serve as an alternative to the proliferation of private docks. Publicly oriented facilities should be reviewed so that they are located only where minor alterations are required (i.e. no major dredge or fill activities). Minor structural alterations such as docks, piling and piers will not significantly degrade resources in this system.

Management Objective

Management unit 34 shall be managed to conserve natural resources and values and to provide for low intensity uses which do not require major alterations of the estuary.

Special Policy

1. Individual single purpose docks and piers shall not be permitted in new subdivisions and planned developments. Community facilities common to several users are encouraged.

SALMON RIVER

MANAGEMENT UNIT 1 - SALMON

Description

Management unit 1 consists of the entire Salmon River estuary from the mouth at Cascade Head up to the head of tide at Otis. The Salmon River forms a relatively small estuary. With about 125 acres of tideland and an additional 75 acres of subtidal areas, the total surface area covered by high tide is roughly 200 acres. Adjacent tidal marshes comprise an additional 330 acres of estuarine area.

Virtually all of the intertidal area occurs between the mouth and river mile 2, below the Highway 101 bridge. Within this area are several small intertidal flats as well as seagrass and algal beds of major significance. Most of the tidal marsh occurs on the south shore of the estuary near river mile 2. Above river mile 2 the estuary takes on a predominantly fresh-water character, with only very narrow margins of intertidal area.

Overall level of alteration in the estuary is low, with some area of stabilized shorelines and some concrete pilings and footings in association with two bridge crossings. Over 200 acres of tidal marsh have been diked off from the estuary. A portion of this diked marsh has recently been restored to the estuary and other areas will follow as part of the U.S. Forest Service's management of the Cascade Head Scenic Research Area.

Classification: Natural

Resource Capability

The Salmon River estuary remains in a relatively pristine state, despite surrounding shoreland and riparian development of moderate intensity. Although small in size, the estuary supports a diversity of habitat types. As a natural classification estuary, the overall management emphasis in the Salmon River estuary will be to minimize aquatic area alterations.

Aquatic area alterations are currently limited to a few areas:

The two bridge crossings and the attendant alterations (piling and bank stabilization) are located on the narrow riverine portions of the estuary. These activities have not impacted the more sensitive estuarine habitats which are located further downriver. As needed public uses, these bridge crossings will require maintenance and possibly expansion in the future. These activities will occur in the same or similar locations as the existing crossings (i.e. the riverine sub-system) and will not impact more important and sensitive aquatic habitats such as tideflats, algal and seagrass beds or tidal marshes.

Management Unit 1 - Salmon
cont'd

The Salmon River estuary has a relatively small area of tidal marsh. Tidal marsh areas have been the most severely impacted habitats in the estuary as a result of past alterations. According to the U.S. Forest Service management plan for the Cascade Head Scenic Research area, the functional values of the estuary would be improved and the system restored to a more "natural" state through restoration of diked tidal marshes. Based on this analysis, alterations (e.g. dike removal, breaching, and shoreline stabilization) in conjunction with the resource capabilities of this unit.

Management Objective

Management unit 1 shall be managed to preserve, protect and where appropriate, enhance natural estuarine habitats and values.

Special Policies

1. Shoreline and aquatic alterations for bridge crossings shall be permitted only for expansion or maintenance of existing structures.
2. Shoreline stabilization shall be permitted only where active erosion threatens uses or structures established prior to October 1, 1977, or as part of an active restoration project.
3. Alterations for boat launching are to be permitted only in conjunction with the maintenance and improvement of existing facilities.

PERMITTED USE MATRIX

Management Unit No. SALMON 1
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																
N	Water dependent															
N	Water related															
N	Non-water related	C														
N	Marina															
N	Boat launching	C	N	N	N	N	P	N	N	N	N	N	C	C	C	3
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
P	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	N	C	C
N	Submerged crossings															
C	Bridge crossings	P	N	N	N	N	P	N	N	N	N	N	N	P	P	1
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	C	C	
Restoration																
P	Active	P	N	N	P	N	P	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SILETZ BAY

MANAGEMENT UNIT 1 - SILETZ

Description

Management Unit 1 includes the intertidal area north of the mouth of Schooner Creek, and all of the subtidal main channel from the mouth up to the old Highway 101 bridge crossing at Kernville. This is a predominantly subtidal area (with the exception of the intertidal sand area adjacent to the shoreline at Taft). Major uses in this unit include shallow draft recreational boating and sport angling. Piers, docks and boat launching facilities are located at Taft and on the spit at Salishan. A small marina is located at Kernville.

Classification: Conservation

This is a partially altered area and is designated conservation in order to provide for water dependent uses requiring minor alterations.

Resource Capability

Management unit 1 is divided between the marine and bay subsystems as described in the ODFW report Natural Resources of Siletz Estuary. The Taft shoreline area is within the marine subsystem. Management recommendations for this area indicate that the area could sustain moderate development activities (i.e. those not involving major intertidal dredge and fill or excessive occupation of surface area). Likewise, the intertidal shore area near Kernville is described by the report as "highly altered" and capable of accomodating additional recreational development.

Management Objective

Management unit 1 shall be managed to provide for water dependent recreational opportunities and facilities, consistent with the conservation of natural resources.

Special Policies

1. Bridge crossing construction will be permitted only for expansion or replacement of the existing crossings at Schooner Creek and Kernville.

PERMITTED USE MATRIX

Management Unit No. SILETZ 1
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
P	Boat launching	P	N	P	P	P	P	C	N	N	N	C	C	P	P		
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
C	Submerged crossings	P	N	N	P	P	P	N	C	C	N	N	N	C	C		
P	Bridge crossings	P	N	C	P	N	P	N	N	N	N	N	N	N	P	P	I
C	Storm water outfall	C	N	N	C	C	P	N	N	N	N	N	N	N	N	N	
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	P	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
Restoration																	
N	Active																
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 2 - SILETZ

Description

Management unit 2 includes Schooner Creek from the Highway 101 crossing up to the head of tide. This is a small tidal creek with some small tracts of high marsh and intertidal sand area in the lower portion. Uses in this unit include sport angling and some minor recreational boating activity. The City of Lincoln City sewage treatment plant and outfall are located within this unit. Some minor alterations are present in the form of a bridge crossing and shoreline rip-rap.

Classification: Conservation

This an area of less biological importance than units 3 and 5, and is designated conservation to allow for minor alterations in conjunction with recreational or public uses.

Resource Capability

This unit is identified as the Schooner Creek riverine sub-system in the ODFW natural resource report. The lower portions of the unit exhibit characteristics of a marine influenced environment, with some minor algal beds near the mouth, and sand shores and low sedge marshes above. The upper portions of the unit above the sewage treatment plant are typically riverine in character. The low marshes and aquatic beds near the mouth are sensitive areas and should be protected from major disturbances. According to ODFW's management recommendations "a boat ramp or a few public docks" would be consistent with resource capabilities in this area.

Management Objective

Management unit 2 shall be managed for low-intensity uses which require only minor alterations.

Special Policies

1. Bridge crossing construction will be permitted only for replacement or expansion of the existing crossings.

PERMITTED USE MATRIX

Management Unit No. SILETZ 2
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
P	Boat launching	P	N	P	P	P	P	N	N	N	N	N	N	C	P	N	
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
C	Overhead crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
P	Submerged crossings	P	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
P	Bridge crossings	P	N	C	P	P	P	N	N	N	N	N	N	N	P	P	1
C	Storm water outfall	P	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
C	Sanitary outfall	P	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
N	Navigation improvement																
C	Aquaculture Facilities	P	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
Restoration																	
P	Active	C	N	N	C	C	P	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 3 - SILETZ

Description

Management unit 3 consists of all of the intertidal and tidal marsh area along the east shore of the estuary from the mouth of Schooner Creek south to the upland area at Kernville. This management unit contains a number of resource characteristics of major significance, including major tracts of tide flats, salt marsh and seagrass and algal beds. The area between Cutler City and Kernville known as Snag Alley is an important waterfowl habitat. Uses in this unit are limited to some shallow draft recreational boating and other recreational uses such as hunting and angling. Alterations in the unit are limited to one small fill at Cutler City and several areas of rip-rapped shorelines.

Classification: Natural

This unit includes major tracts to tideflats and tidal marsh and is classified natural to protect important resource values.

Resource Capability

This unit is a portion of the bay subsystem of the Siletz estuary. This area contains the greatest diversity of habitats, including a large portion of the estuary's marsh and intertidal flat habitats. Due to the importance of this area to productivity of the estuarine system, alterations should be minimized. Those alterations proposed should be reviewed for consistency with the resource capabilities of this area, particularly the area's values for primary productivity.

Management Objective

Management unit 3 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of the existing crossing at Drift Creek.

PERMITTED USE MATRIX

Management Unit No. SILETZ 3
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
C	Bridge crossings	P	N	N	N	N	P	N	N	N	N	N	N	N	P	P	I
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	C	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
Restoration																	
C	Active	N	N	N	C	C	P	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 4 - SILETZ

Description

Management unit 4 includes all of Drift Creek between Highway 101 and the head of tide. This unit includes some small tracts of intertidal area and salt marsh of minor significance. Uses in the area include some recreational boating and sport angling. Alterations are present in the form of stabilized shorelines, bridge crossings and pasture dikes.

Classification: Conservation

This unit contains tracts of habitat of minor significance is classified conservation in order to provide for minor alteration in conjunction with recreational and other public uses.

Resource Capability

Management unit 4 is identified as the Drift Creek riverine subsystem. Comparatively little is known about the physical and biological characteristics of this unit. It is an important transportation corridor for anadromous fish, especially winter steelhead and Coho Salmon. Also, being just upstream of major tracts of marsh and tideflats, alterations in unit 4 could affect these important habitats. For this reason, alterations should be kept to a minimum in this unit, and those which are permitted should be reviewed on an individual basis to ensure that they are consistent with the resource capability of the area.

Management Objective

Management unit 4 shall be managed to conserve natural resources and to provide for uses requiring only minor alterations.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of existing crossings.

PERMITTED USE MATRIX

Management Unit No. SILETZ 4
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
		C	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
P	Overhead crossings	C	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
P	Submerged crossings	P	N	C	P	P	P	N	N	N	N	N	N	N	P	P	1
P	Bridge crossings	C	N	N	C	C	P	N	N	N	N	N	N	N	C	C	
C	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
N	Navigation improvement																
C	Aquaculture Facilities	P	N	N	C	C	P	N	N	N	N	N	N	N	C	C	
Restoration																	
P	Active	C	N	N	C	C	P	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

LINCOLN COUNTY
ESTUARY MANAGEMENT PLAN

SEPTEMBER, 1982

MANAGEMENT UNIT 5 - SILETZ

Description

Management unit 5 consists of the intertidal flats west of Highway 101 and south of the main channel, Millport Slough, and the tracts of tidal marsh north and west of Millport Slough. This unit contains major tracts of both tideflats and salt marsh. Smaller beds of seagrass and algae are also present. Uses in the area are limited to some minor recreational activities, and agricultural use (grazing) of some of the high marsh around Millport Slough. Alterations include diking and filling of marsh areas in the Siletz Keys area and at the mouth of Millport Slough, and numerous areas of rip-rapped shorelines.

Classification: Natural

This unit contains major tracts of tidal marsh and intertidal flats and is classified natural to protect these resources.

Resource Capability

This area consists of major tracts of tideflats in the south bay and large areas of tidal marsh in the upper bay subsystem around Millport Slough. While this system has been altered severely in the past by filling and diking, it still provides resource values which are essential to the natural estuarine productivity. Further alterations in this area should be restricted to minimal structural activities, such as piling placement for needed public uses such as overhead crossings. According to the ODFW resources evaluation of the Siletz Estuary, active restoration measures such as the placement of culverts in existing causeway fills will improve flushing and circulation and are consistent with the resource capability of this area.

Management Objective

Management unit 5 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of existing crossings.

PERMITTED USE MATRIX

Management Unit No. SILETZ 5
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Special Policy	Dolphins	Pilings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)
Commercial/Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
P	Overhead crossings															
N	Submerged crossings															
C	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement															
C	Aquaculture Facilities															
Restoration																
P	Active															
P	Passive															

MANAGEMENT UNIT 6 - SILETZ

Description

Management unit 6 includes all of the river from the old Highway 101 bridge crossing up to the head of tide at Cedar Creek. This unit has primarily riverine characteristics with fluctuations in water level due to tidal influences. The shoreline has been altered by commercial and private development. Marinas, trailer parks and residential subdivisions are interspersed with areas of agricultural and forest lands along the north bank. This section of the river is heavily used by bank and boat anglers. Rip-rap, bulkheads, docks, and pilings have altered the shoreline and narrow intertidal fringes in some areas.

Classification: Conservation

This is a partially altered area and is classified conservation to permit minor alterations in conjunction with water dependent recreational uses.

Resource Capability

Management unit 6 is comprised primarily of the riverine subsystem as described in The Natural Resources of Siletz Estuary (Estuary Inventory Report, Vol 2 No. 4, ODFW, 1979). According to the management recommendations contained in the report, the development of public marinas and boat launching ramps are in keeping with the resource capabilities of this area as such facilities will serve as an alternative to the proliferation of private docks. These public facilities should be reviewed so that they are located where only minor alterations are required (i.e. no major dredge or fill activities). Minor structural alterations such as docks, piling and piers will not significantly degrade the resources in this system.

Management Objective

Management unit 6 shall be managed to provide for recreational opportunities and development, consistent with the conservation of natural resources.

Special Policies

1. Individual, single purpose docks and piers shall not be permitted in new subdivisions and planned developments. Community facilities common to several users are encouraged.

PERMITTED USE MATRIX

Management Unit No. SILETZ 6
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																
C	Water dependent	P	N	N	N	N	P	N	N	N	N	C	C	C	C	
C	Water related	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
N	Non-water related	C														
C	Marina	P	C	C	P	P	P	P	C	C	P	P	P	P	P	
C	Boat launching	P	N	P	P	P	P	C	N	N	N	C	C	P	P	
Industrial																
N	Log dumping															
N	Log storage															
C	Mining	P	N	N	P	C	P	N	N	N	N	C	C	P	P	
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	C	C	
C	Submerged crossings	C	N	N	P	P	P	N	N	N	N	N	N	C	C	
C	Bridge crossings	P	N	C	P	P	P	N	N	N	N	N	N	P	P	
C	Storm water outfall	C	N	N	C	C	P	N	N	N	N	N	N	C	C	
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	P	N	N	C	P	P	C	C	C	C	C	C	C	C	I
C	Aquaculture Facilities	P	N	N	C	C	P	N	N	N	N	C	C	C	C	
Restoration																
C																
P	Active	N	N	N	C	C	P	N	N	N	N	N	N	N	N	
	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

ALSEA BAY

MANAGEMENT UNIT 1 -ALSEA

Description

Management unit 1 consists of the subtidal area between the mouth of the river and the PUD power line crossing at Waldport. This unit is predominantly marine in character, with high current velocities and high salinities. Substrates are mostly large grained sands, and no major seagrass or algal beds are present. Alterations are limited to the Highway 101 bridge footings and the power line support poles. This unit is heavily used for sport angling, crabbing and recreational boating.

Classification: Conservation

This unit is classified conservation in order to manage for long time uses of renewable resources.

Resource Capability

Unit 1 is a portion of the marine subsystem of Alsea Bay. Ocean waters and strong tidal currents dominate, and habitats are influenced primarily by the proximity to the ocean. Sand substrates in this area provide important feeding and rearing areas for fish and invertebrates, though this unit does not include the critical rock shore and intertidal habitats of the marine subsystem. The nature of this high energy environment is such that minor structural alterations such as piling or minor bridge maintenance will not have substantial impacts on the biota of the area. More extensive alterations such as mining or construction of new bridge crossings should be reviewed for consistency with the resource capability of the area.

Management Objective

Management unit 1 shall be managed to conserve natural resources and provide for uses requiring only minor alterations.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of the existing Highway 101 crossing.

PERMITTED USE MATRIX

Management Unit No. ALSEA 1
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
C	Mining	X	N	N	C	C	P	N	N	N	N	N	N	N	C	C	
C	Oil or Gas Extraction	X	N	N	C	C	P	N	N	N	N	N	N	N	C	C	
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
P	Overhead crossings	X	N	N	N	N	P	N	N	N	N	N	N	N	P	P	
C	Submerged crossings	X	N	N	P	P	P	N	N	N	N	N	N	N	C	C	
P	Bridge crossings	X	N	P	P	P	P	N	N	N	N	N	N	N	P	P	1
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	X	N	N	N	N	P	N	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	X	N	N	C	P	P	N	N	N	N	N	N	N	C	C	
Restoration																	
C	Active	X	N	N	C	C	P	N	N	N	N	N	N	N	N	N	
P	Passive	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 2 - ALSEA

Description

Management unit 2 includes the narrow intertidal area along the north shore of the estuary from the mouth east to the PUD power line crossing. This unit contains tracts of intertidal flats and also an intertidal rock shore which supports major growths of seagrass and algae. Use in this area is limited to recreational boating, angling, and crabbing during high tide. The only alterations present are the small channel which has been excavated into the Bayshore development and a small area of stabilized shoreline on the inside of the Bayshore spit.

Classification: Natural

This area contains major tracts of intertidal flats and seagrass and algae beds.

Resource Capability

Unit 2 is a highly sensitive area of intertidal habitats, including a relatively scarce rock shore habitat northeast of the U.S. Highway 101 Bridge. Because of the importance of this area, alterations which would degrade intertidal habitats through fill, sedimentation, scouring or excessive reduction of light should not be permitted. Proposed alterations should be reviewed for consistency with the resource capability of this area. According to ODFW management recommendations for the Alsea estuary, work necessary to repair and maintain the county boat ramp on the Alsea spit would be consistent with the resource capabilities of the area, and should be permitted in accordance with other relevant standards.

Management Objective

Management unit 2 shall be managed to preserve the intertidal flats, seagrass and algal beds which are present within the unit.

Special Policies

1. Alterations undertaken in conjunction with boat launching facilities shall be limited to those necessary to refurbish and maintain the existing county boat ramp.
2. Bridge crossing construction will be permitted only for maintenance or replacement of the existing Highway 101 crossing.

PERMITTED USE MATRIX

Management Unit No. ALSEA 2
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
C	Boat launching	P	N	N	N	P	P	N	N	N	N	N	N	N	N	N	1
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
C	Submerged crossings	C	N	N	C	C	P	N	N	N	N	N	N	N	N	N	
P	Bridge crossings	C	N	N	N	N	N	N	N	N	N	N	N	N	C	C	2
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	N	C	C	
Restoration																	
N	Active																
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 3 - ALSEA

Description

Management unit 3 consists of the intertidal flat along the south shore of the estuary from the mouth up to Waldport. This is a major tract of tideflat with a predominantly sand substrate. A small algal bed occurs within this unit on the bedrock shore area near the mouth of the estuary. This south shore area is an important fish spawning and nursery area. Only minor recreation use is present on the sand flats near the Highway 101 bridge, but the south shore of this unit near the mouth is heavily used by bank and boat anglers and also by recreational crabbers. Bridge footings and a seawall along the lower portion of this unit are the only alterations present.

Classification: Natural

This area contains major tracts of intertidal flats and is classified natural in order to preserve important resource values.

Resource Capability

Unit 3 includes a large intertidal flat and an important area of fish habitat along the south shore of the estuary. Management recommendations by ODFW indicate that this south shore area should remain free of alterations which would degrade intertidal habitats through fill, sedimentation, scouring or excessive reduction of light. Alterations with potential for these or similar impacts should be reviewed to assure consistency with the resource capability of this area.

Management Objective

Management unit 3 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Overhead crossings shall be placed on the Highway 101 bridge whenever practical.
2. Bridge crossing construction will be permitted only for maintenance or replacement of the existing Highway 101 crossings.

MANAGEMENT UNIT 4 - ALSEA

Description

Management unit 4 is Lint Slough, between the impounding structure and the Highway 34 crossing. This is an area of intertidal mud flats and low salt marsh. These important wetlands are minimally altered and receive only minor recreational use.

Classification: Natural

This area is a major wetland tract and is classified natural to manage for the preservation of important resources.

Resource Capability

According to recommendations by both ODFW (Management Recommendations for the Alsea Estuary, 1979) and the Corps of Engineers (Alsea Wetlands Review, 1976), Lint Slough is considered to be an important and productive wetland area and should be protected accordingly through the prohibition of major alterations such as dredge, fill or large structural alterations. Minor structural alterations may be permitted, but should be reviewed individually to assure that they do not impede tidal circulation or permanently disrupt intertidal or tidal marsh habitats.

Management Objective

Management unit 4 shall be managed to preserve and protect natural values.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of the existing crossing.

PERMITTED USE MATRIX

Management Unit No. ALSEA 4
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pillings	Dolphins	Special Policy
Commercial/Recreational																
N	Water dependent															
N	Water related															
N	Non-water related	C														
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C
C	Submerged crossings	N	N	N	C	N	N	N	N	N	N	N	N	N	N	N
P	Bridge crossings	P	N	N	C	C	P	N	N	N	N	N	N	N	C	C
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
N	Navigation improvement															
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	N	C	C
Restoration																
C	Active	C	N	N	C	C	P	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 5 - ALSEA

Description

Management unit 5 includes all of the intertidal flats north of the main river channel and east of the PUD power line crossing. It also includes the north channel and the tidal marsh areas north of the main channel up to river mile 5.7. This unit is a natural resource area of major importance. This unit displays great diversity of habitats, with extensive tracts of intertidal flats, important eelgrass and algal beds and major tracts of high salt marsh. Uses in the area are limited primarily to some minor recreational activity, with some grazing use of high salt marsh areas.

Classification: Natural

This unit contains major tracts of both intertidal flats and tidal marsh and is classified natural to manage for the preservation of natural resource values.

Resource Capability

This large area contains a great diversity of habitats and resource values, including the estuary's largest tracts of tidal marsh and intertidal flats. This unit is the transition zone between salt and fresh waters; the extensive flats are where most of the fine grained river borne sediments are deposited. Because of the variety of important values in this area, alterations should be individually reviewed to assure that they are consistent with the resource capability of the area. According to ODFW recommendations, the dike across the north channel hinders passage of anadromous fish and retards flushing, resulting in low dissolved oxygen levels in the area. The breaching or removal of this dike is recommended by ODFW as a restoration action consistent with the resource capabilities of this area.

Management Objective

Management unit 5 shall be managed to preserve and protect natural resources and values.

PERMITTED USE MATRIX

Management Unit No. ALSEA 5
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
C	Overhead crossings	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C
C	Submerged crossings	N	N	N	C	N	N	N	N	N	N	N	N	N	N	N	N
N	Bridge crossings																
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	N	N	C	C
Restoration																	
P	Active	C	N	N	P	C	P	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 6 - ALSEA

Description

Management unit 6 includes all of the sub-tidal area south of management unit 5 between the port docks at Waldport and river mile 5.7. This area receives heavy recreational use. Shoreline alteration and development for these uses along the south shore includes the port facilities at Waldport, the small boat basin at the mouth of Lint Slough, several commercial marinas above Eckman Lake and numerous private docks and piers.

Classification: Conservation

This is a partially altered area and is designated conservation in order to provide for water dependent uses consistent levels of development.

Resource Capability

Unit 6 includes a portion of the bay subsystem along the southern shore of the estuary where habitats, according to ODFW, "have been drastically modified." ODFW recommendations indicate that development where pilings, docks and other alterations exist should be encouraged as consistent with the resource capabilities of this area. Those portions of the south shore included in unit 6 are previously altered areas. Uses similar to existing uses in the area, including water dependent commercial activities not requiring fill, should be permitted in accordance with ODFW recommendations.

Management Objective

Management unit 6 shall be managed to provide for water dependent recreational opportunities and development, consistent with the conservation of natural resources.

Special Policies

1. Bridge crossing construction shall be limited to maintenance or replacement of the existing crossing at Lint Slough.

PERMITTED USE MATRIX

Management Unit No. ALSEA 6
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																
P	Water dependent	C	N	N	N	N	P	N	N	N	N	C	C	C	C	
C	Water related	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
N	Non-water related	C														
C	Marina	P	C	P	P	P	P	P	C	C	P	P	P	P	P	
C	Boat launching	P	N	P	P	P	P	C	N	N	N	C	C	P	P	
Industrial																
N	Log dumping															
	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	C	C	
C	Submerged crossings	C	N	N	P	P	P	N	N	N	N	N	N	C	C	
P	Bridge crossings	P	N	P	P	P	P	N	N	N	N	N	N	P	P	1
C	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	P	N	N	C	P	P	C	C	C	C	C	C	C	C	
C	Aquaculture Facilities	P	N	C	C	P	P	N	N	N	N	C	C	C	C	
Restoration																
C	Active	C	N	N	C	C	P	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 7 - ALSEA

Description

Management unit 7 consists of McKinney Slough and the intertidal algal beds immediately west of the slough mouth. This is an important wetland area of intertidal mud flats, high and low salt marsh and a small algal bed. Uses in this area are limited to some minor recreational activity. This unit is essentially unaltered, with the exception of the bridge crossing structure near the head of McKinney Slough.

Classification: Natural

This area is a major tract of wetlands and is designated natural to provide for natural resource protection.

Resource Capability

McKinney Slough is labeled as "wetlands of importance" by the Alsea Wetlands Review (USACE). Likewise, ODFW recommends that the area should be retained in its present state. In order to limit alterations to those which do not result in permanent disturbance or destruction of wetland values, proposals should be evaluated individually to assure that activities are consistent with the resource capabilities of the area. Bridge maintenance or construction activities have occurred in this area in conjunction with the Highway 34 crossing. If future maintenance or construction requires the replacement of piling or dolphins, such activity will be permitted as consistent with the area's resource capability, providing it does not substantially impede tidal circulation (as required by Estuarine Use Standards).

Management Objective

Management unit 7 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of the existing crossing.

PERMITTED USE MATRIX

Management Unit No. ALSEA 7
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related																
N	Marina																
N	Boat launching																
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
N	Overhead crossings																
N	Submerged crossings																
P	Bridge crossings	P	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
N	Navigation improvement																
C	Aquaculture Facilities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C
Restoration																	
C	Active	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 8 - ALSEA

Description

Management unit 8 includes all the intertidal flat and tidal marsh area at the mouth of Eckman Lake. This is a wetland area of major importance. Uses in the area are limited to some minor recreational activity. Some filling of marsh areas has occurred at the eastern end of this unit, but these are relatively minor alterations.

Classification: Natural

This unit is a major tract of tidal marsh and is designated natural to provide for natural resource protection.

Resource Capability

Management unit 8 includes the remaining unaltered tracts of intertidal flat and tidal marsh along the south shore of the bay subsystem. This important resource area is identified by the USACE as "wetlands of importance" where applications for major alterations such as dredge, fill or pier construction would normally be denied. Because of this area's important resource characteristics, alterations should be limited to low intensity activities which do not degrade the wetland values of the area. Such proposals should be evaluated individually to determine consistency with the resource capability of the area.

Eckman Lake has been identified as a potential estuarine restoration site. Because of the size and complexity of a restoration project involving Eckman Lake and the potential for adverse impacts on other estuarine habitats, restoration activities should be reviewed for consistency with this area's resource capability.

Management Objective

Management unit 8 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction shall be permitted only for maintenance or replacement of the existing crossing at Eckman Lake.

PERMITTED USE MATRIX

Management Unit No. ALSEA 8
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
N	Submerged crossings															
P	Bridge crossings	P	N	N	N	N	N	N	N	N	N	N	N	N	P	P
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
N	Navigation improvement															
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	C	C	
Restoration																
C	Active	C	N	N	C	P	N	N	N	N	N	N	N	C	C	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

MANAGEMENT UNIT 9 - ALSEA

Description

Management unit 9 extends from the boundary of management unit 5 near the mouth of Drift Creek up to the head of tide. Drift Creek has the character of a tidal river. Intertidal habitats are narrow, and the river has steep banks covered with dense riparian vegetation. Some diked marshes occur in this unit; they are used as pasture. This unit receives moderate recreational use by boat anglers. Alterations to this unit are minimal.

Classification: Conservation

This is an area with some important biological values and is designated conservation to provide for low intensity uses not requiring major alterations.

Resource Capability

Management unit 9 is the Drift Creek riverine subsystem. Relatively little is known about the physical and biological characteristics of this unit. It is an important transportation corridor for anadromous fish, including wild stocks of fall chinook, Coho and winter steelhead. Also, being just upstream of major tracts of tide flats and tidal marshes, alterations in unit 4 could affect these important habitats. For this reason, alterations in this area should be minimized. Minor structural alterations such as piling or dolphins for maintenance or replacement of the existing bridge crossings in this unit would not have any significant effects on important resource values and may be permitted as consistent with the resource capabilities of the area.

Management Objective

Management unit 9 shall be managed for uses which conserve natural resources and require only minor alterations of the estuary.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of existing crossings.

PERMITTED USE MATRIX

Management Unit No. ALSEA 9
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

	Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Harves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																
N	Water dependent															
N	Water related															
N	Non-water related	C														
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
N	Submerged crossings															
P	Bridge crossings	P	N	N	N	N	N	N	N	N	N	N	N	N	P	P
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
N	Navigation improvement															
C	Aquaculture Facilities	P	N	N	C	N	P	N	N	N	N	N	N	N	P	P
Restoration																
P	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 10 - ALSEA

Description

Management unit 10 extends from river mile 5.7 to the head of tide at river mile 15. The estuary in this unit has the characteristics of a tidal river. Intertidal habitats are narrow and the river's steep banks are covered with grasses, shrubs and trees. The shoreline has been altered in many locations by commercial and private development. Marinas, travel trailer parks and residences are grouped primarily along the north bank. Rip-rap, bulkheads, docks and pilings have altered intertidal areas in many locations. This portion of the estuary is used heavily by boat and bank anglers and recreational boaters.

Classification: Conservation

This is a partially altered area and is classified conservation in order to provide for recreational and other water dependent uses requiring minor alterations.

Resource Capability

Management unit 10 includes the Alsea riverine subsystem. According to management recommendations provided by ODFW, development of marinas and other public recreation facilities in previously altered areas would be consistent with the resource capabilities of the area. Likewise, the Alsea Wetlands Review indicates that Department of Army permits would generally be issued in these already developed shoreline areas, but would be denied in areas where shorelines have not been disturbed. Because locational factors will play a major part in permit decisions in this unit, proposals for recreational developments in aquatic areas should be reviewed individually to establish consistency with the resource capability of the area.

One bridge crossing is present at approximately river mile 7 and it is possible that additional crossings may be proposed as substantial portions of the south shore are largely inaccessible above river mile 10. Such structures may be permitted as consistent with the resource capability of the area in accordance with review requirements for compatibility with existing uses, minimizing adverse biological impacts, and the allowance for only minor alterations.

Management Objective

Management unit 10 shall be managed to provide for water dependent recreational opportunities and development, consistent with the conservation of natural resources.

Special Policies

1. Individual, single purpose docks and piers shall not be permitted in new subdivisions and planned developments. Community facilities common to several users are encouraged.

PERMITTED USE MATRIX

Management Unit No. ALSEA 10
 Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																
C	Water dependent	P	N	N	P	P	P	C	N	N	N	P	P	P	P	P
C	Water related	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
N	Non-water related	C														
C	Marina	P	C	P	P	P	P	P	C	N	P	P	P	P	P	P
C	Boat launching	P	N	C	C	P	P	C	N	N	N	C	C	P	C	C
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
C	Overhead crossings	C	N	N	N	N	P	N	N	N	N	N	N	C	C	C
C	Submerged crossings	C	N	N	P	P	P	N	N	N	N	N	N	C	C	C
P	Bridge crossings	P	N	N	P	N	P	N	N	N	N	N	N	P	P	P
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	N
C	Aquaculture Facilities	P	N	C	P	P	P	N	N	N	N	N	N	N	N	N
Restoration																
C	Active	C	N	N	P	C	P	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MINOR ESTUARIES

MANAGEMENT UNIT 1 - BEAVER CREEK

Description

Management unit 1 includes all of the Beaver Creek estuary below Highway 101. This is a small estuary with limited intertidal area and some minor algal beds. This is an important recreational area (it flows through Ona State Park) and use is heavy. Alterations are present in the form of stabilized shorelines and bridge crossing construction.

Classification: Natural

This area is classified natural in order to maintain a diversity of values in the estuary.

Resource Capability

The portion of the Beaver Creek estuary is an important recreational and aesthetic resource. Very little is known concerning the area's physical and biological characteristics, but the limited intertidal and algal bed areas of the estuary are located in this unit. Two bridge crossings are present within the unit, one a footbridge in the state park, the other the Highway 101 bridge. Minor bankline alterations have occurred in the past in conjunction with these structures without substantial impacts. Similar minor alterations in conjunction with these uses will be consistent with resource capability of this area.

Management Objective

Management unit 1 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction will be permitted only for maintenance or replacement of existing crossings.

PERMITTED USE MATRIX

Management Unit No. BEAVER CREEK 1
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

	Special Policy	Dolphins	Pilings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)	
Commercial/Recreational																
N	Water dependent															
N	Water related															
N	Non-water related														C	
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
N	Submerged crossings															
P	Bridge crossings										P	N	N	N	N	P
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
N	Navigation improvement															
N	Aquaculture Facilities															
Restoration																
C	Active										C	N	N	N	C	C
P	Passive										N	N	N	N	N	N

MANAGEMENT UNIT 2 - BEAVER CREEK

Description

Management unit 2 extends from Highway 101 up to the head of tide (near the confluence of the north and south forks of Beaver Creek). The estuary in this unit has the character of a small tidal river. Intertidal habitats are narrow and the creek's banks are covered with grasses, forbes, shrub's and trees. Alterations in this unit are minimal.

Classification: Conservation

This unit is classified conservation in order to provide for uses requiring minor alterations and to conserve natural resources.

Resource Capability

This area is a predominantly fresh-water environment, and receives some moderate recreational use from boaters and anglers. In general, minor alterations which do not degrade riparian habitats or water quality or impede anadromous fish passage are consistent with the resource capabilities of this area.

Management Objective

Management unit 2 shall be managed for uses which conserve natural resources and require only minor alterations.

Special Policies

1. Boat launching construction is permitted only for maintenance or expansion of the existing facility.
2. Bridge crossing construction will be permitted only for expansion or replacement of existing crossings.

PERMITTED USE MATRIX

Management Unit No. BEAVER CREEK 2

Classification CONSERVATION

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial /Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
P	Boat launching	P	N	C	P	P	P	N	N	N	N	N	N	P	P	P	1
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
P	Overhead crossings	C	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P
C	Submerged crossings	N	N	N	C	N	N	N	N	N	N	N	N	N	N	N	N
P	Bridge crossings	P	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
N	Navigation improvement																
C	Aquaculture Facilities	P	N	C	C	P	N	N	N	N	N	N	N	N	N	P	P
Restoration																	
P	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

MANAGEMENT UNIT 1 - BIG CREEK

Description

Management unit 1 encompasses the entire Big Creek estuary. Big Creek forms a small estuary just below Placer Lake, and for a short distance up Dick's Fork to the south. The estuary consists of two small subtidal channels (Big Creek and Dick's Fork) and a small tract of undisturbed high salt marsh. The two streams support runs of wild sea-run cutthroat trout and some use by other anadromous salmonids is probable. Some minor recreational use occurs in the unit. Alteration of the area is limited to structures and shoreline stabilization near the Highway 101 bridge crossing.

Classification: Natural

Resource Capability

This is a small estuarine area with little capacity to sustain aquatic area alterations. Although not much is known about the physical or biological characteristics of this area, it is known that the area is used by anadromous salmonids and it is likely that the marsh areas provide important primary productivity and wildlife habitat. Alterations in the area should be limited to those activities which do not adversely impact these values to maintain the area's resource capabilities.

Near the Highway 101 bridge crossing, the estuary is narrow and shallow, with unvegetated sand substrates. Biological values in this area are probably low, and alterations for needed bridge maintenance or replacement would be consistent with the resource capabilities of the area, so long as they do not impede fish passage.

Management Objective

Management unit 1 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction will be permitted only for expansion or replacement of the existing crossing.

PERMITTED USE MATRIX

Management Unit No. BIG CREEK 1
 Classification NATURAL

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Special Policy	Dolphins	Pillings	Docks	Piers	Wharves	Groins	Pile Dikes	Breakwaters	Navigation Aids (beacons, buoys, etc.)	Maintenance Dredging	New Dredging	Fill	Dikes (new)	Shoreline stabilization (structural)
Commercial/Recreational																
N	Water dependent															
N	Water related															
N	Non-water related	C														
N	Marina															
N	Boat launching															
Industrial																
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
Public																
N	Overhead crossings															
N	Submerged crossings															
P	Bridge crossings	P	N	N	C	C	N	N	N	N	N	N	N	N	P	P
N	Storm water outfall															
N	Sanitary outfall															
Port Facilities																
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
N	Navigation improvement															
C	Aquaculture Facilities	C	N	N	N	N	P	N	N	N	N	N	N	N	C	C
Restoration																
C	Active	N	N	N	C	C	N	N	N	N	N	N	N	N	N	N
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Management Unit 1 - Yachats River *

Description

Management Unit 1 extends from the Yachats city limits upstream to the head of tide, a distance of approximately one-half mile. The estuary in this unit has the character of a small tidal river. Intertidal habitats are narrow and the stream banks are covered with grasses, forbes, shrubs, and trees. Alterations in this unit are minimal.

Classification: Conservation

Resource Capability

This area is a predominantly fresh water environment which receives some moderate recreational use from boaters and anglers. This area does provide an important transportation corridor for anadromous salmonids which spawn in freshwater areas upriver. In general, minor alterations which do not degrade riparian habitats or water quality or impede anadromous fish passage are consistent with the resource capabilities of this area.

Management Objective

Management Unit 1 shall be managed for uses which conserve natural resources and require only minor alterations.

Special Policies

1. Individual single purpose private docks are not permitted in Unit 1. Public or community facilities common to several users are encouraged.
- * The portion of the Yachats estuary covered by the estuary management plan is only that portion outside of the Yachats city limits. The Yachats Urban Growth Boundary does not extend beyond the corporate limits of the city; therefore there is no area of joint city/county management responsibility. However, the city and county management provisions for the estuary have been coordinated and are fully consistent.

PERMITTED USE MATRIX

Management Unit No. Yachats 1
 Classification Conservation

P = Permitted w/standards
 C = Conditional
 N = Not Allowed
 X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	(beacons, buoys, etc.)	Navigation Aids	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
Commercial/Recreational																	
N	Water dependent																
N	Water related																
N	Non-water related	C															
N	Marina																
C	Boat launching	P	N	C	P	P	P	N	N	N	N	N	N	C	P	P	I
Industrial																	
N	Log dumping																
N	Log storage																
N	Mining																
N	Oil or Gas Extraction																
N	Industrial outfalls																
N	Marine ways																
N	Water dependent industrial																
N	Water related industrial																
N	Non-water related industrial																
Public																	
P	Overhead crossings	C	N	N	N	N	N	N	N	N	N	N	N	N	P	P	
C	Submerged crossings	N	N	N	C	N	N	N	N	N	N	N	N	N	N	N	
N	Bridge crossings																
N	Storm water outfall																
N	Sanitary outfall																
Port Facilities																	
N	Deep draft (over 23')																
N	Medium draft (10'-22')																
N	Shallow draft (0-9')																
N	Navigation improvement																
C	Aquaculture Facilities	C	N	P	P												
Restoration																	
p	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	N	N
p	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

PART VII

MITIGATION AND RESTORATION

Lincoln County estuaries have been substantially altered over the past century to provide for navigation, shoreline development and agriculture. Upriver watershed activities have also contributed significantly to changes in the natural functioning of the estuaries. While it is not possible or desirable to return the estuaries to their pre-nineteenth century condition, restoration of certain habitat and cultural values is an important estuary management objective.

Necessary new development projects in estuarine areas will have some adverse environmental impacts, regardless of how carefully the projects are designed and planned. The adverse effects of such development can be compensated for (or mitigated) by the creation, restoration or enhancement of other estuarine areas.

RELATIONSHIP OF RESTORATION AND MITIGATION

Restoration refers to restoring prior or original attributes of the estuary that were lost as a result of past alterations. Examples of restoration projects include removing fills; marsh creation; shoreland vegetation planting to control erosion and re-establish riparian zones, breaching dikes to restore or improve tidal flushing; and dredging and construction measures to re-establish former depths, shoreline configurations and flushing and circulation patterns.

Mitigation refers specifically to offsetting or compensating for adverse impacts of proposed dredging and filling through creation, restoration and enhancement of estuarine areas.

Restoration and mitigation are connected in that certain restoration activities can serve as mitigation for adverse impacts of development. For example, restoration of an abandoned diked marsh to full aquatic production by removing or breaching the dike would generally be acceptable mitigation for filling a tidal marsh in some other area for water dependent development.

Statewide Planning Goal 16 has explicit requirements concerning mitigation. Implementation requirement 4 states:

"Adverse impacts to estuarine resources resulting from dredge or fill activities permitted in intertidal or tidal marsh areas shall be mitigated by creation, restoration or enhancement of an estuarine area(s). The objective shall be to improve or maintain the functional characteristics and processes of the estuary, such as its natural biological productivity, unique features and water quality."

The Oregon Removal-Fill Law (ORS 541.605-541.695) provides the Division of State Lands (DSL) with the authority to require

mitigation for dredging or filling waters of the state. For estuarine areas, DSL must require mitigation for alteration of intertidal and tidal marsh areas as outlined in Goal 16. DSL may also require mitigation for alteration of productive sub-tidal areas. Certain activities which have negligible adverse impacts can be exempted from the mitigation requirement. DSL coordinates its permit issuance and mitigation requirements with affected local, state and federal agencies.

OVERALL RESTORATION POLICY

All restoration projects should serve to revitalize, return, replace or otherwise improve estuarine ecosystem characteristics.

Examples include restoration of natural biological productivity, fish or wildlife habitat or other natural characteristics or resources which have been diminished or lost by past alterations, activities or catastrophic events. In selecting projects, priority should be given to those projects which provide substantial public benefits and which restore habitat types, resources or values which are in shortest supply as compared to past abundance. Particular emphasis should be given to aquatic and riparian habitat restoration.

RESTORATION NEEDS

Yaquina Bay

Past alterations in the Yaquina Bay estuary have resulted in the loss of a number of resources and habitat types. Probably the most conspicuous of these alterations are the numerous landfills (253 acres total) which have resulted in the loss of nearly 200 acres of intertidal area, or about 14% of the total tidelands within the bay. The other major alteration that has resulted in significant habitat and resource loss has been the extensive diking and/or filling of tidal marsh areas. Tidal marsh is a scarce habitat type within Yaquina Bay. With a total area of slightly less than 4,000 acres, Yaquina Bay contains only 819 acres of tidal marsh. Some tidal marsh areas have been filled for development or used as dredged material disposal sites. Others have been diked and closed off from tidal flushing for use as pasture.

The opportunities for the restoration of tideland area within Yaquina Bay are extremely limited. Nearly all of the filled areas have been developed for commercial or industrial uses, making any major fill removal impractical. Some small sites may be suitable for the restoration of limited intertidal areas.

By far the most prevalent and practical restoration opportunities in Yaquina Bay involve marsh creation/restoration. Extensive

areas of diked or semi-diked marsh exist in the middle and upper portions of the estuary; a number of these areas have the potential to be restored to productive tidal marshes.

Salmon River

The Salmon River estuary has been minimally altered in comparison to other estuaries in the county. Only one small area of tidelands (0.12 acres) has been filled; other aquatic area alterations are limited to bank stabilization and bridge structures. By far the most significant resource loss in the estuary has been the diking of tidal marshes for agricultural use. Almost half of the 556 acres of tidal marsh in the estuary have been diked. Recently, about 60 acres of diked marsh were restored to the estuary as part of the Forest Service's management of the Cascade Head Scenic Research Area. The opening of other diked marsh areas represents the most practical and productive restoration opportunity in the estuary.

Siletz Bay

Siletz Bay has been substantially altered by landfills and diking primarily around the Kernville-Millport Slough area. Only a little more than two acres of tidelands have been filled, but substantial areas of tidal marsh have been both filled and diked. As is the case with most Lincoln County estuaries, both the major resource losses and the primary opportunities for restoration involve tidal marsh.

Alsea Bay

Alsea Bay has been moderately altered by a number of activities, including landfills in intertidal areas, fills in tidal marsh areas, diking of tidal marsh areas and extensive shoreline development. About 25 acres of intertidal area has been filled, but this represents only a small fraction of the total tidelands in the bay. Significant areas of tidal marsh have been filled in the Eckman Lake area, and the flushing of marshes in other areas has been restricted by dikes and tidegates.

RESTORATION SITES

The following sites have been inventoried as potential restoration sites. This list identifies those known sites which have some potential for restoration to the estuary. This list does not exhaust the possibilities for creation or enhancement of other areas which may be performed as mitigation. As additional sites or procedures are identified, they should be added to this section through a plan amendment.

Yaquina Bay

Site #1 - Margaret's Marine Ways

This is an approximately three acres site immediately east of Margaret's Marine Ways, on the east side of County Road 515. The restoration of tidal flushing in this area would result in the re-establishment of a high tidal marsh. The site is currently a freshwater wetland in use as pasture. A house is present on the edge of the area near the road. There is a well developed channel which is closed off from the estuary by the road, which has a tidegated culvert through it. To restore the area, the tidegate would have to be removed or a bridge crossing constructed. This site also has potential as a back up development area for the adjacent water dependent uses in management unit 14, and this use may take priority over its value as a restoration site. Also before any restoration action took place, the elevation of the existing house would have to be carefully surveyed to determine potential flood danger.

Site #2 - L.B. Huss Property

This site is an existing freshwater marsh area used as a pasture. It is about three acres in size and is located approximately one mile east of River Bend. It is blocked from tidal flushing by a tidegated culvert which passes under County Road 515. This area could be restored to tidal marsh by removal of the tidegate or construction of a bridge crossing for the road. A house and other structures are present and their elevation would have to be checked to determine potential flood hazard.

Site #3 - Blackberry Hill

This is a partially tidal marsh area of approximately three acres in size. Tidal flushing to the area is severely restricted, with only a small culvert opening through the road dike. This site is presently undeveloped, and a number of tidal channels are present. By replacing this existing culvert with either larger culverts or a bridge crossing, the area could be significantly enhanced through restoration of tidal circulation.

Site #4 - Reinoehl Trout Hatchery

This is a small freshwater drainage/wetland, the lower portion of which receives some tidal influence because of a faulty tidegate. The upper portion of this two to three acre site has been diked to form a pond which is used as a trout hatchery. The restoration of full flushing to the lower portion of this site by removing the tidegate or placement of a bridge would re-establish an area of tidal marsh.

Site #5 - Sherman Property

This is a high freshwater marsh, about two acres in size. It is located approximately 0.9 miles east of Oregon Oyster Co. and is north of County Road 515. Tidal action is blocked from this area by the road dike which has two tidegated culverts through it. This site has a well developed main channel, although secondary tidal channels are not present. Tidal marsh could be restored at this site if a larger open culvert were placed through the road or if a bridge crossing were constructed.

Sites #6 and #7 - Boone's and Nute's Sloughs *

These are two large sloughs which are now areas of freshwater marsh and diked pasture land. They are closed off from the estuary at the slough mouths by two large, functional tidegates. The lower portions of the Boone's Slough main channel are not diked and some tidal channels are still present. The upper portions of Boone's and all of Nute's Slough are diked and quite high. The potential of restoring these areas to tidal marsh needs further investigation. Also, the loss of agricultural land that would result from restoring this area would need to be fully evaluated. Tidal marsh is a limited eco-type in the Yaquina Bay, and the restoration of Boone's Slough and Nute's Slough could potentially add over 600 acres of tidal marsh back to the estuary. This is one of the largest potential restoration projects on the Oregon Coast and represents an opportunity for large scale restoration of a scarce resource. For this reason, this project should receive high priority for further study. The project's scale and magnitude as well as the range of potential benefits that would result present an ideal opportunity for a cooperative effort between local, state and federal interests.

Site #8 - Northern Portion of Management Unit 33

This site is a partially diked marsh area. The northern most portion of this area has been used for dredged material disposal and would not be suitable for restoration. The remainder of the site has some tidal influence because the existing dikes are in a state of disrepair. Flushing of the area could be improved if additional breaches were made in the dikes. This site is currently being examined as a potential log storage site. The resource benefits that would result from removing logs from existing in-water storage sites may outweigh the benefits of restoring tidal marsh in this area. The use of this area for restoration will not be considered until the potential suitability of the site for use as an alternative to in-water log storage has been determined.

Site #9 - Olalla Slough #1 *

This is a small area (about two acres) which was diked some time ago. The dike is currently breached and some tidal flushing is present; the site has high tidal marsh characteristics. The productivity of this site could be enhanced by removal or additional breaching of the dikes to restore full tidal flushing.

Site #10 - Olalla Slough #2 - (Fieber Pasture) *

This is an area of diked pasture land that is approximately 14 acres in size. Tidal channels are still present on this site, and dike removal or breaching could restore the area to high tidal marsh. The dikes are currently well maintained and the site is in active pasture use. This site has been identified as a potential dredged material disposal site. Because of the scarcity of suitable spoil disposal sites in this area, first priority for use of this site should be for dredged material disposal. It should only be considered for restoration if findings can establish that it is not needed for spoil disposal.

Site #11 - Olalla Slough #3 *

This site encompasses all of the Olalla Slough area above the causeway. There are five culverts with tidegates that pass through the causeway dike. The water level in the slough above the tidegates is diked from the main channel and is in agricultural use as pasture. Few tidal channels are present. Some areas of high marsh could probably be restored if some of these dikes were removed or breached. Restoration of tidal influence and tidal marsh area in this upper portion of Olalla Slough would be a major project, but the physical potential does exist. This site can only be considered for restoration if it is no longer needed for its current use as an industrial water storage site.

Site #12 - Publisher's #1 *

This is a diked area extending for about 6000' upriver from the Publisher's Paper mill site. A portion immediately adjacent to the mill site has been used in the past for dredged material disposal, and is identified as a future spoil disposal site. This portion of this site is within the Toledo urban growth boundary and priority for its use should be for dredged material disposal and/or upland log storage, since little restoration potential exists. The remainder of the site which is outside the Toledo urban growth boundary does have some potential for restoration of high marsh if the

existing dikes were removed or breached. This site has rail access and is located adjacent to an existing industrial site. It has significant potential as a site for industrial development. Use of this area as a restoration site will require findings that the benefit of such restoration outweighs the need for use of this site for industrial development.

Site #13 - Publisher's #2 *

This is a sizeable freshwater wetland that was diked at one time for use as pasture. The dikes have been breached and well developed tidal channels are present. Productive value of this high marsh area could be improved if the dikes were removed or additional breaches made. This site is not currently in active agricultural use.

Site #14 - Depot Slough *

This site encompasses all of the Depot Slough area between the tidegate and Highway 20. The tidegate and dike on the main channel of the slough are located approximately one-half mile above the County Road 515 bridge. By removing the tidegate, tidal influence could be restored to the main slough channel. However, the adjacent pasture (formerly high marsh) areas are surrounded by well maintained dikes and are in active agricultural use. No tidal channels are present. These pasture dikes and the existing tidegate are maintained by an active special district and a restoration project in this area would conflict with present and planned agricultural use in the area. Although physical potential for restoration in this area does exist, this site is not currently considered to be a viable restoration site due to major conflicts with existing committed uses.

Site #15 - Flesher Slough

This is a slough of approximately 15 acres located west of Toledo on the South Bay Road. The slough consists of both intertidal mud flats and high salt marsh. Flushing of this area is severely restricted by the road dike which has only a single small culvert through it. Productivity of this area could be enhanced by the restoration of full tidal flushing. This could be accomplished by the placement of additional culverts or the construction of a bridge crossing for the road.

Salmon River

Site #1 - Lower Three Rocks Road

This is a small, partially diked area of high marsh located on the north shore about 0.5 miles east of the county boat ramp.

The dikes on this site are breached in two locations, and partial tidal exchange is present. Removal or additional breaching of these dikes would improve tidal flushing and restore high marsh vegetation to the site.

Site #2 - YWCA Property *

This is a large area (150 acres) of diked marsh on the south shore adjacent to Camp Westwind. It has two large tidal channels and numerous smaller channels throughout its area. The main channels are blocked by a large tidegate, and there are dikes on both the western and eastern margins of the property which separate it from areas of undiked marsh. This site could be restored as high marsh by removal of the main tidegate. Flushing and drainage would be further improved by removal or breaching of the dikes on the east and west sides.

Site #3 - Gnos Property *

This is a diked area between Three Rocks Road and Highway 101. There is a well maintained dike between the area and the river. One major tidal channel is present which has a tidegate constructed across its mouth. The area is currently being intensively managed as pasture and nearly all of the smaller tidal channels have been filled in. Some marsh could be re-established if the dike and tidegate were removed, although it may also be necessary to re-establish some of the secondary tidal channels.

Site #4 - Pixieland Property

This is a tidal marsh which is diked on three sides and is also partially surrounded by an artificially constructed canal. It has been developed in the past as an amusement park and, although there is no current active use of the property, numerous buildings and other improvements are present. Portions of this site on the northern and western fringes may have some restoration potential, restoration on the balance of the property is probably impractical.

Siletz Bay

Site #1 - Lower Drift Creek *

This is an area diked marsh in use as pasture. It is located immediately north of the mouth of Drift Creek and is bisected by Highway 101. Dikes are located along the main Drift Creek channel, and tidegates are present near the mouth. A barn is present on the west side of Highway 101 and a dwelling is located on a small fill area east of the highway. If the dikes were breached or removed, some tidal marsh could probably be restored in this area, although few tidal channels remain throughout most of the site.

Site #2 - Upper Drift Creek*

This is a large (175 acres) area of diked marsh located about two miles above the mouth of Drift Creek. While dikes are present along the main channel of Drift Creek, no tidal channels or tidegates are present on the site. Dike removal could be effected, but because of this site's relatively high elevation and lack of any tidal channels, any appreciable marsh restoration seems unlikely.

Site #3 - Millport Slough*

This is a large area of diked marsh (200 acres) located immediately south of Millport Slough. A dike runs along the length of the main slough channel and a secondary channel at the west end of this site (which provides the drainage for the area) is closed off by a tidegate. Most of the lower portion of this site has no apparent use currently, but the eastern portion is used for grazing. This site appears to have high potential for restoration of high marsh. Removal of the tidegate at the west end would restore much of the tidal flushing to the lower portion, and dike removal or breaching would provide tidal exchange to the upper portions. There are additional areas of diked marsh north of Millport Slough, but much of this area has been filled and developed for residential uses and does not appear to be suitable for restoration.

Site #4 - Kernville Pasture*

This is a diked marsh area of about 80 acres located just north of Highway 229, one mile east of Highway 101. It has numerous tidal channels present and much of the area is periodically inundated with freshwater runoff. It is blocked from the estuary by the road dike, which has culverts through it in two locations. These culverts are equipped with functional tidegates. Tidal marsh could be restored in this area by removal of the tidegates. The placing of additional culverts would likely be beneficial also, but may be impractical.

Alsea Bay

Site #1 - Lint Slough

The upper portions of Lint Slough were cut off from major tidal exchange by construction of an impoundment dam. The area behind the dam was used as a fish rearing area at one time. Some tidal exchange is present in this area, but flushing of the area could be improved by removing the impounding structure. This would restore to full tidal influence a subtidal mud channel and a surrounding fringe of high marsh. Further up Lint Slough is another dike which has a tidegated culvert through it. The

area behind this dike is primarily in use as pasture. Some tidal marsh could be restored in this area if the dike and/or tidegate were removed.

Site #2 - Bayview *

This is an extensive area (300 acres) of diked marsh which is currently used as pasture. A small tidal channel is present in the lower portion of this area; it passes through Bayview Road via a culvert fitted with a tidegate. The upper portions of this area are quite high and no tidal channels are present. The lower portions are somewhat lower and still retain some wetland characteristics. It may be possible to restore some tidal marsh to this area by removing the tidegate.

Site #3 - Eckman Lake

Eckman Lake is a former tidal slough which is located at approximately river mile 4.5. The tidal slough was diked at its mouth by the construction of the Highway 34 causeway. It is currently a small freshwater lake, which drains into the estuary through an outlet in the west end of the road dike. This outlet maintains the lake at a constant level and is elevated to prevent the intrusion of tidal waters into the lake.

The area could probably be restored to a tidal slough by further breaching of the causeway (which would necessitate the construction of a bridge or bridges or the placement of several large culverts) and by lowering the elevation of these openings to allow the "lake" to fill and drain on the tides. Intertidal and shallow subtidal flats would be created by such a project.

This site has a number of significant limitations. First, the expense of properly restoring tidal action to the area would be great. Second, the restoration would be accomplished at the expense of losing a locally important aesthetic and recreational resource. Eckman Lake is popular with boaters, bathers and anglers at various times of the year. Third, the project may have adverse impacts on sensitive marsh and intertidal habitats at the mouth of the slough, areas which have been identified by both the Army Corps of Engineers and ODFW as "wetlands of importance." All of these factors would have to be carefully weighed in evaluating any potential restoration project in this area.

Site #4 - Drift Creek *

This is a diked tidal marsh located roughly 1.5 miles up from the mouth of Drift Creek. The dikes at this site are well maintained and the area is in productive agricultural use. Some limited tidal channels are still present and tidal marsh could be restored to portions of this site by removing or breaching the dikes.

Site #5 - Barclay Meadows *

This is an area at approximately river mile 7 which was at one time a sizeable tidal marsh. The southern and eastern portions of the property have been filled for a housing development but the remainder still has some well defined tidal channels and some wetland vegetation. Tidal circulation and productivity could be increased by removing or breaching dikes along the shoreline of this area.

Site #6 - Kent Malcom Property *

This site is a former tidal marsh which was diked in the early part of the 20th century for use as pasture. The elevation of this site is low and numerous tidal channels are present as well as some freshwater wetland vegetation. However, the shoreline dikes on this site are well maintained and the channels are blocked by functioning tidegates. Also this area has been used for agricultural purposes, and may not be readily available for restoration use.

* Sites in the above description marked with an asterisk (*) are Goal 3 agricultural lands as defined in the Statewide Planning Goals. No attempt is made at this point to weigh the potential benefits of restoration against the loss of agricultural land that would be sustained through the use of these sites for restoration. An exception to Goal 3 and a comprehensive plan amendment will be required for the use of any of these sites for restoration purposes.

MITIGATION

The mitigation provisions of Goal 16 require that appropriate sites be designated to meet anticipated needs for mitigation. These sites are to be protected from uses which would pre-empt their availability for restoration or enhancement activities. Mitigation sites have been selected from among the restoration sites identified in the preceding discussion. All of these sites have been evaluated as potential mitigation sites based on the following criteria:

1. Biological Potential. Sites have been evaluated in terms of their similarity of habitat or potential to areas likely to be altered or destroyed by future development activities; or, alternatively, sites were chosen which may provide resources which are in greatest scarcity compared to their past abundance or distribution. This evaluation has been based on an analysis of each site relative to a general assessment of probable foreseeable mitigation needs in each estuary, as well as past alterations or losses.

2. Engineering or Other Technical Constraints. Sites have been evaluated in terms of the type and magnitude of technical limitations which need to be overcome to accomplish restoration or enhancement. Sites with fewer constraints were considered more appropriate for use as mitigation sites.

3. Present Availability. The probable availability of each site during the planning period has been evaluated. This evaluation was based primarily on the presence or absence of existing conflicting uses and ownership factors which might influence availability (e.g. public vs. corporate or other private).
4. Feasibility of Protecting the Site. An assessment of each site has been done to determine the likelihood that an overriding need for a preemptive use will arise during the planning period. Sites for which no conflicting uses are anticipated are considered most desirable from the standpoint of ensuring future availability through protective zoning or other means.

MITIGATION NEEDS AND SITES

Yaquina Bay

Future mitigation needs in Yaquina Bay will most likely be generated by dredge and fill activities in intertidal flat areas in the Newport and Toledo sub-areas and possibly in the Yaquina sub-area. In addition, portions of the Sally's Bend sub-area and the Boone's sub-area may be slated for development activities within the planning period (see Future Development Sites Section). Projects in this area would also mainly involve alteration of intertidal shore or flat habitats.

Virtually all of the tidal marsh areas in Yaquina Bay are protected by Natural Management Unit designations, so projects involving dredge and/or fill in tidal marsh areas are unlikely. One notable exception is the proposed aquaculture development at Poole's Slough (see Goal Exceptions, appendix C). This project would involve fill and removal in a tidal marsh area and appropriate mitigation would be required.

As described in the discussion on restoration needs and sites, opportunities for restoration or enhancement in intertidal flat or shore areas in Yaquina Bay appear to be very limited. For this reason, the mitigation sites listed below were selected for the opportunities they provide for restoration of scarce resources. The matching of sites to individual dredge or fill projects will be accomplished as part of the fill and removal permit process.

While it is extremely difficult to estimate and quantify the amount of mitigation that will be needed during the planning period, it is felt that the sites listed below represent sufficient biological potential to compensate for the general range and extent of anticipated intertidal dredge and fill activities in Yaquina Bay.

<u>Site</u>	<u>Location</u>	<u>Protective Mechanism</u>
L.B. Huss Property	11-11-27 t.l. 1801	Coastal Shorelands Overlay Zone (wetland area)
Blackberry Hill	11-11-35 t.l. 200	Estuarine Management Unit
Reinoehl Trout Hatchery	11-11-35 t.l. 100	C-S Overlay Zone (wetland area)
Sherman Property	11-11-36 t.l. 300, 401	Estuarine Management Unit
Publishers #2	11-10-16 t.l. 200	C-S Overlay Zone (wetland area)
Flesher Slough	11-11-35 t.l. 1500, & 1901	Estuarine Management Unit
Lower Boone's and Nute's Slough	See Coastal Shorelands Inventory (Habitat site #15)	Coastal Shoreland Overlay (wetland)

Salmon River

Salmon River estuary is classified as a "natural" estuary by the Oregon Estuary Classification Rule. This classification does not provide for dredge or fill activities which would require mitigation, thus no sites are being specifically reserved for the purpose.

Siletz Bay

The overall management plan for Siletz Bay does not provide for major dredge or fill activities. Any intertidal dredge or fill activities would be minor in nature and would likely occur in the narrow intertidal shore areas at Taft, Kernville or at sites further upriver. Tidal marshes are in protective designations and no dredge or fill activities will take place in these areas.

There are no known opportunities for restoration or enhancement of intertidal flat or shore habitats in Siletz Bay. Because of past alterations and relative scarcity of tidal marsh, mitigation actions to restore or enhance marsh areas are desirable. Given the limited extent of dredge and fill activities contemplated in Siletz Bay, it is felt that the following site provides more than adequate opportunity for mitigation of expected adverse impacts.

<u>Site</u>	<u>Location</u>	<u>Protective Mechanism</u>
Millport Slough (restoration #3)	8-11-10 t.l. 802, 601 500, 701, 602, 700, 600	C-S Overlay Zone (wetland area)

Alsea Bay

Major dredge and fill activities are not expected to occur in Alsea Bay during the planning period. It is possible that some minor dredge and fill projects will be authorized in some of the narrow intertidal shore areas at Waldport, at the mouth of Lint Slough and upriver from Eckman Lake along the south shore of management unit 6. Because restoration and enhancement opportunities for intertidal flat or shore habitats do not appear to be readily available in Alsea Bay, future mitigation activities will likely focus on marsh restoration projects. The following sites should provide sufficient resource values to mitigate the expected range of adverse impacts from future alterations:

<u>Site</u>	<u>Location</u>	<u>Protective Mechanism</u>
Lint Slough	13-11-19 t.l. 201; 701	C-S Overlay Zone (wet- land area)
Barclay Meadows	13-10-30 t.l. 200 13-11-25 t.l. 100	Exclusive Farm Use Zone

Use of Shoreland Habitats for Estuarine Mitigation

The use of certain major marshes of significant shoreland habitats for estuarine mitigation may potentially conflict with the protection of natural shoreland values. However, it is felt the sites selected in the preceding discussion have existing natural values which would not be adversely impacted or reduced by anticipated mitigation actions. Details concerning the existing and potential values of those mitigation sites which are also identified as major marshes or significant shoreland habitat areas are provided below:

Millport Slough Diked Marsh

(Restoration Site #3 - Siletz; Shoreland Habitat Site #22)

This is a large (200 acre) area of diked marsh which has been used in the past as pasture. Vegetation is typical of freshwater emergent marshes consisting primarily of sedge and Spiraea. A tidegate on the western end of this site allows some limited tidal influence and the lower channels show some characteristic tidal marsh vegetation.

The primary values of this site as a shoreland resource are for waterfowl habitat and general primary productivity. This area also serves as a bandtailed pigeon watering area.

Mitigation actions on this site would involve simply removing the lower tidegate and possibly breaching or removing the dikes on the upper portion of the site. Such actions would not require any fill or removal activities or other disturbances in the existing wetland area. The addition of tidal action to this site will change the vegetative composition of marsh, but should not diminish its value as waterfowl habitat. The value of the area as a pigeon watering site and for primary productivity will likely be enhanced by restoration of tidal action.

Lint Slough

(Restoration Site #1 - Alsea Bay; Shoreland Habitat Site #4)

The portion of Lint Slough above the impounding dam is classified as a coastal lake. Some limited tidal influence is present due to a faulty tidegate. Lint Slough's values as a shoreland habitat area include an area of relatively sheltered, open water which provides waterfowl habitat; fringes of sedge marsh and excellent, undisturbed riparian areas along the shorelines.

Use of this site for estuarine mitigation would involve the

restoration of tidal action to the upper slough by removing the tidegate in the existing impounding structure. This activity would require some limited disturbance to the area around the dam, but these impacts would be only temporary.

Once the tidegate is removed, the character of the slough above the dam would change slightly. The open water areas would likely provide habitat for marine fishes and invertebrates, while retaining their value as waterfowl habitat. The fringe of marsh on the upper end of the slough would be altered in terms of the composition of plant species present. However, the existing values of providing a diversity of habitats and primary productivity would be retained or enhanced. The surrounding riparian areas would not be affected and would retain their present character.

USE OF SHORELAND HABITATS FOR ESTUARINE MITIGATION
(Amended Findings)

L.B. Huss Property

(Restoration Site #2; Shoreland Habitat Site #13)

This is a small freshwater marsh which has a substantial area of open standing water during the rainy months. A culvert with a tidegate connects this area to the estuary and provides some limited fluctuation in water levels.

The primary value of this site as a shoreland resource is as waterfowl habitat. Adjacent riparian areas are also valuable as wildlife habitat as they are relatively undisturbed.

Restoration actions would involve removal of the tidegate and/or additional breaches in the road dike to provide a direct tidal link with the estuary.

As a result of this action, more complete drainage and filling of the area would occur, though some area of standing water would remain (even at low tide) due to the site's low elevation. The composition of vegetation surrounding the fringe of the area would change as a result of the intrusion of saline waters. However, the value of the site as waterfowl habitat should not be diminished, and the more complete tidal flushing may enhance the area's value for species such as herons and egrets. Riparian areas will not be affected by the restoration action.

Reinoehl Trout Hatchery

(Restoration Site #4; Shoreland Habitat Site #13)

This small freshwater wetland is similar in character to the

Huss property site in that it contains an area of ponded water which fluctuates with the opening and closing of a tidegate. The ponded area serves as habitat for waterfowl, and the small fringe of marsh surrounding has some value for other wildlife species.

If restored to full tidal flushing, the vegetative associations in the area would change as a result of increased salinities and more extreme fluctuations of water levels. This will likely increase primary productivity and detrital export, but should not affect the waterfowl habitat value of the site.

Publisher's #2

(Restoration Site #13; Shoreland Habitat Site #17)

This is a sizeable area of freshwater wetland that has a variety of shoreland values, including high wildlife and waterfowl value and an undisturbed riparian fringe. This site has considerable tidal influence now due to several breaches in the dike which runs along the shoreline.

Restoration of this site would require additional breaching or removal of the remaining dike and re-establishment of some of the original tidal channels.

This work would result in some short term disturbances to portions of the marsh, but these impacts will be relatively minor.

The restoration of full tidal influence in this area will likely provide an increase in detrital export, thus enhancing the estuarine ecosystem. Because salinities are low in this upriver area, wetland vegetation in the marsh will probably not change

significantly. General wildlife value of the area will probably be enhanced through increased wetness and periods of standing water resulting from full tidal exchange. Adjacent riparian areas will not be affected.

Lower Boone's and Nute's Sloughs

(Restoration Sites #6 and 7; Shoreland Habitat Site #15)

These are extensive areas of former tidal marsh which are currently blocked from tidal influences by dikes and tidegates. The lower portions are relatively low and support freshwater wetland vegetation. Dominant species in these areas are spike rush (Eleocharis palustris), common rush (Juncus effusus) and slough sedge. According to the Lincoln County Comprehensive Plan Inventory of shoreland habitat sites (D.W. Thomas, 1982), these areas are considered significant primarily because of their large areal extent and value as waterfowl habitat.

Use of this site for estuarine mitigation would involve the restoration of tidal influence to some or all of the lower wetland areas of this site. This could be accomplished by relocating the dike and tidegate structures to points further upstream of the mouth of the sloughs. Some breaching or removal of secondary dikes and re-establishment of tidal channels would also be beneficial, but this would be accomplished in the higher elevation pasture areas and would not result in any disturbances to the shoreland habitat areas.

Restoration of these freshwater wetlands to tidal marsh would

likely result in substantial change in the vegetative associations at the site. This should generally increase the value of these wetlands for primary productivity and detrital export. Similar tracts of tidal marsh in the area (e.g. Poole and McCafferey Sloughs) have substantial value as waterfowl habitat, and it thus appears unlikely that the value of Boone's and Nute's Sloughs as waterfowl habitat would be reduced through restoration activities.

PART VIII

LOG STORAGE AND TRANSPORTATION

GENERAL OVERVIEW

Presently three different companies have forest products processing plants within the shorelands boundary of the Yaquina Estuary. All of the plants are located at Toledo, Oregon. A summary of the types of plants and operations, and related employment as well as the current milling capacity and recent log storage needs of those plants dependent upon logs as a basic raw material are listed as follows:

<u>Company</u>	<u>Operation</u>	<u>Avg. Annual Employment</u>	<u>Milling Max.</u>	<u>Capacity Avg.</u>	<u>Recent Land</u>	<u>Storage Water</u>
Georgia Pacific	Paper Plant	466	(MMBF)	--	-- (MMBF)	--
	Bag Plant	70	--	--	--	--
	Plywood Plant	250	70	50	3.5	10.4
	Stud Mill	24				
	Logging	<u>104</u>	--	--	--	--
		914	70	50	3.5	10.4
Publishers						
	Sawmill	127	60	45	13.0	--
	Logging	<u>75</u>	--	--	--	--
		202	60	45	13.0	--
Guy Roberts						
	Sawmill	53	50	35	--	4.2
	Logging	<u>25</u>	--	--	--	--
		78	50	35	--	4.2
Caffall Bros.*						
		--	--	--	20.0	--
		--	--	--	20.0	--
GRAND TOTAL		<u>1,194</u>	<u>180</u>	<u>130</u>	<u>36.5</u>	<u>14.6</u>

*Log Yard Only

Collectively these six plants are the largest source of employment in Lincoln County, providing 1,194 jobs in the Toledo-Newport-Siletz area. The basis of operations for all six industrial plants is focused on the availability of logs to the plywood plant and two sawmills. For example, the shavings from the plywood plants and sawmills go to the paper mill which in turn supplies paper to the bag plant for its bags and the cores from the plywood plant supply most of the raw material for the studmill.

Historically, the mills operating around Yaquina Bay depended heavily upon using the waters of the bay to transport logs to their milling operations and to store the inventories necessary to assure continuous plant operations. Today the number of mills dependent upon the bay for such water handling of logs has been reduced to two -- Georgia-Pacific and Guy Roberts. The other have either

gone out of business or converted to dry land storage operations.

RESOURCE IMPACTS OF IN-WATER LOG STORAGE

In general, in-water storage of logs has a number of undesirable resource impacts. These impacts are primarily related to the effects on water quality characteristics and the effects of grounding logs on benthic organisms. The latter situation is particularly acute in Yaquina Bay, where few deepwater storage areas are available and considerable grounding of log rafts occurs. According to the Department of Environmental Quality's policy "Log Handling in Oregon's Public Waters", the following general conclusions about the effects of in-water log storage can be drawn:

1. There is ample and conclusive evidence that the bark, debris and leachate releases resulting from dumping, storage and millside handling of logs in public waters can have an adverse effect on water quality. The magnitude of the effect varies with the size and characteristics of the waterway and the nature and magnitude of the log handling operation.
2. Free fall log dumping causes the major release of bark and other log debris.
3. Bark and log debris are the major waste products resulting from logs in water. These materials range in size from microscopic particles to whole logs. Some float but most will sink in a short time. Numerous particles may travel submerged a considerable distance before dropping to the bottom. Bottom deposits of these substances may blanket the benthic aquatic life and fish spawning areas. During submerged decomposition stages the wood products rob overlying waters of dissolved oxygen and often give off toxic decay products.
4. Leachates from logs in water can be a significant source of biochemical oxygen demand and dark color. These generally have minimal impact in larger flowing streams but their effect may be compounded in poorly flushed areas.
5. Where logs go aground during tidal changes or flow fluctuations, they can be a detriment to bottom dwelling aquatic life and can be the cause of increased turbidity.
6. The site specific impacts of log storage will vary depending on the duration of the storage, the surface area involved, the amount of grounding, the flushing and circulation characteristics of the area, and other factors.

NEED FOR ADDITIONAL IN-WATER LOG STORAGE IN YAQUINA BAY

The current source and volume of logs for the three major wood products plants has changed with time and will continue to do so. A general decline in log availability has been experienced in the Toledo area over the past several years and the situation is not expected to improve for at least 20 to 30 years. Several factors contribute to this decline:

1. The U.S. Forest Service established a small business set aside program in 1972, the result being in the Toledo area that only 22 percent of the U.S.F.S. volume can be sold to companies which employ over 500 people. Consequently this reduced the volume available to both Georgia-Pacific and Publishers.
2. The public timber supply throughout Oregon has begun to decrease not because of the lack of trees per se but because of public policies, increasing environmental restrictions and set-asides for wilderness and other amenity-type uses.
3. Private lands in the Toledo area were heavily cut-over in the 1930's and 1940's.

Many of these lands were "lost" to brush following harvesting and have only been reforested in recent times. In addition, the declining availability of logs and the increasing demand for wood products has accelerated harvest of existing mature timber. Generally, private lands will not contribute significantly to local resource needs for 20 to 30 years.

4. The State and BLM have only limited sources of timber available which, like the U.S.F.S., are heavily competed for not only by locals but also companies from the Willamette Valley.

Along with this decline, and as indicated above, the main source of logs has shifted from the private land to the public land base.

The consequences of the decline and shift in log availability is expected to have a major influence on future log storage needs in the Toledo area. When private land was the principal source of logs, mill owners had the ability to store logs on the stump; bringing them in as needed and thereby minimizing large, costly inventories. However, as the industry turns to the public sector for its basic raw materials, the situation changes drastically. Timber is purchased under contracts that have definite time limits and only minimal sensitivity to market fluctuations. Consequently, the industry expects to be periodically faced with moving large volumes of logs in short time periods and to have the corresponding need of increasing inventories in storage at the plant site.

Those mills still dependent either wholly or partially on water storage of logs have one problem in common -- the lack of suitable land storage areas available to their plant site operations. It should be noted that besides obvious terrain limitations there are definite criteria a potential land storage site must meet to be viable in the long run:

1. The site must be close enough to the plant that reloading of the loads is not necessary to get the logs to the point of processing;
2. It must be large enough to hold at least one month's production needs of the plant involved; and,
3. It must lend itself to security control so that it does not become a public safety hazard.

Guy Roberts has no sites available that meet the above criteria and Georgia-Pacific has developed the one site available it has. Publisher's is the only company with potential additional land storage adjacent to its plant site.

Even though the increased need for log storage capacities is presently visualized as a potential future problem, Georgia-Pacific and to some degree Publisher's have immediate specific problems that demand attention in the present planning process.

As indicated in the preceding table, annually, there are approximately 14.6 MMBF of logs stored on the water in Yaquina Bay and another 36.5 MMBF stored on land. Those on the water occupy about 73 acres of water surface area. Between 1965 and 1979 the current balance of water and land storage was sufficient to satisfy the needs of the existing operations. However, two events occurred in 1979 that caused significant change in future needs for log storage capacities for the Georgia-Pacific plywood/studmill operation.

First, the ever increasing shortage of logs in the Toledo area prompted Georgia-Pacific to experiment with the importing of logs from Chile to make up the local deficit. The experiment was successful as products manufactured from these logs

meet all standards satisfactorily and proved to be a new source of raw material that could be used to keep plants running during times of domestic log shortages.

The imported logs were brought in by ship, unloaded and stored at the Sunset Terminal, and then loaded on log trucks and transported to the Georgia-Pacific log yard in Toledo as needed. The average volume per ship was slightly over 4.2 MMBF and the land area available near dockside was sufficient to store the entire shipment.

The second significant event was that the ownership of the storage area at Sunset Terminal changed and the area will no longer be available for storage of logs. This meant a loss of 20 MMBF of dry land storage capacity for the Toledo area. In the past, Publisher's had depended upon this site for storage of logs as well as Georgia-Pacific. In regards to future imported logs to supply the Georgia-Pacific operations, they will have to be almost immediately loaded on trucks and hauled to Toledo for storage. Since the ship is unloaded within a 14 day period, the 4.2 MMBF plus load would have to be moved within that time period. This would require 1050 round trips for log trucks between Sunset Terminal and Toledo, an average of 70 to 80 round trips per day; or based on a 10 hour work day, a log truck would pass a single point en route an average of every 4 minutes during each and every work day for two weeks. The logistics and safety of such an operation would be prohibitive.

An alternative to truck transportation was found to be water transport of logs up the bay to Toledo. The logs can be secured into small bundles on ship and be placed directly into the water and then the bundles grouped and rafted up the river. Once reaching the mill site, they can be taken directly out of the water and decked at the existing Georgia-Pacific log yard. The advantage of such an alternative is that it eliminates the need for non-available dockside log storage and that intensive log hauling between Newport and Toledo is eliminated.

However, to establish a viable water transportation system for the movement of the logs, two temporary tie-up facilities would be needed between the log put-in and take-out points in order to work the logs up the river with the tides. The first of the two tie-ups could readily be located both out of the navigation channel and over deep water. However, the second tie-up, in order to be out of the navigation channel, would have to be located where rafts being moored would go aground during extreme low tides.

Regardless of whether the logs are trucked or rafted from the shipping terminal to Georgia-Pacific's plant at Toledo, the loss of the land storage area at Sunset Terminal has created a log storage deficit in relation to continued importation and use of imported logs at the Georgia-Pacific milling operation. Since Georgia-Pacific has no additional land storage capacity available, their log yard at Toledo will now have to accommodate the imported logs thereby pre-empting its use for domestic logs. However, the same volume of domestic logs will be needed in inventory as before because the imported logs don't come in on truck load or 4 MBF at a time but rather one ship load or 4,200 MBF at a time.

Plant needs necessary to meet changing market conditions, logging weather, scheduling of shipments and other certain adverse situations, prohibit the chance of running a 4.2 MMBF deficit in inventories.

In summary, the expected near term increase of log handling and storage needs are as follows:

1. Expansion of the Publisher's existing land storage area to replace the capacity lost at the Caffal Brother log yard;
2. Establishment of two tie-up areas to facilitate the transportation of logs from the Sunset Terminal to Georgia-Pacific's log yard at Toledo; and
3. An increase of 4.2 MMBF in water storage capacity near the Toledo industrial complex to replace the capacity lost at the Cafall Brothers log yard.

Additional land and water storage may be needed within the estuary and it's associated shoreline in the future. However, specific requests cannot be formulated at this time.

FINDINGS AND POLICIES

Findings:

1. In-water storage can have significant adverse impacts on natural resources, especially in areas where grounding occurs.
2. Maintaining the viability of the local lumber and wood products industry is essential to the economic well being of the Yaquina Bay area.
3. Existing mills in the Yaquina Bay area have been designed and located to receive logs stored and transported in the estuary.
4. Because of the domestic log situation, the importation of Chilean logs to Yaquina Bay, and the loss of the storage area at the Cafall Brother's site, there is a need for new log storage in the Yaquina Bay area.
5. Because of the costs involved in reloading operations, remote upland sites are not considered to be economically feasible for plants in the Yaquina Bay area at this time.
6. It is recognized that some existing upland sites with direct water access may be feasible to use for log storage, but because of the time involved in establishing feasibility and preparing a site for operation, these sites are not available to meet immediate log storage needs.
7. There is a demonstrated need at this time for a 4.2 MMBF expansion of in-water log storage in Yaquina Bay.
8. Because of the loss of storage area at the Cafall Brothers site, water transportaion is the only practical means by which to move the imported Chilean logs from the Sunset Terminals area to the processing plant in Toledo.
9. Water transportation of logs from the Sunset Terminls area to Toledo will require two temporary moorage sites for log rafts.

Policies:

1. Because of the potential adverse impacts of in-water log storage on water quality and particularly on benthic organisms, the following long term goals for in-water log storage are established:

- a. To minimize the in-water storage of logs in areas where grounding will occur by requiring, where practical, the use of deep water or upland storage sites.
 - b. To minimize overall in-water storage of logs by requiring, where practical, the use of upland storage sites.
2. A study shall be undertaken by the industry to examine the feasibility of alternatives to continued in-water log storage. This study shall be completed within five years.
 3. Until such a study is completed, the following sites shall be designated to permit interim log storage:

<u>Management Unit</u>	<u>Location</u>	<u>Capacity</u> (MMBF)
30	Below Boom #5	1.5
25	Below Boom #4	1.0
32	Above Boom #2	1.0
31	Plywood Boom	2.0

These sites are approved for new log storage with the following conditions:

- a. Storage is approved until the completion of a study examining alternatives to in-water storage or for a period not to exceed five years. At the end of five years, or when the alternative study is completed log storage needs and available sites will be re-assessed through the plan review and update process.
 - b. The approval of permits for the development of log storage sites will be conditioned to require mitigation for the adverse impacts of expanded log storage. The restoration of full flushing in Flesher Slough would be considered adequate mitigation for the use of all of the interim log storage sites. Other equivalent mitigation action would also be acceptable.
 - c. Restoration of flushing in Flesher Slough (or equivalent compensation) may be considered mitigation "credit" toward any dredging or filling required in the development of upland storage sites if all of the interim water storage sites are not used. The amount of "credit" given would be relative to the degradation of the interim storage sites. For example, if all the interim storage sites were used and degraded, no "credit" would be given; if none of the sites were used, a significant "credit" would be due. The extent of this mitigation "credit" will be established at the time of the plan review and update.
4. To facilitate water transportation of logs from the Sunset Terminals area to Toledo, two temporary moorage areas will be designated; one each in management units 8 and 25. Specific location of these sites within the management units will be established through the permit process. Temporary moorage is permitted

with the following conditions:

- a. Whenever feasible, individual logs shall be bundled, but shall always be held in rafts.
 - b. The number of log rafts moored at any time shall be the lowest practical number for the shortest practical time considering log supply and tidal cycles.
 - c. Water surface area occupied by temporary moorage shall not at any time exceed seven (7) acres.
 - d. Temporary moorage sites shall be occupied no more than two weeks in any six consecutive weeks.
 - e. Dolphins shall be sited and moorage conducted so that log rafts will not ground at low water. (Management Unit 8)
 - f. Dolphins shall be sited and moorage conducted so that grounding of log rafts will be minimized. (Management Unit 25)
 - g. As much as practical, shipment and movement of logs shall be timed to minimize conflicts with recreational uses in the area.
5. All log storage and handling shall be conducted in such a manner so as to comply with the Environmental Quality Commission policy "Log Handling in Oregon's Public Waters". Existing in water log storage sites are recognized as "grandfathered" uses, consistent with DEQ policy.

PART IX

FUTURE DEVELOPMENT SITES

In the process of developing the Yaquina Bay Estuary Management plan, it became apparent that some long term development needs may not be adequately addressed by the present management unit designations. It is felt that the more foreseeable short term needs are largely accommodated by the present management unit designations. But because of the difficulty of predicting the timing, extent and type of long term development needs, and because of the use specific nature of the Goal exception process, it is not possible, at the time of plan development, to specifically accommodate all potential development needs.

Since one purpose of any plan is to provide general, long term direction to future decision makers, this section of the plan identifies some potential long term development needs within the estuary, as well as potential sites which may accommodate some of these needs. It is recognized that future development needs will require that some estuarine management units, or portions of management units, which are presently classified "Natural" or "Conservation" be designated for development. Since the areas which have been identified presently meet the criteria for Natural or Conservation Units, and need cannot at this time be demonstrated to justify exceptions, these areas will, in the interim, remain in the Natural or Conservation category. However, it is the clear intent of this section to direct identified needs for future water dependent development to these identified areas. At the time need can be demonstrated, appropriate plan amendments shall be undertaken and goal exceptions documented.

It is important to emphasize the dynamic nature of this plan: it is intended to change and adapt to changing circumstances. This section of the plan provides the groundwork to trigger some of these changes as future needs develop.

POTENTIAL DEVELOPMENT NEEDS

Offshore Energy

According to the publication Oregon and Offshore Oil (prepared for the Governor's Task Force on Outer Continental Shelf Oil and Gas Development by OSU Sea Grant Program, 1978), there is significant potential over the next 20 years for the production of oil and/or natural gas from Oregon's continental shelf. A number of exploratory holes were drilled in 1964-65, and although no commercial quantities of oil or gas were found, the thick sediments off the Columbia River, Newport, and Coos Bay were found to have significant potential. Because of leasing priorities established by the Department of Interior, it is unlikely that any production could occur before 1988, at the earliest.

The amount of backup space required in waterfront areas by offshore energy development can vary substantially with the type and size of the operation, but general requirements would be for between 25 and 50 acres of back up area fronting on water of 14 to 20 feet in depth.

Commercial Fisheries

The character of Oregon's commercial fishing industry has changed dramatically over the past several years. The decline in the salmon resource, the expansion of markets for previously unexploited species and the advent of the 200 mile limit were three of several factors that precipitated this change. The emphasis of the industry has shifted from the small, near shore salmon trollers, to much larger vessels which concentrate primarily on the shrimp and bottom fisheries.

With this shift in emphasis has come a change in the industry's needs for both port and onshore facilities. Present moorage is inadequate to handle the larger, deeper draft vessels. While re-development of existing moorage is expected to alleviate this problem to some degree, it is expected that some additional large vessel moorage space will be needed. Attendant support facilities will also likely be required. A marine railway system capable of handling these large vessels, expanded repair and maintenance facilities, additional seafood processing capacity and ice and cold storage facilities are probable needs in this area.

Barge Shipping

Wide fluctuations in the amount of barge traffic in Yaquina Bay have been observed historically. While marine commerce in general is presently at a low ebb in the estuary, it is felt that potential expansion of markets for both imported and exported goods, changes in wood products markets, energy efficiency of barge transport and other factors may contribute to an increase in future barge traffic. Eventual need for barge tie-ups in the lower estuary, as well as a terminal facility in the South Beach area may arise as a result. This is especially likely given the present and projected future industrial development in the South Beach/Newport Airport area.

Aquaculture

Aquaculture, the culture of aquatic organisms, is developing around the world as technology improves and interest in efficient protein production increases. Oysters and salmon are the two primary species groups commercially cultured in Yaquina Bay today. There is interest in new species, new culture methods and the potential expansion of existing operation. Current interest in aquaculture development in Oregon extends to oysters, clams, mussels, salmon, trout and algae.

Long term forecasts are for further increases in demand for seafood protein as fish becomes a larger part of the American diet. Traditional fishery stocks may not be able to be further exploited, or may actually begin decreasing from overfishing. Cultured fish and shellfish species may be able to fill the gap in the market. In addition, potential for algae farming in Oregon is substantial and, at present, totally undeveloped. World markets for such products as algin and carrageenan may make such operations feasible in the future.

Despite some existing conflicts, sizeable areas of Yaquina Bay are known to be suitable for aquaculture of various fish and shellfish species. Additional areas may be suitable for culturing of other plant and animal species in the future.

POTENTIAL DEVELOPMENT SITES

South Jetty Area

A portion of the area immediately south of the south jetty is recognized as possessing significant potential for water dependent development. Adequate back-up space exists for water dependent industrial or recreational development. Access to the estuary would be across the south jetty into management unit 3.

A number of technical problems may restrict the suitability of this site for development requiring deep-draft access for large vessels. The aquatic area available for development is limited in size, and terminal type development in this area would likely require excavation into the shorelands to create additional aquatic area. This portion of the estuary is a high current area and there may be problems in designing an access channel to a protected area which is capable of being negotiated by large vessels. Opportunities for development of shallow or possibly medium draft facilities designed for smaller vessels would likely not be as constrained by these difficulties. There is presently only limited access to this area by land via the south jetty road, and major improvements would need to be undertaken to provide adequate access to any type of high intensity development.

Sally's Bend

Yaquina Bay's commercial fishing and deepwater shipping industries are concentrated on the north shore of the lower estuary, within the Newport urban area. With the authorized deepwater channel and turning basin designed and maintained to serve the area, and with a location which is protected, yet in immediate proximity to the bar, future expansion of water dependent industry would logically be located in this area. However, available space for water dependent uses is presently at a premium; little developable space remains and competition among users is high. Some future expansion of marine industry could be accommodated through redevelopment of existing areas along the Newport waterfront east to McLean point. However, if appreciable future expansion of water dependent industry is to be accommodated, new development areas must be made available. The amount of backup space and deep water frontage that would be required, for example, for offshore energy exploration and production is simply not presently available.

In 1969, the original Yaquina Bay Task Force developed the Yaquina Bay Land Use Plan. At that time it was recognized that extension of the landfill (begun 1965) at McLean Point represented a logical area to provide for continued expansion of marine industry on the bay. At the same time, it was also recognized that the Sally's Bend area, into which the fill would extend, was one of the most productive natural resource areas in the estuary. Several possible options to extend the landfill were explored, and after much discussion and negotiation a compromise was reached. State and Federal natural resource agencies established a "resource line" (see illustration beyond which filling would not be acceptable). This resource line would provide for approximately 65 acres of additional development area.

Since the time the original "resource line" was established, the nature of marine industry has changed considerably in Yaquina Bay. However, the probable long term need for areas suitable for water dependent development in the immediate Newport area is still apparent, and the area adjacent to McLean Point still represents the logical area for this expansion.

In light of probable future needs, filling of the entire area within the resource line seems of dubious merit. The land area created would not have direct access to navigable water. Valuable resource area would be lost and the resultant area seems more likely that some combination of fill, dredging and breakwater construction within the resource line would provide a more beneficial development scenario, creating some additional large vessel moorage area and some additional back-up area with immediate water access.

The precise location of the resource line will have to be established at the time a development proposal is entertained. It is recognized that some minor modification of the line may be required, depending on the type of development proposed. The concept behind the establishment of the original resource line (i.e. to re-establish the original flushing and circulation characteristics of Sally's Bend) should be adhered to in finalizing the line and designing any development. It should be emphasized that the intent of this plan is to provide for development within the resource line only upon a clear demonstration of need, and that no further development into Sally's Bend is to be permitted.

Toledo Airport Site

The site of the existing Toledo airport appears to have significant potential for water dependent use. The viability of the site as an airport is presently questionable. A consultant's study completed in 1977 (Revised Airport Layout Plan Report, Toledo State Airport, M.R. Miner & Associates, Oregon Aeronautics Division, DOT, 1977) recommended that either the airport's runway be lengthened or the airport be closed, because of safety factor. The only potential area for expansion of the runway is into the wetland area in Management Unit 33. The required filling of the wetland for the non-water related airport use would be inconsistent with the policies and purpose of this plan.

With roughly 25 acres of available land area and reasonable proximity to the navigation channel, this would appear to be an excellent site for water dependent use. The channel depth in this area is presently authorized to only 10 feet, so only medium draft vessels could service a facility here. Depending on the type of use proposed, required dredging would not be extensive, and spoil disposal could likely be accomplished on portions of the airport site itself.

South Beach Fill Area

The vacant portion of the South Beach fill adjacent to the Ore-Aqua salmon hatchery is one of the few remaining parcels of vacant land suitable for development in the lower estuary. It has water frontage on a development management unit with ready access to deep water.

It also has reasonably good access to the existing and proposed South Beach industrial area via Marine Science Drive and Ferry Slip Road. The location and access characteristics of this site make it ideally suited for the development of a barge terminal type facility. With the planned extension of industrial activities in the South Beach area, the need for this type of facility in the future is likely, and this area appears to be one of the few suitable sites available to meet this need.

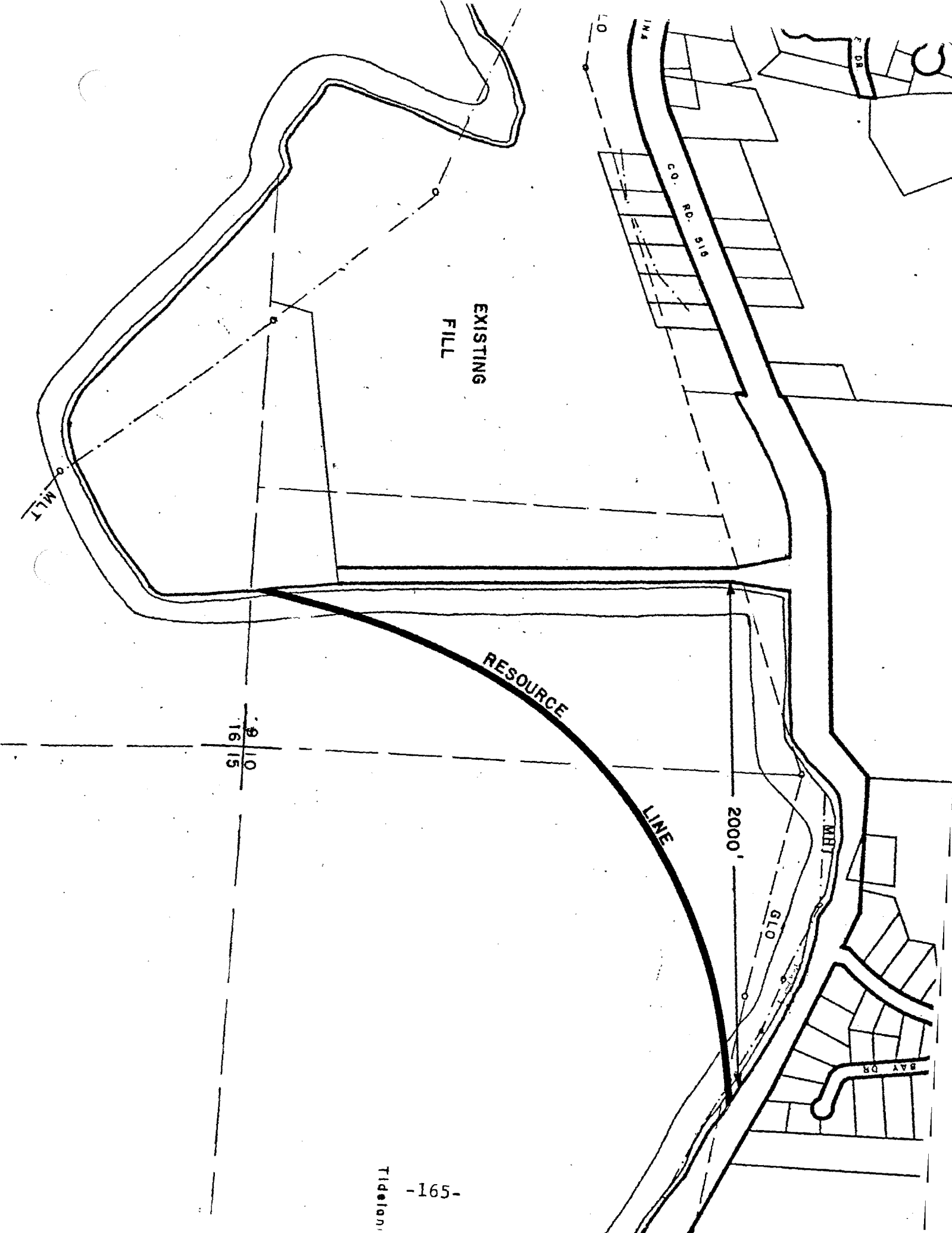
Northern Portion of Management Unit 33

The northern portion of Management Unit 33 is a diked wetland area which may be suitable for development as an upland log storage site. Its location near existing log dumps and processing sites, direct water access and other factors indicate that this may provide a feasible alternative to continued in-water storage in the estuary. Filling of portions of this wetland as well as dredging of adjacent shallow water areas would be required for development as a log storage site. The purpose of developing this site and sacrificing the resource values of this wetland area would be to provide an alternative to continued in water log storage. Development of this site will only be considered for that purpose.

If and when this project site is developed, it should be done so in conjunction with the expansion of dredged material disposal site #19, an adjacent fill area. This would provide for additional needed dredged material disposal capacity as this area is filled for its development as a log storage site.

Johnson Slough

Johnson Slough (management Unit 20) has been identified as a potential aquaculture development area. Findings made by researchers for Oregon State University studying water quality characteristics in the slough indicate that this area has ideal conditions for shellfish culture. It is unclear at this time what needs may be satisfied through development at this site, however, as new markets develop for aquaculture products, this may provide a suitable location to apply new aquaculture technologies.



Tidalan

PART X

PLAN IMPLEMENTATION

The Lincoln County Estuary Management Plan will be implemented at the local level by the various units of local government with comprehensive planning and zoning responsibilities. The management plan will become an element of the applicable local comprehensive plans, and through these plans it will be incorporated into the Oregon Coastal Management Program.

For certain requirements of Statewide Planning Goal 16, no explicit implementing measures or standards are included in the management plan. Local governments will rely on certain state and federal regulatory authorities and programs to meet these requirements. (These programs and the goal requirements they fulfill are described in the following section on State and Federal Agency Coordination). However, it should be noted that the administration of this plan and all implementing measures contained herein (e.g. application of use standards, conditional use criteria, etc.) is the responsibility of the appropriate local jurisdiction.

LOCAL REVIEW PROCEDURE

Permitted Uses

For uses and/or activities which are "Permitted with Standards" (i.e. those activities or uses which are designated "P" in the appropriate permitted use matrix) no local permit is required. These uses and activities will be reviewed by the local jurisdiction for consistency with applicable Estuarine Use Standards through the Division of State Lands public notice process. The procedure will be as follows:

1. Upon receipt of the Public Notice, the Planning Department shall review the proposed use or activity for consistency with applicable Estuarine Use Standards set forth in Part V of the Lincoln County Estuary Management Plan.
2. If the Planning Department finds that the proposed use or activity is consistent with all applicable Estuarine Use Standards, the department shall notify the Division of State Lands to that effect prior to the expiration of the Public Notice. As a part of this review process the Planning Department shall impose any conditions or restrictions necessary to ensure compliance with applicable Estuarine Use Standards.
3. If the Planning Department finds that the proposed use or activity is inconsistent with any applicable Estuarine Use Standard, the department shall notify both the Division of State Lands and the applicant prior to the expiration date of the Public Notice. This notification shall cite the standard(s) which has not been met and state with particularity the reasons for the inconsistency.

4. If the information contained in the Public Notice is not sufficient for the Planning Department to reach a decision on the consistency of the proposed use or activity, the department shall notify the applicant to that effect prior to the expiration date of the Public Notice. This notification shall cite the standard(s) needing to be addressed and state with particularity the information needed to arrive at a decision.
5. Any finding of consistency made through this review process may be subject to revocation by the Planning Department if it is ascertained that the application included any false information or if it develops that any conditions of approval have not been complied with or are not being maintained.
6. Any decision made by the Planning Department through this review process may be appealed in accordance with the provisions of article 10 of the Lincoln County Zoning Ordinance #34, as amended.

Conditional Uses

Uses and/or activities which are "conditional" (i.e. those uses or activities which are designated "C" in the appropriate permitted use matrix) may be permitted upon authorization by the Planning Department or Planning Commission in accordance with the standards and procedures set forth in Article 6 of the Lincoln County Zoning Ordinance #34, as amended.

In addition to conformance with the procedures and standards of article 6, conditional use authorization shall require the following findings:

1. That the use or activity is compatible with the management objective and policies of the management classification.
2. That the use or activity complies with all applicable Estuarine Use Standards as set forth in Part V of the Lincoln County Estuary Management Plan.
3. That the use or activity complies with the management objective and special policies of the individual management unit.
4. That the use or activity is consistent with the resource capabilities of the management unit.
5. That the cumulative impacts of the proposed use or activity have been considered.

Application of Standards

The Estuarine Use Standards set forth in Part V of the Estuary Management Plan and the conditional use requirements set forth in Part IV of the Estuary Management Plan are to be applied to estuarine developments on a case by case basis by the appropriate local governing body (i.e. city or county), through the review processes described above.

The specific nature and circumstances of a proposal will be measured against each applicable standard or criterion. Findings of fact will be developed relative to compliance with each applicable standard or criterion, based on an analysis of the proposal. The Planning Department may require an applicant to provide such information and technical analysis as may be needed to determine compliance with any and all applicable standards, including but not limited to the following:

1. Effects on physical characteristics such as: flushing and circulation; erosion and accretion patterns; salinity, temperature and dissolved oxygen characteristics.
2. Effects on biological characteristics such as: benthic habitats and communities; anadromous fish migration routes; fish and shellfish spawning and rearing areas, primary productivity; resting; feeding and nesting areas for migrating and resident shorebirds; wading birds and other wildfowl; riparian vegetation; wildlife habitat.
3. Effects on other established uses in the area.
4. Alternative project designs and/or locations which have been considered.
5. Steps which have been taken to minimize or avoid adverse impacts.

In the process of gathering necessary factual information for the application of standards, the Planning Department may consult with any agency or individual able to provide relevant technical expertise.

STATE AND FEDERAL AGENCY COORDINATION

As described above, the Lincoln County Estuary Management Plan is designed to provide for the review of proposed uses and the application of performance standards in conjunction with the Division of State Lands waterway project permit review procedure (which in turn is integrated into the Corps of Engineers Section 10 and Section 404 review procedures).

Through this process, all state and federal resource agencies which

participate in the review of waterway permits will be apprised of actions taken and findings made under the provisions of the management plan.

Similarly, local governments will be able to take advantage of the resource agencies' participation in this process for acquiring technical information and assessments relative to the review of waterway projects.

Reliance on State and Federal Standards. In order to streamline the permit process and avoid unnecessary duplication in the review of estuarine development proposals, the management plan will rely on the requirements of certain state and federal agency programs and requirements to provide specific implementing measures for certain Goal 16 requirements. The goal requirements and the programs being relied on to fulfill them are as follows:

(Note: The major programs and agency responsibilities affecting estuarine development are listed, and described following this section.)

<u>Goal Requirement</u>	<u>Agency Program(s) Relied On *</u>
A. Provide findings that dredge, fill or other degradation is only allowed upon demonstration of public need.	Corps of Engineers, <u>Section 10</u> (33 CFR 320.4) <u>Division of State Lands, Fill & Removal Law</u> (ORS 541.625(2)a-e).
B. Provide findings that, where permitted, structural bank stabilization or dredging activities in conjunction with aquaculture, public facilities, and/or active restoration measures are consistent with the resource capabilities of a "Natural" management unit.*	Corps of Engineers, <u>Section 10</u> (22 CFR 322.5)
C. Provide findings that, where permitted, fill, structural bank stabilization or dredging activities in conjunction with marinas, minor navigational improvements, mining and mineral extraction, bridge crossings, and water dependent uses requiring occupation of surface area by means other than fill are consistent with the resource capabilities of a "Conservation" management unit.*	Corps of Engineers, <u>Section 10</u> (22 CFR 322.5)

- * In the event that these State or Federal regulations change so as to no longer satisfy these goal requirements, equivalent complementary measures will be required. Plan policies moderate compliance with Goal 16 implementation provisions; appropriate implementing standards must be referenced and/or developed as part of the plan to maintain conformance with plan policies.

<u>Goal Requirement</u>	<u>Agency Program(s) Relied on *</u>
D. Provide findings that, where allowed, fill, bank stabilization or dredging activities in conjunction with mining extraction, public facilities, bridge crossings, research and education observations or protection of habitat and other natural values are consistent with resource capabilities of "Development" management unit.	Corps of Engineers, <u>Section 10</u> (22 CFR 322.5)
E. Clearly present the impacts of a proposed alteration to the estuary with a demonstration of the public's need and gain which warrant the modification or loss.	Corps of Engineers, <u>Section 10</u> (33 CFR 320.4)
F. Provide findings that the proliferation of single purpose docks and piers is being restricted by encouraging community facilities and considering other alternatives.	Corps of Engineers, <u>Section 10</u> (33 CFR 320.4)
G. Require mitigation for dredge or fill in tidal marsh or intertidal areas.	Division of State Lands Fill & Removal Law (ORS 541.626)
H. Maintain water quality and minimize man-induced sedimentation.	Department of Forestry, <u>Oregon Forest Practices Act and Administrative Rules</u> , (ORS 527.610-527.730) Various programs of the Soil and Water Conservation Commission, the local Soil & Water Conservation District and the Soil Conservation Service <u>Department of Environmental Quality Section 208 of the Clean Water Act as amended in 1972 (PL 92-500)</u> <u>Division of State Lands, Fill and Removal Law (ORS 541.605-541.665)</u>

Federal and State Agency Programs and Responsibilities

The following lists the major state and federal agency programs which relate to estuarine development activities. The specific program provisions which will be relied on to meet Goal 16 requirements are cited and the relevant standards from each are briefly described. Also included in the listing are those agency programs which, while not specifically relied upon to meet goal requirements, may generate technical information useful to local government in evaluating estuarine development proposals.

1. CORPS (40 CFR 230.4-1) Disposal of Dredged or Fill Material
 - a. Testing water column effects;
 - b. Testing effects on benthos;
 - c. Evaluation exemption;
 - 1) If naturally occurring sediment larger than silt;
 - 2) Beach nourishment;
 - 3) Discharge is substantially same as disposal site substrate.
2. CORPS (40 CFR 230.4-2) Disposal of Dredged or Fill Material
 - a. Corps prohibits discharge when it would cause a violation of such appropriate standards at the perimeter of the disposal site after consideration of the mixing zone.
3. CORPS (40 CFR 230.5) Disposal of Dredged or Fill Material
 - a. The permitting authority should use the following, in sequence, for evaluating whether a particular discharge should be allowed:
 - 1) Minimize adverse impacts through evaluation in 230.10 and 230.11 below;
 - 2) Use general permit if applicable and all conditions are met;
 - 3) Examine practicable alternatives;
 - 4) Delineate candidate disposal sites consistent with the criteria and evaluation in 230.11 below;
 - 5) Evaluate the various physical and chemical components;

- 6) Identify and evaluate any special or critical characteristics of a candidate disposal site and surrounding areas which might be affected by use of such site, related to their living communities or human uses;
- 7) Evaluate chemical contamination or physical incompatibility of discharged material;
- 8) Conduct appropriate chemical tests if appropriate;
- 9) Identify appropriate and practicable changes to the project plan to minimize environmental impact of discharge.

4. CORPS (40 CFR 230.10) Disposal of Dredged or Fill Material

a. Restrictions of Discharge

- 1) No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.
- 2) No discharge of dredged or fill material shall be permitted if it:
 - a) Causes or contributes to violations of any applicable state water quality standard;
 - b) Violates any applicable toxic effluent standards;
 - c) Conflicts with Endangered Species Act;
 - d) Violates requirements in the Marine Protection Research and Sanctuaries.
- 3) No discharge of dredged or fill material will be permitted that causes or contributes to significant degradation of waters of the U.S. Effects contributing to significant degradation include:
 - a) Adverse effects on human health or welfare;
 - b) Adverse effects on life stages of aquatic life and wildlife;
 - c) Adverse effects on aquatic ecosystem diversity, productivity and stability;

d) Adverse effects on recreational, aesthetic and economic values.

4) No discharge of dredged or fill material will be permitted unless appropriate steps have been taken to minimize adverse impacts of the discharge on the aquatic ecosystem.

5. CORPS (40 CFR 230.11) Disposal of Dredged or Fill Material

Permitting authority must document the potential short term and long term effects of a proposed discharge on the environment. The determination must include findings on:

- a. Physical substrate;
- b. Water circulation, fluctuation and salinity;
- c. Suspended particulate/turbidity;
- d. Contaminants;
- e. Aquatic ecosystem and organisms;
- f. Proposed disposal site;
- g. Cumulative impacts; and
- h. Secondary impacts.

6. EPA (40 CFR 231.(A) Disposal of Dredged or Fill Material

Prohibit or otherwise restrict a site whenever the discharge of dredged or fill material is having or will have an "unacceptable adverse effect" on municipal water supplies, shellfish beds and fishery areas, wildlife or recreational beds. And there is a showing that all the activity associated with the fill is necessary.

7. CORPS (33 CFR 320.4) Permits for Activities Affecting Navigational Waters

Required consideration for all Corps reviews of dams and dikes; structures; working, alteration or modification of navigable waters; construction of fixed structures on Outer Continental Shelf; discharges into waters of the United States; and ocean dumping.

- 1) Public interest review;
 - a) Extent of public and private need.

- b) Alternative location and methods.
 - c) Public and private beneficial and detrimental effects.
 - d) Cumulative effects.
- 2) Wetlands;
 - a.) Cumulative impacts;
 - b.) No permit issued unless District Engineer concludes the benefits outweigh damage to wetland;
 - 3) Applicant is urged to modify the proposal to eliminate or mitigate damage to resources;
 - 4) Water Quality
 - 5) Historic, scenic and recreational values;
 - 6) Effects on limits of the territorial sea;
 - 7) Interference with adjacent properties or water resource projects.
 - 8) Activities in marine sanctuaries
 - No permit issued until applicant certifies that the activity is consistent with the purposes of Title III of the MPRSA.
 - 9) Floodplains
8. CORPS (22 CFR 322.5) Permits for Activities Affecting Navigational Waters
- a. Permits for structures or work in or affecting navigable waters of the United States as required under Section 10 of the Rivers and Harbors Act include:
 - 1) Non-Federal Dredging for Navigation

Permittee must meet same conditions as federal dredging projects with respect to turbidity, water quality, containment of material, nature and location of approved spoil disposal areas, extent and period of dredging, and "other factors relating to protection of environmental and ecological values."

2) Structures for Small Boats

In the absence of overriding public interest, favorable consideration will generally be given to applicants from riparian owners for permits for piers, boat docks, moorings, platforms, and similar structures for small boats.

Particular attention is given to prevent possible obstructions to navigation.

Cooperative or group facilities are encouraged.

3) Aids to Navigation

Must conform to U.S. Coast Guard requirements for marking, lighting, etc.

4) Canals and Other Artificial Waterways Connected to Navigable Waters of U.S.

Canals or similar artificial waterways are subject to same regulations as other natural waterways of the U.S.

5) Power Transmission Lines

Section 10 permits are required for power transmission lines crossing navigable waters. Regulations prescribe minimum clearance.

9. CORPS (33 CRR 323.4) Permits for Activities Affecting Navigational Waters

a. Management practices that should be followed to the "maximum extent practicable" in the discharge of permitted dredged or fill materials.

- 1) Discharges of dredged or fill material should be avoided or minimized through the use of practical alternatives;
- 2) Discharges in spawning areas during spawning season should be avoided;
- 3) Discharges should not restrict or impede the movement of aquatic species;
- 4) Should minimize impacts from impoundments;
- 5) Wetland discharges should be avoided;

- 6) Heavy equipment in wetlands should be placed on mats.
- 7) Discharges into breeding and nesting areas for migratory waterfowl should be avoided; and
- 8) All temporary fills should be removed in their entirety.

10. CORPS (22 CFR 323.4-2) Permits for Activities Affecting Navigational Waters

a. Provided conditions in "B" below are met, permitted discharges include:

- 1) Non-tidal rivers, streams and their impoundments including adjacent wetlands that are located above the headwater;
- 2) Natural lakes, including their adjacent wetlands, that are less than 10 acres in surface area and that are fed or drained by a river or stream above the headwaters. In the absence of adjacent wetlands, the surface areas of a lake shall be determined at the ordinary high water mark;
- 3) Natural lakes, including their adjacent wetland, that are less than 10 acres in surface area and not a part of a surface river or stream. In the absence of adjacent wetland, the surface area of a lake shall be determined at the ordinary high water mark; and
- 4) Other non-tidal waters of the United States other than isolated lakes larger than 10 acres (see 3) above) that are not part of a surface tributary system to interstate waters or navigable waters of the United States (see Sub-section 323.2(a)(5)).

b. For purposes of Section 404, the following conditions must be satisfied for any discharge of dredged or fill material in waters described above:

- 1) That the discharge will not destroy a threatened or endangered species as identified under the Endangered Species Act, or endanger the critical habitat of such species;
- 2) That the discharge will consist of suitable material free from toxic pollutants in other than trace quantities;

- 3) That the fill created by the discharge will be properly maintained to prevent erosion and other non-point sources of pollution; and
- 4) That the discharge will not occur in a component of the National Wild and Scenic River System or in a component of a State Wild and Scenic River System.

11. CORPS (33 CFR 325.9) Permits for Activities Affecting Navigational Waters

District Engineers will assure that authorized activities are conducted and executed in conformance with approved plans and other conditions of the permits.

12. CORPS OF ENGINEERS (33 CFR 320.4 (C)) Permits for Activities Affecting Navigable Waters

"The applicant will be urged to modify his proposal to eliminate or mitigate any damage to (wildlife) resources and, in appropriate cases, the permit may be conditioned to accomplish this purpose."

13. U.S. FISH AND WILDLIFE SERVICE/NMFS (40FR 231 5.2.A.(4)) Fish and Wildlife Coordination Act

"Non-water dependent structures, facilities, or activities generally will be considered by the Service to be unacceptable uses of the public waters unless it has been demonstrated that the proposed use is required in the public interest... and no alternative site mutually acceptable to the Service and the applicant is available. Although in many cases a restaurant, motel, trailer park, golf course, or other service facility may be more attractive to its customers if it has water frontage, this attraction does not necessarily require encroachment into navigable waters and wetlands. A set-back location that preserve public access to the water usually can provide as good or better water view, assure greater safety from storm hazards, and otherwise accord more fully with both the private and public interest."

14. U.S. FISH AND WILDLIFE SERVICE/NMFS (40 FR 231.4.1.B(2))

"...wetlands and shallow water habitats have such high ecological and social values as to admit their destruction or degradation only when there is no question that the public interest demands it."

15. U.S. FISH AND WILDLIFE SERVICE/NMFS (40 FR 231 2.2.B(1)(b)) Fish and Wildlife Coordination Act

"The Service, through taking of every appropriate, useful action, has the following long-range objective...Ensuring that

all authorized works, structures, and activities are (1) judged to be the least ecologically damaging alternative or combination of alternatives (e.g., all appropriate means have been adopted to minimize environmental losses and degradation.. (40 FR 231 2.1 C.) For water-dependent works "The service usually recommends that the site occupied involves the least loss of area on the least valuable of the alternative sites..."

16. U.S. FISH AND WILDLIFE SERVICE NMFS/(40 FR 231 3.1 (B(2))
Fish and Wildlife Coordination Act

"It is the Service position that it is proper to assess the total impact of the total development, including any part to be located on uplands and any secondary effects."

"The totality of existing and projected cumulative impact of all developments affecting a waterway or group of related waterways and the dependent resources thereof also must be considered."

17. U.S. FISH AND WILDLIFE SERVICE/NMFS (40 FR 231 5.2A(6))
Fish and Wildlife Coordination Act

"The Service will object to or request denial or Federal permit for any proposed project not properly designed or located to avoid preventable significant damages to fish, wildlife, and/or other environmental values."

18. U.S. FISH AND WILDLIFE SERVICE/NMFS (40 FR 231 5.31(1))
Fish and Wildlife Coordination Act

Regarding excavation and filling, "any permits issued... will be recommended to be conditioned to prohibit activities in fish and wildlife nursery areas and during periods of migration, spawning, and nesting activity."

19. U.S. FISH AND WILDLIFE SERVICE (46 FR 15) Mitigation Rules

In January 1981, the USFWS promulgated regulations for mitigating the adverse impacts of land and water developments on fish, wildlife, their habitats and uses thereof.

USFWS recommends mitigation programs consistent with fish and wildlife resource values, Resource Category 1, who's goal is "no loss of existing habitat value" is consistent with mitigation language in Goal 16.

20. DSL (ORS 541.625 Fill and Removal Law

a. The Director shall issue a permit if he determines the removal will not be inconsistent with the protection, conservation and best use of the water resource.

b. The Director shall issue a permit if it would not interfere with state policy to reserve waters for navigation, fishing and public recreation.

21. DSL (ORS 541.625(2)a-e) Fill and Removal Law

a. Director shall consider

- 1) Public need
- 2) Conservation, public health and safety
- 3) Conforms with existing public uses
- 4) Consistency with land use
- 5) Whether for stream bank protection

22. DSL (ORS 541.626) Fill and Removal Law

The Director shall require mitigation as a condition of any permit for filling or removal of intertidal marsh.

23. ODFW (ORS 496.012) Wildlife Policy

Manage wildlife to provide the optimum recreational and aesthetic benefits by:

- a. Maintaining all species of wildlife;
- b. Developing and managing lands and waters in a way that will enhance production and public enjoyment of wildlife;
- c. Permit orderly and equitable utilization of available wildlife;
- d. Develop and maintain public access;
- e. Regulate wildlife populations compatible with primary uses and public use.

24. ODFW (ORS 506.036) Jurisdiction of Fish and Wildlife Commission

The Commission has exclusive jurisdiction over all fish, shellfish and all other animals living intertidally on the bottom, within the waters of this state.

The Commission also has the duty of protection, preservation, propagation, cultivation, development and promotion of all fish under its jurisdiction in state waters.

25. ODFW (ORS 506.109) Food Fish Management Policy

Manage food fish for optimum economic, commercial, recreational and aesthetic benefits by:

- a. Maintaining them at optimum levels;
- b. Developing and managing lands and waters for optimum use;
- c. Permitting optimum and equitable use;
- d. Developing and maintaining access;
- e. Regulating populations;
- f. Preserving fishing industry with sound management policies.

26. ODFW (ORS 509.505) Placing Inwater Matter Injurious to Shellfish

It is illegal for any person, municipal corporation, political subdivision or governmental agency to deposit or allow to escape into, or cause or permit to be deposited or escape into any public waters of this state, any substance of any kind which will or shall in any manner injuriously affect the life, growth or flavor of shellfish in or under such waters.

APPENDIX A

DEFINITIONS

DEFINITIONS

ACTIVE RESTORATION: The use of specific remedial action such as removing fills, breaching dikes, removing tidegates etc. to restore or replace original estuarine attributes. (see RESTORATION)

AQUACULTURE: The raising, feeding, planting and harvesting of fish, shellfish or marine plants, including facilities necessary to engage in the use.

BENTHIC: Living on or within the bottom sediments in water bodies.

BOAT LAUNCHING: A facility designed for the launch, take out and/or tie up of recreational or smaller commercial craft. Such use may include commercial, public or individual private facilities. Boat launching does not include large scale marine railway facilities designed for marine industrial boat building and repair facilities.

BREAKWATER: A barrier, sometimes connected to the shore at one or both ends to break the force of waves. Used to protect harbors and marinas, breakwaters may be constructed of rock piling, concrete or may be floating structures.

BRIDGE CROSSING: A structure spanning a waterway designed to carry automobile, railroad and/or pedestrian traffic across the waterway. Maintenance or replacement of bridge crossings means repair, restoration, or in-kind replacement of a bridge such that the number of travel lanes is not increased.

CONDITIONAL: Refers to a use which may be permitted only after a case-by-case review and local conditional use approval has been granted. (See PART IV)

CONSERVE: To manage in a manner which avoids wasteful or destructive use and provides for future availability.

DIKE: An earthen embankment or ridge constructed to restrain high waters.

DOCK: A fixed or floating decked structure against which a boat may be berthed.

DOLPHIN: A group of piles driven together and tied together so that the group is capable of withstanding lateral forces from vessels or other objects.

DREDGED MATERIAL DISPOSAL: The deposition of dredged material in shorelands or estuarine areas.

DREDGING: The removal of sediment or other material from a water body, usually for the purpose of deepening a channel, mooring basin or other navigaiton area.

ESTUARY: A semi-enclosed body of water connected with the ocean and within which fresh and salt water mix. The estuary includes (a) estuarine water; (b) intertidal lands; (c) sub-tidal lands; and (d) tidal marshes. Estuaries extend upstream to the head of tide; their landward extent is Mean Higher High Water or the line of non-aquatic vegetation.

EXCAVATION: Excavation of shoreland to create new estuarine surface area directly connected to other estuarine waters.

FILL: The placement of material in estuarine areas to create new shoreland area or raise the elevation of land.

GROIN: A shore protection structure (usually perpendicular to the shoreline) to trap littoral drift or retard erosion of the shoreline. Generally constructed of rock or other solid material.

INTERTIDAL: The area between mean lower low water and mean higher high water.

JETTY: An artificial barrier used to change littoral drift to protect inlet entrances from sedimentation and to direct and confine the stream of tidal flow. Usually constructed at the mouth of a river or estuary to help deepen and stabilize a channel.

MANAGEMENT UNIT: A discrete geographic area, defined by biophysical characteristics and features, within which certain uses and activities are promoted, encouraged and protected and others are discouraged, restricted or prohibited.

MARINA: A small harbor, boat basin or moorage facility providing dockage for recreational craft.

MEAN HIGHER HIGH WATER: The average of the higher high waters over a 19 year period.

MEAN LOWER LOW WATER: The average of the lower low waters a 19 year period.

MINERAL AND AGGREGATE EXTRACTION: The removal for economic use of minerals, petroleum resources, sand, gravel or other materials from the estuary.

MITIGATION: The creation, enhancement, or restoration of an estuarine area to maintain the functional characteristics of the estuary such as its natural biological productivity, habitats and species diversity, unique features and water quality. (See PART VIII)

NOT ALLOWED: Refers to a use or activity which is not permitted. Can only be permitted upon adoption of a plan amendment.

OUTFALLS: An outlet through which materials are discharged into the estuary. Outfalls include sanitary (sewer) discharges, storm drainage facilities, and other industrial waste discharges.

PASSIVE RESTORATION: The use of natural processes, sequences or timing to bring about restoration after removal or reduction of adverse stresses. (See Restoration)

PERMITTED WITH STANDARDS: Refers to a use which is permitted as consistent with the purpose and management objective of the management unit. Permitted uses must conform to the Estuarine Use Standards set for in the plan.

PIER: A structure extending into the water from solid land generally to afford passage for persons or goods to or from vessels, but sometimes to provide recreational access to the estuary.

PILING: A long, slender stake or structural element of steel, concrete or timber which is driven, jettted or otherwise embedded into the bed of the estuary for the purpose of supporting a load.

PORT FACILITIES: Facilities which accommodate and support commercial fishery and navigation activities, including terminals and boat basins and moorage for commercial vessels, barges and oceangoing ships.

PRESERVE: To save from change or loss and reserve for a special purpose.

PROTECT: Save or shield from loss and reserve for a special purpose.

RESOURCE CAPABILITY: The ability of a natural resource site to be physically, chemically or biologically altered, or otherwise assimilate an external use, and still fulfill its estuarine resource role as stated in management objective of the individual management unit and the definition of the management classification in which it is located.

RESTORATION: Revitalizing, returning or replacing original attributes and amenities, such as natural biological productivity, which have been diminished or lost by past alterations, activities or catastrophic events.

RIPARIAN: Of, pertaining to or situated on the bank of a river or other body of water.

SHORELANDS: The area adjacent to the estuary and its wetlands. The lower boundary of the shorelands is Mean Higher High Water or the line of non-aquatic vegetation; the upperboundary is the shorelands boundary, which is established on the basis of a number of inventory characteristics. Shorelands extend upstream to the head of tide. (See PART VII).

SHORELINE STABILIZATION: The stabilization or protection from erosion of the banks of a waterway by vegetative or structural means.

SUBMERGED CROSSINGS: Power, telephone, water, sewer, gas or other transmission lines which are constructed beneath estuarine waters, usually by embedding into the bottom of the esturay.

SUB-TIDAL: Below the level of mean lower low water.

TIDAL MARSH: Estuarine wetlands from the line of non-aquatic vegetation down to the end of vegetated flats, which is approximately the lower high water level.

WATER DEPENDENT: A use or activity that can only be carried out on, or in adjacent to the water because the use physically or economically requires access to the water body for water borne transportation, recreation, energy production or source of water. Non-water dependent accessory uses may be permitted in conjunction with a primary water dependent use. In general, such non-water dependent uses should not exceed 10% of the total area of the use. Variations to this standard may be permitted if it is found that additional area is required for non-water dependent uses essential to the functioning of the primary water dependent use (s).

Examples of water dependent uses include, but are not necessarily limited to:

- Marinas
- Aquaculture
- Marine ways
- Seafood processing plants
- Marine shipping terminals
- Charter boat operations
- Marine fuel sales

WATER RELATED: A water related use is:

- a. a use which derives a cost savings advantage (not associated with land costs or rent) from a location on or near the water; or
- b. a use whose location on or near the water is essential to the functioning of adjacent water dependent uses.

Examples of water related uses include, but are not necessarily limited to:

- Marine supply sales
- Bait and tackle shop
- Commercial fishing gear storage
- Seafood market

WATER HANDLING OF LOGS: The combined process of log dumping, storage transportation, millside handling and takeout as logs are placed into the water and moved to a final processing site.

WHARF: A structure built alongside a waterway for the purpose of receipt, discharge and storage of goods and merchandise from vessels.

APPENDIX C
GOAL EXCEPTIONS

GOAL 16 EXCEPTION TO ALLOW AQUACULTURE DEVELOPMENT AT
POOLE'S SLOUGH

Description

The area addressed by this exception includes tidal marsh and some limited intertidal lands at the mouth of Poole's Slough in management unit 19. Exception is taken to the Goal 16 "Natural" management requirements to allow dredge, fill and other activities for aquaculture development. These activities would otherwise be prohibited by the Goal in areas qualifying for natural management.

The aquaculture development proposed for the area involves the expansion of the existing Newport Pacific Corporation oyster facility and an adjacent operation to utilize a modified out-of-bay culture, a local seed technique to provide production and nursery operation.

The project would be accomplished in three phases. The first phase of the project would see maintenance dredging of a silted in channel from the firm's Poole Slough and Yaquina Bay growing grounds to their processing house. The 30 foot wide channel would be deepened some 5 feet for its 800 foot length. The resulting dredgings would be used to create a 100 x 32 foot tract of land in a sub-slough fronting the existing up-land site, and would become the site of a new processing plant and seed production operation.

Phase II of the plan would create by dredging, two modified out-of-bay rearing channels in the tidal marsh area, each 16 feet wide and 400 feet long, and a workway for mechanical equipment between them. Nearly all of the dredged material would be used to build the workway, with the small surplus taken to the new plant site.

The nursery channels, through the construction of berns, baffles, tidegates, etc. will function as an outdoor incubator driven by the tides and direct solar heating. Oyster seed larvae will initially be brought in from a Netarts Bay hatchery (and later from an on-site hatchery), and placed in the nursery area. Once the larvae have set, the resulting spat will be transplanted into the subtidal channel of Poole's Slough and adjacent areas of Yaquina Bay for the final growth phases. At maturity, the oysters will be harvested and delivered by boat to the shucking house for processing.

Phase III would see a staged expansion in the number of rearing channels up to a maximum of 18, with the dredged material expanding the original plant site to provide for shell storage, seed processing operations, and a larval hatchery. The additional seed production capacity provided by the Phase III channels should provide sufficient production for seeding all suitable oyster growing in Yaquina Bay, with some seed production for outside markets a possible eventuality.

In total, the completed plan would involve approximately 5.35 acres of the land, consisting of 3.45 acres of dredging and 1.9 acres of fill.

Need

Commercial oyster growing has taken place in Yaquina Bay since before the turn of the century. Current oyster production is about 8,000 gallons per year. Roughly 200 acres of the bay (out of 600 acres which have been identified as suitable by the Oregon Department of Fish and Wildlife) are currently in production.

For complex biological reasons, the native Yaquina oyster failed to adequately re-propagate and commercial production demands necessitated turning to external seed sources. Growers utilized the larger Pacific oyster, which grows well in Yaquina Bay, but does not successfully spawn. Japan, for decades, was the only source of seed. Historically, oyster production has been limited by the expense and inadequate availability of seed and long (3-4 yrs.) growth cycles. Because of these limitations on production, the capital investment necessary for improving harvesting, processing and other operations has not been feasible.

Oregon State University and other institutions have intensified various research programs in an effort to overcome these limitations. The creation of new genetic oyster strains, production of regional seed sources and other factors have combined to increase somewhat the overall efficiency of oyster operations. As a result of this work, for example, most Northwest oyster seed is now produced domestically in "eyed larval" hatcheries, with growers setting their own seed.

More recently, advancing research on "out-bay" culture techniques offers great commercial promise for more efficient spat production and the reduction of total growth time.

The underlying principle of out-bay culture is water control hence the control of algal production. Usually single celled algal plankton reproduce once every twenty-four hours. By controlling the rate of water exchange in a closed water mass, plankton blooms can be encouraged. Nutrients for the system can come from upwelled seawater or supplied as organic or inorganic fertilizer. Tests have shown that oyster seed can grow up to four times faster in such a system in comparison with non-manipulated seawater.

Modified out-bay culture which is proposed for Poole's Slough would entail developing dredged channels which would provide nursery areas for oyster seed.

Setting eyed larvae as currently practiced in Yaquina Bay necessitates the two day old seed being placed directly in the estuary. By placing the seed in controlled nursery areas, accelerated growth is anticipated. According to professor Wilbur Breese of Oregon State University this will increase survival and provide larger and healthier seed in less time. Hopefully the benefits to the seed will allow the oysters to reach market size from six months to a year earlier, a reduction in growth time of from 15 to 30 per cent.

The development of a seed production and nursery operation of this type provides the potential for putting into production large areas of Yaquina Bay which are currently under utilized for oyster growth. This local source of seed is felt to be a key step in realizing the full potential of the oyster industry in Yaquina Bay.

Alternatives

The following sites and designs are felt to represent the theoretical alternatives to the modified out-bay culture project proposed for Poole's Slough:

Upland Locations - The use of a remote upland location would involve construction of tanks and/or ponds to provide oyster nursery areas. Water would have to be pumped from the estuary to the site and returned via an outfall. A feasible upland site would need to be located in reasonable proximity to the estuary in order to provide access for a water source and also for moving the juvenile oysters by vessel from the nursery area to the open water areas of the estuary for the final growth stages.

No upland sites with suitable area (approximately 5.5 acres) are known to exist within the "oyster zone" of Yaquina Bay (River Bend to Grassy Point). Extreme topography along this portion of the estuary severely limits suitable area for a project of this nature. Relatively low, level lands are limited to tidal marsh or intertidal flat areas, which would require dredge and fill activities for project construction.

Suitable upland areas are available both above and below the oyster zone. Upland areas suitable for water dependent use are available in the Toledo area; however winter salinities in this area are too low to allow for oyster growth. Upland areas are available in the Yaquina sub-area (Coquille Point) and in the Newport area (McLean Point; South Beach). None of these areas have access to State certified shellfish waters, and water quality and ultra violet sterilizers).

Diked shorelands within the oyster zone were also examined as possible alternative sites. Several small diked areas are present along County Road 515 (north shore) between River Bend and Grassy Point. None of these areas is large enough to provide the needed area for an integrated nursery processing facility and none has vessel access for re-planting of spat. (Provision of vessel access to these areas would require extensive intertidal dredging.) Further, resource agencies have indicated that, despite being partially diked, these areas are still classified as wetlands and would require full environmental review under Section 404 for needed dredge and fill activities (and would require either Goal 16 or 17 exceptions). Due to the scarcity of mitigation sites in Yaquina Bay, these diked areas have been identified and reserved as needed mitigation sites.

Diked shorelands are also potentially available in the Boone's and Nute's Slough areas. Sufficient area is available at both of these sites for the proposed facility. State certified shellfish water is not available, and water quality control equipment would be required. Vessel access to this area is not available; intertidal dredging in a Natural management unit would be required to provide such access.

All of the above diked shoreland sites would require major construction activities to breach existing dikes and provide tidal openings through the fill bed of County Road 515. Several sites would also involve removal and relocation of large tidegates. All of these sites have the additional limitation of being located across County Road 515 from the estuary itself. This would necessitate crossing the county road (classed as a major arterial) regularly with equipment, cages, trays etc. as they are transferred from the nursery areas to the open water areas, a potentially hazardous situation.

Finally, all of the potential sites along the north shore which are outside of the City of Newport (diked shoreland and other upland) have no known source of fresh water. Groundwater supplies are uncertain and known surface water supplies available for appropriation are not adequate. It is anticipated that at eventual capacity, the nursery and processing facilities will require substantial quantities of fresh water.

Open Water Areas - Open water areas in the oyster zone have been considered in the past for use as oyster nursery areas. There are several serious limitations with the use of these areas. First, and most important, is the fact

that to properly establish and monitor accelerated growth techniques requires minimizing the many environmental variables, which is extremely difficult to accomplish in an open water situation. Use of such areas largely nullifies the anticipated advantages of the relatively isolated and controllable environment provided by the modified out-bay technique. Additional problems with the use of these areas include possible damage from boat traffic, heavy winds and strong tidal currents; potential conflicts with established users of the water surface area such as boaters and anglers; and potential vandalism and security problems.

Design Alternatives - Design alternative involving man made channels or ponds constructed on adjacent shoreland areas have been considered under "upland alternatives."

It is theoretically possible to provide construction of processing and other landside facilities on piling, thus minimizing the amount of fill needed. This would be possible at the Poole's Slough site as well as several locations on the north shore of the oyster zone along County Road 515. However, due to the amount of area needed for the project (at least 60,000 square feet) this is not felt to be an economically feasible alternative. Local contractors' current cost estimates for pile supported structure are approximately \$20 per square foot. This would require an initial capital cost of 1.2 million dollars for construction of these facilities; at least five times the cost of construction on fill. In addition, ongoing maintenance and repair costs for pile supported structures would significantly increase the cost of operation.

A final design alternative involves the use of the Poole's Slough site for construction of the nursery area and locating the remaining landside facilities at other less environmentally sensitive locations. For successful operation, both the nursery facility (i.e. the rearing channels) and processing facilities must be located in close proximity to the open water growing grounds (for efficient transfer of spat and harvested oysters) and harvested oysters) and have vessel access (to provide for direct transfer of spat or harvested product to and from the growing grounds). Due to extreme topography and inadequate water depths, no upland sites are available in the oyster growing zone which could provide suitable area for a processing facility.

The operators of this proposed facility believe that integrating these uses at one location will be essential to an economical operation. Numerous capital and operating

costs, including personnel, equipment, utilities, transportation, and initial facility construction could be at least partially consolidated and thereby significantly reduced through the combining of operations at a single site. Since the economics of this proposal are currently untested, such factors may be key to successful operation.

In summary, the site and facility design for the proposed Poole's Slough oyster nursery operation meet the following essential requirements (alternatives considered are all found to be deficient relative to one or more of these requirements):

1. The Poole's Slough Facility can be operated using direct tidal exchange for the rearing channels. No pumping or other water intake and exchange facilities are required. Based on power and equipment cost estimates, an upland site requiring pumping would add over \$6,000 per month to the facility's operating costs. This cost factor renders the use of upland sites or full "out-bay" techniques impractical.
2. The Poole's Slough site has excellent water quality characteristics for oyster growth. Sites upriver from the oyster zone do not have access to waters with suitable salinity and nutrient characteristics. Sites downriver do not have access to State Health Division certified shellfish waters. These waters could only be used after processing with sand filters and ultra-violet sterilizers. According to representatives of Becker Industries (designer and manufacturers of sophisticated water filtration systems) this equipment would cost a minimum of \$150,000, plus installation, maintenance and operating costs, amounts which would render the project economically impractical.
3. Adequate space can be made available for an integrated nursery - processing facility at the Pooles's Slough site. No other sites which meet above requirements 1 and 2, have this needed area available.
4. Poole's Slough has adequate road and navigational access. Potential diked shoreland sites along the north shore of the oyster zone would require extensive dredging to provide vessel access. Upland and open water areas on the south shore downriver of Poole's Slough have no road access.
5. Poole's Slough has a reliable source of fresh water available. The Seal Rock Water District main line runs past the Poole's Slough site. It is unlikely that groundwater supplies elsewhere in the oyster zone would be adequate for the operation of the proposed facility.

Environmental Consequences

Approximately 5 acres of tidal marsh would be lost to dredge and fill activities as a result of the proposed project. This would result in the loss of primary productivity, detrital export, favorable water filtration and wildlife habitat. While this is a relatively small portion of the total area of tidal marsh in Yaquina Bay (approximately 819 acres), tidal marsh is considered a scarce habitat type in the estuary when compared to past abundance and to Oregon estuaries of similar size. The loss of even a small portion of a major tract of tidal marsh such as Poole's Slough must be considered a serious environmental consequence.

Actual loss of estuarine surface area will be limited to the approximately 1.9 acre area of fill. The roughly 3 acres of dredged area will result in high tidal marsh habitat being replaced by shallow sub-tidal habitat. Most, if not all of these negative environmental consequences can likely be compensated for through appropriate mitigation. Several potential sites for the restoration of tidal marsh are available in this area of the estuary (see Mitigation Sites).

Socio-Economic Consequences

With the development of new aquaculture facilities in this area, the oyster industry's efforts to expand production would be significantly enhanced. The local economy will realize the positive employment and economic spin-off that will result from the expansion of this basic industry. It is estimated that expansion of the oyster industry as a result of the proposed development could provide from 30 to 50 jobs and increase oyster production to 750 gallons weekly. This will help the county to further its economic goals of diversifying and stabilizing the local economy.

The Poole's Slough area has been identified by the Oregon Natural Heritage Program as a potential significant natural area. However, according to refinements of the ONHP Data Summary for Lincoln County, the Pooles's Slough area does not qualify for consideration as an ecologically or scientifically significant natural area (See Goal 5 Inventory, Lincoln County Comprehensive Plan). A long history of human use and disturbance, particularly in the area near the mouth of the slough indicate that it is not suitable for consideration as a significant natural area.

Energy Consequences

Energy will be conserved by allowing provision of navigational access to existing facilities on Poole's Slough. Currently, harvested oysters are unloaded at a site near River Bend

Moorage, trucked up the Bay Road to Toledo, and back down the South Bay Road to Poole's Slough. This 12 mile trip would be eliminated, as oysters could be delivered directly by boat once historically used channels are re-established through dredging. In addition, the proposed site and design provides the most energy efficient design for this type of nursery facility. Tidal and solar energy will be employed to provide the water circulation and temperature control needed for enhancing oyster production.

Compatibility

Existing uses in and around Poole's Slough include aquaculture operations, boating, angling, waterfowl hunting, commercial forestry uses, widely scattered rural residences, biological productivity and fish and wildlife habitat. Currently, no compatibility problems exist in this area.

It is anticipated that the expansion of the existing aquaculture facilities in this area will represent a continuation of an existing use pattern and will be compatible with surrounding uses.

Existing boat traffic and occupation of surface area will not increase significantly and thus will not conflict with anglers, boaters, hunters or other public water users.

Existing residences in this area are all entirely screened from the project site, thus no conflicts should arise as a result of these uses.

The proposed project is located entirely within an aquatic area and is buffered by privately owned upland areas. Commercial forestry activities in the vicinity will not be affected in any way by the proposed expansion.

The proposal will adversely impact biological productivity and wildlife habitat only on the small area actually included in the project site. The project site is geographically isolated from other areas important for productivity and habitat (i.e. McCaffery's Slough and upper Poole's Slough). The influence of human activity on surrounding areas will not be significantly greater than it is at present. Therefore, the proposed facility will not conflict with the area's overall values for biological productivity and fish and wildlife habitat.

POOLE'S SLOUGH AQUACULTURE PROPOSAL - DEVELOPMENT SUMMARY

PHASE I

1. DREDGE SUB-SLOUGH CHANNEL - POOLE SLOUGH TO ROAD.
 - A. 30' wide by 5' deeper (from +3.0 to -2.0)
by 800' length..
 - B. Provides 4,444 cu. yds. material.
 $\frac{12,000 \text{ cu. ft.}}{27 \text{ cu.ft./cu.yd.}}$ 4,444 cu. yds.

2. DREDGE ADDITIONAL 25' x 100' x 5' DEEPER TO
CREATE TURNING BASIN OF 55' x 100' x 5' DEEPER,
 - A. Provides 463 cu. yds. material.
 - B. $\frac{12,500 \text{ cu. ft.}}{27 \text{ cu.ft./cu.yd.}}$ TOTAL $\frac{463 \text{ cu. yds.}}{4,907 \text{ cu. yds.}}$

3. CREATE NEW PROCESS PLANT SITE AT ROAD,
 - A. Fill 100' wide front channel 10' deep
(to +13.0) x 132.6' long.
 - B. 100' x 10' = 1,000 cu. ft. and 37 cu. yds.
per running foot.
 - C. $\frac{4,907 \text{ cu. yds.}}{37, \text{cu. yds. per foot}} = 132.6 \text{ ft. length}$
 - D. 100' x 132' = 13,200 sq. ft.
 $\frac{13,200 \text{ sq. ft.}}{43,000 \text{ sq. ft. per acre}} = \text{Plant Site } \frac{100' \times 132'}{0.31 \text{ acres}}$

PHASE II

1. CREATE THREE REARING CHANNELS 16' WIDE x 6' DEEP
400' LONG.
 - A. With slope, plan 10' at bottom and 16' at +9' level.
 - B. Plan dredged depth to +3.0'.
 - C. For calculation, plan 13' wide ave. x 6'
deep x 400' per channel.
13 x 6 x 400 = 31,200 cu. ft. or 1,156 cu. yds. dredged.

Development Summary

D. 1,156 cu. yds. x 2 channels = 2,311 cu. yds. dredged.

E. Dredge 16' wide x 400' x 2 = 12,800 sq. ft. or
0.30 acres.

2,311 cu. yds.

2. CREATE ENTRY AND EXIT DITCHES AT EACH END.

A. Ditch 10' wide (plan 7' average) x 8'
deeper (+1.0) x 50' x 2 ditches.

B. 7' x 8' x 50' x 2 = 5,600 cu.ft.
or 207 cu. yds.

Dredge 207 cu.yds.
TOTAL DREDGE 2,518 cu.yds.

3. BUILD WORKWAYS TO SERVICE CHANNELS.

A. Build 25' wide x 50' long main workway at
13' level (+9.0 to +13.0)

25' x 4' x 50' = 5,000 cu. ft. or 185 cu.yds.

185 cu. yds.

B. Build 2 channel workway 16' wide x 400'
long @ 13' level.

16' x 4' depth x 400' = 25,600 cu. ft.

or 948 cu. yds.

948 cu. yds.
TOTAL FILL 1,133 cu. yds.

C. Total dredge area = 16' x 400' x 2 channels =
6,400 sq. ft. or 0.3 acres

SURPLUS FILL 1,385 cu. yds.
TO PLANT SITE

D. Total fill 25' x 50' + 16' x 400' x 2
channels or 1,250 + 12,600 or 14,050 sq. ft.
or 0.33 acres.

TOTAL DREDGE AND FILL 0.63 acres +

PHASE III

1. DEVELOP - BY STAGES - ADDITIONAL REARING CHANNELS.

A. 16 additional channels - 18 total.

B. Each channel requires dredging 1,156 cu.yds.
x 16 channels.

= 18,496 cu.yds. dredged

C. Each channel = 0.15 acres dredged. = 2.4 acres dredged

Development Summary

D. Plan one workway per two channels.

1. Plan 8 added workways (total of 9).

2. 16' x 400' x 8 = 51,200 sq. ft. or 1.2 acres filled

3. Add 50' main workway (Plan 48' lineal per 2 channels) or 50' x 48' x $\frac{16 \text{ channels}}{2}$ = 19,200 sq. ft. or 0.45 acres.

0.45 acres filled

E. Add entry exit ditches of 48' x $\frac{16 \text{ channels}}{2}$ x

2 ditches x 7' average width = 5,376 sq. ft. or

0.13 acres dredged

1-7' wide x 384' length x 8' deep =

21,504 cu. ft. or 796 cu. yds.

796 cu. yds. dredged

TOTAL DREDGED 19,292 cu. yds.

TOTAL FOR WORKWAYS

1-total sq. ft. (57,200 + 19,200)

is 70,400 x 4' depth = 281,600 ÷ 27

= 10,430 cu. yds.

SURPLUS TO PLANT SITE 8,862 cu. yds.

2. DEVELOP REMAINDER OF PLANT SITE.

A. Use surplus from ditches and channels.

1. 8,862 cu. yds. from Phase III + 1,385 cu. yds. from Phase II or 10,247 cu. yds.

B. Plan 100' wide x 10' deep or 37 cu. yds. per running foot.

C. $\frac{10,247}{37} = 277$ lineal feet

D. 277 x 100' wide = 27,700 sq. ft. =

0.64 acres fill

E. Add Phase II surplus of 1,385 cu. yds. to create fill of 1,385 cu. yds

$\frac{1,385 \text{ cu. yds}}{37 \text{ cu. yds. per foot @ 100' width x 10' deep}} = 68$ lineal feet
6,800 sq. ft. and

TOTAL FILL $\frac{.16 \text{ acres}}{0.8 \text{ acres}}$

OUT OF BAY CULTURE POWER USE ANALYSIS (Cont.)

5. PUMP STATION INSTALLATION AND PIPING COSTS NOT ADDRESSED.

6. TOTAL COSTS W/O INSTALLATION - PIPING.

A. Pump amortization \$3,000 yr./12 mo's =\$ 250.00 mo.

B. 200 KW demand x \$10.00 =\$2,000.00 mo.

C. KWH usage @ 0.027 KWH =\$3,888.00 mo.

TOTAL \$6,138.00 mo.