

FILED

AT _____ O'CLOCK _____

JUN 15 1982

D.M. PENFOLD, Director of
General Services of Lane County

[Signature]
DEPUTY

IN THE BOARD OF COUNTY COMMISSIONERS OF LANE COUNTY, OREGON

ORDINANCE NO. 862

) IN THE MATTER OF AMENDING THE COASTAL
) GOALS COMPLIANCE REPORT, A COMPONENT
) OF THE COMPREHENSIVE PLAN FOR LANE COUNTY
) (PA 81-307)

WHEREAS, the Board of County Commissioners has received from the West Lane Planning Commission a report dated April 14, 1982, of record herein, recommending approval of a proposed amendment to the "Coastal Goals Compliance Report"; and

WHEREAS, the Board of County Commissioners has received and considered the proposed amendment, public testimony and correspondence relating thereto; and

WHEREAS, the Board of County Commissioners has performed its public hearing and other duties in accordance with applicable law; now therefore

THE BOARD OF COUNTY COMMISSIONERS ORDAINS AS FOLLOWS:

That the proposed amendment to the "Coastal Goals Compliance Report", consisting of modifications to the text and to the maps of the document and retitling the document the "Coastal Resources Management Plan", as indicated on Appendix "A" to this Ordinance and attached hereto, is ADOPTED.

This Ordinance becomes effective 30 days from the date set forth herein or upon the adoption of an Order adopting Findings of Fact and Conclusions of Law Concerning the action, whichever comes last.

ENACTED this 9th day of JUNE, 1982.

[Signature]
Chair, Board of County Commissioners

[Signature]
Recording Secretary for this Meeting
of the Board

APPROVED AS TO FORM
DATE 5/17/82
[Signature]
OFFICE OF LEGAL COUNSEL

COASTAL RESOURCES MANAGEMENT

PLAN

COASTAL GOALS COMPLIANCE

REPORT

Adopted June 19, 1980

Revised 1982

Lane County, Oregon

June, 1978

Lane County Department
of Planning and Community Development

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CHAPTER 1INTRODUCTIONBACKGROUND

Coastal areas have long been recognized for their unique environmental qualities. The Oregon planning system (both state and local levels) has taken the needs of coastal areas into account. Most recently (1976), the state Land Conservation and Development Commission (LCDC) adopted a series of four "Coastal Goals" which deal exclusively with planning and resource management in the Coastal Zone of the state - including Lane County.

The Coastal Goals, which have the same legal standing as the earlier 15 LCDC Statewide Planning Goals, are quite firm and specific in what kinds of planning products and implementation measures are expected to be adopted by local governments. For the most part, required measures center around the concept of "management units," which are areas in which certain activities can occur and others cannot (similar to a subarea plan land use designation). Because some coastal resource information utilized in this study is inadequate and in some cases in error, and because natural systems do experience change, further study and experience should allow for future MU boundary modifications. The MU concept is explained in more detail later in this report.

Up to this time, coastal planning in Lane County has been accomplished through the adoption of a "Coastal Subarea Plan" plus a Countywide Goals and Policies plan. Although these documents both address coastal issues, they do not accomplish the level of detail required by the Coastal Goals. This plan - the "Coastal Resources Management Plan" is intended to meet the LCDC mandate. A separate but related study ("Siuslaw River Dredged Material Disposal Plan") will also help meet that mandate. All four documents functioning together should fulfill state planning requirements for coastal area planning.

A number of data sources have been used in this report. A major one is a technical report compiled by planning consultants Wilsey & Ham, called "Lane County Coastal Resource Inventory" and designed to meet specific Inventory requirements spelled out in the Coastal Goals. Other data sources include a state publication, "Environmental Geology of Coastal Lane County" (Department of Geology and Mineral Industries), various reports of the former Oregon Coastal Conservation & Development Commission (OCC&DC), and information gathered during the Coastal Subarea Plan preparation process.

THE COASTAL GOALS COMPLIANCE REPORT

As mentioned above, this report responds directly to the LCDC mandate for Coastal-area planning. The contents of the report are summarized below.

Estuarine Resources & Coastal Shorelands:

According to state guidelines, this report defines designated estuarine and shoreland management units (MUs) specifies priority levels for land use within these MUs, and details allowed and conditional uses. The specific

recommendations for land use regulation in these MUs are generally based directly on the state mandated guidelines.

Specific policies in this document regarding forestry practices are intended as recommendations to the Oregon State Board of Forestry. Suggestions are made for modification of the Forestry Practices Act (FPA) procedures and rules to meet the requirements of the Coastal Goals. Lane County realizes that final change in FPA rules and procedures may not comply with all County recommendations owing to the necessity to adopt rule changes to satisfy diverse Coastal County approaches.

Because of the extent of available data on Lane County's estuarine and shoreland habitats, these two goals have been addressed in greater detail than the "Beaches and Dunes Goal." However, there are still significant gaps in data which must be filled before these goals can be fulfilled with complete satisfaction.

Beaches and Dunes:

The Beaches and Dunes section of this report differs from those above in that specific management units are not assigned. Instead, five categories of duneforms are identified and general development guidelines are provided. Allowed land uses are designated by the comprehensive plan and zoning which were determined separately from, but in conjunction with, this report.

Ocean Resources:

A brief discussion is made of the "Ocean Resources Goal." Because the requirements of this goal pertain almost exclusively to state and federal agencies, the County's responsibilities are limited.

CHAPTER IIGoal 16 - ESTUARINE RESOURCESINTRODUCTION

Consistent with the requirements of Goal 16 and the designation of the Siuslaw as a Shallow Draft Development Estuary, estuarine areas were placed into three management Units (MUs): Natural, Conservation or Development. Designation of the various management units was based on the Lane County Coastal Resource Inventory and accompanying maps (Maps III-1 through IV-7) conducted by Wilsey and Ham, plus subsequent inventory information. Each management unit identified on subsequent pages is a unique biological, physical and economic unit. The intent is to provide a diverse mixture of use and preservation of the Siuslaw estuary's natural resources such that the long-term economic, environmental and social values can be maintained.

The following section defines the three management unit categories, setting priorities for uses within them and listing the various uses permitted within each.

A subsequent section designates specific MUs within the estuary. The unique features of each MU are described and special considerations based on these features are established. The text of this section corresponds to the lettered MUs shown on the attached maps of estuarine resources.

Management Unit Definitions:Natural:

This designation is designed to assure the protection of significant fish and wildlife habitats, the continued biological productivity within the estuary, provide for educational and scientific needs and to maintain a level of diversity essential to provide for a long-term, dynamic ecosystem which can withstand a variety of pressures. All major tracts of saltmarsh, tideflats and eelgrass and algae beds will be found in this MU, as they are the areas of primary biological productivity without which the health of the entire estuary could not be maintained.

Uses within the "NATURAL" MU shall be of a low-intensity, undeveloped nature stressing minimal human impact. Recreational clamming and fishing are examples of acceptable uses within this MU.

Policies:

1. Log storage on existing sites should continue subject to the requirements of state and federal regulations. Log storage in the waters of the Siuslaw has been the practice of wood processing firms for many years. Storage and handling of logs by use of water is an integral part of the present facilities' manufacturing processes and is therefore water dependent. However, due to impacts of log storage in intertidal areas, Lane County recommends against expansion of existing sites or creation of new storage sites in the Natural MU.

2. Low-intensity grazing on high salt marshes is consistent within the capacity of the marsh to accommodate such use and retain significant natural characteristics.
3. Commercial clamming and fishing shall only be allowed to the extent that the productivity of the resource is not endangered. The Oregon Department of Fish and Wildlife shall be the proper consulting agency in this regard.
4. No filling, regardless of volume, shall be allowed in this MU. Riprap to protect structures existing prior to October 7, 1977 shall be allowed provided other protection measures less harmful to the estuary have been considered. Riprap must meet Army Corps of Engineer strength standards.

Conservation

The primary purpose of this MU is preservation of long-term use of renewable resources which do not require major alteration of the estuary. The majority of the Siuslaw River estuary is included in this MU to reflect the predominantly rural, sparsely developed nature of this estuary.

Although certain commercial and recreational uses may be consistent with the resource capabilities and purpose of this MU, each proposal will be evaluated on its potential for maintenance and enhancement of biological productivity.

Policies:

1. Log storage on existing sites ~~should continue~~ is subject to the requirements of state and federal regulations. Log storage in the waters of the Siuslaw has been the practice of wood processing facilities for many years. Storage and handling of logs by use of water is an integral part of the present facilities' manufacturing processes and are therefore water dependent.

Expanded or new log storage leases shall be allowed only if:

1. It is determined that the storage is water dependent;
2. A public need is demonstrated;
3. No alternative upland locations are feasible;
4. Adverse impacts are minimized as much as feasible;
5. The storage meets all applicable state and federal regulations;
6. The storage does not preempt long-established recreational use of the site;
and;
7. Logs will not ground at low water.

Log storage sites for new facilities on the Siuslaw or for facilities not located on rivers shall be reviewed to determine if they are water dependent. All expanded sites must be located such that they do not preempt traditional use of the area for water-dependent recreational activities.

2. Single-family, single-purpose piers are discouraged in favor of public, multiple-purpose or commercial piers. Mooring buoys, floating piers, launching ramps and dry-land storage are potential alternatives.
3. Filling, dredging and other activities which degrade natural estuarine values will be allowed only if they constitute a minor estuarine alteration

and if in compliance with mitigation requirements of ORS 541.605 to 541.695 (Fill and Removal Law).

Normal maintenance dredging of existing facilities and dredging of minor channels between such facilities and the main Siuslaw River channel constitute minor estuarine alterations.

Major dredging or filling shall only be allowed in conjunction with an active restoration project or for aquaculture, water-dependent recreation or navigational improvement if:

- a. An estuarine location is required;
- b. A public need is demonstrated;
- c. No alternative upland locations exist for the portion of the use requiring fill;
- d. Adverse impacts are minimized as much as feasible;
- e. If consistent with the resource capabilities of the area and the purposes of the management unit; and
- f. No alternative locations exist within the estuary.

Development

Providing for navigational, public, commercial and industrial water-dependent needs is the purpose of this designation. This report assigns the dredged navigation channel and the jetties to this category, essentially responding to the existing situation. It will be necessary to effect a plan amendment for future uses requiring a Development designation. The cumulative effect of all such changes, as well as the potential for using upland sites to limit use of the estuarine surface area, shall be considered in each case.

Developmental activities can and have produced adverse effects on the Siuslaw Estuary. Sedimentation resulting from logging practices contributes to sedimentation of the dredge channel, necessitates more frequent dredging and adds to the turbidity of the water. Conversely, bank and streambed erosion can result when flow is constricted through the emplacement of bridge supports. In addition, industrial or residential development can cause further chemical and biological changes in the estuary.

When considering further development along the estuary it will be necessary to review the individual and cumulative effects to determine further impacts both on the natural systems and the local economy.

Policies:

1. New dredging projects, any project which requires filling of the estuary, or other degradation of natural biological values, 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 feasible.
 - e. if in compliance with mitigation requirements of ORS 541.605 to 541.695 (Fill and Removal Law).
2. Dredge or fill activities, as otherwise approved, must be mitigated, if found to be subject to the mitigation requirement, by creation, restoration or enhancement of an estuarine area to maintain the functional characteristics and processes of the estuary such as its natural biological productivity, habitats and species diversity, unique features and water quality.
 3. Maintenance dredging of the navigation channel, as authorized in the Siuslaw River Dredged Material Disposal Plan, is automatically approved and need not go through an impact assessment for each individual project.
 4. Proposals must consider and not be detrimental to natural characteristics of value in the adjacent estuary.
 5. Flood and erosion control structures such as jetties, bulkheads and seawalls, shall meet the requirements of Policy #1 and shall be designed and sited to minimize:
 - (1) erosion or man-induced sedimentation in adjacent areas, and
 - (2) other adverse impacts on water currents, water quality, and fish and wildlife habitat.

MITIGATION AND RESTORATION

A. Mitigation Sites

A significant portion of the estuary within the jurisdiction of the City of Florence in Management Units E and F has been designated development. These are relatively deep water environments of low biologic value adjacent to developed or partially developed shorelands with access to transportation routes and are thus suitable for this designation. There is only a fringe along both of these Management Units which is intertidal land and would require mitigation for any dredge or fill activities. As there are presently no specific plans for development of these sites requiring dredge or fill, no specific mitigation requirements are known or even necessarily anticipated. However, the designation of estuarine development MUs could imply the possibility of future mitigable activities here.

Possible mitigation sites have been reviewed by a Mitigation Task Force consisting of several resource agencies and the Port of Siuslaw. As a result of this review, three dredged material disposal islands near the mouth of the Siuslaw North Fork in Natural MU G have been designated as mitigation sites. The two larger islands are within county jurisdiction; the smaller one is within the City of Florence. All three islands are owned by the Port

of Siuslaw and are zoned in a Dredged Material/Mitigation Combining District. The islands appear to have the potential of use as a mitigation bank in the future.

They presently support high salt marsh and upland communities. Mitigation could consist of returning portions of these islands (as needed) to intertidal (tide flat) or subtidal (eel grass production) environments by removing surface sands. This approach is favored by the local jurisdictions because this estuary is salt marsh rich (approximately 1458 acres) and tide flat poor (756 acres). The loss of some marsh environments with a corresponding increase in tide flats would provide a slight balancing effect for the overall estuarine habitat makeup. As a rough approximation, there is about 40 percent more area within the islands designated as mitigation sites than within the intertidal portions of Management Units E and F.

B. Restorable Lands

Many acres of former intertidal lands have been diked along the Siuslaw for agricultural use, tidegates have been placed cutting off saltwater influence to some areas, other estuarine habitat has been lost by deposition of dredge spoils or other fill. This process continued for many years with little control.

The Oregon Department of Fish and wildlife has investigated lands along the Siuslaw to determine which were previously functioning parts of the estuary. Most lands lost were diked for agricultural production, primarily grazing. Although it is difficult to determine the type of tideland that formerly existed, it can be assumed that most areas diked for agricultural use were mid to high elevation salt marshes, since these are most readily converted to upland uses.

As new estuarine lands can be created by man, they are also created by natural means. Shoaling of the estuary creates new mudflats; these can gradually grade into salt marshes. This process is accelerated by agricultural and silvicultural uses upriver, but has always occurred, and will continue, on the Siuslaw.

Lane County does not have a program designed to return previous tideland to the estuary, although both passive and active restoration can occur. Passive estuary restoration is a permitted use in the Natural and Conservation Districts. Active restoration is a permitted use in the Conservation District, and a Special Use in the Natural and Development Districts. Restoration is also encouraged, but not required, in Goal 16.

ESTUARINE IMPACT ASSESSMENT.

Any dredging, filling, or other use which could cause a significant degradation of the estuary must be preceded by a full review of the impacts of the proposed alteration.

The County will rely on the existing Corps of Engineers Section 10/404 permit process to determine when a significant degradation, other than dredge or fill, will occur. In this process, a Preliminary Environmental Assessment (PEA) is completed for every permit application and a preliminary determination of

whether significant impacts would occur and therefore whether an Environmental Impact Statement (EIS) would be required. This determination is sent out for public review to public agencies and interested parties who have an opportunity to challenge the Corps' decision, or to ask for a public hearing. Thus, any party has the ability to supply information that insignificant degradation or reduction in natural values would occur. The Corps' then makes a final determination whether an EIS is required. If that determination is positive, an Impact Assessment is required.

All uses listed as conditionally permitted in the Natural, Conservation and Development Management Units are allowed only if they are shown to be consistent with the resource capabilities of the area.

Procedures for Impact Assessments and determination of Resource Capabilities are delineated in the zoning ordinance.

It is recognized that previous actions in the Siuslaw Estuary, including logging, diking of wetlands and dredge and fill projects have resulted in a degradation of estuarine biological values. Likewise, further development of the estuary for water-dependent or water-related industrial, commercial or recreational uses and continued development of adjacent shorelands will likely result in some further sedimentation of the estuary. It is anticipated that undisturbed riparian strips required adjacent to forestry and other lands will reduce this sedimentation and that planned channel dredging will modify that which does occur.

Since no negative estuarine impacts are anticipated from upland spoils disposal, the designation of restoration/mitigation sites for this purpose is clearly unnecessary.

There is also a lack of restoration/mitigation sites available on the Siuslaw because: 1) those diked lands which have restoration potential are presently in private ownership and are being actively farmed; and 2) the majority of old dredged material disposal sites in the estuary have developed salt marsh communities through natural processes and further 'restoration' actions would not be appropriate.

Therefore, since there is a limited need for restoration/mitigation sites and as potential sites are limited in number, this report designates only a few sites as suitable for this use. Designated mitigation sites for presently unknown future estuarine modifications are limited to old dredged material disposal sites within the estuary which do not presently exhibit subtidal or intertidal vegetation communities. These sites are included within Estuarine MU, 'D' (Natural) and are indicated on map IA. These two small islands consist primarily of high salt marsh, an environment which the Siuslaw estuary has in abundance. Reduction of the surface of these islands would provide additional subtidal or intertidal environments which the estuary is relatively poor in. However it is critical that the overburden removed from these islands not be deposited with MU 'D' as it consists throughout of the following highly productive environments:

1. Major clam beds,
2. Major intertidal seagrasses,

3. Subtidal seagrasses,
4. Major intertidal algae beds, and
5. Major tide flats.

It is anticipated that the bulk of estuary development and alteration will occur within the Florence urban area and that such development will require mitigation. These old dredge spoil sites will provide some limited area for the required mitigation.

GENERAL USE PRIORITIES

Four levels of priorities apply to all uses in the estuarine management units. Uses within the Natural MU will utilize Priorities 1 and 2 (in that order) for an evaluation. The Conservation MU uses will fall within Priorities 1-3 (in that order) and will be considered on that basis. Priorities 2-4 (in that order) will be used to evaluate proposals in a Development category. This is not meant to downplay the importance of Priority 1, only to indicate that a Development category, when applied, is to provide for commercial and industrial needs and is balanced estuary-wide with biological needs. Diversity of uses within the estuary is essential to the economic well-being of the area and is indicated by the "Shallow-Draft" designation given the Siuslaw River Estuary by LCDC. To provide this diversity while maintaining the health of the estuary is the underlying concern behind evaluation of all uses of this priority system.

PRIORITIES (from highest to lowest):

1. Uses which maintain the integrity of the estuarine ecosystem;
2. Water-dependent uses requiring estuarine location, as consistent with the overall Oregon Estuarine Classification;
3. Water-related uses which do not degrade or reduce the natural estuarine resources and values;
4. Nondependent, nonrelated uses which do not alter, reduce or degrade the estuarine resources and values.

RESOURCE USES WITHIN MANAGEMENT UNITS

I. Natural

A. Permitted Uses:

1. Undeveloped, low-intensity, water-dependent recreation;
2. Research and educational needs;
3. Navigation aids, such as beacons and buoys;
4. Passive estuary restoration.
5. Protection of habitat, nutrient, fish, wildlife and aesthetic resources.

6. Low-intensity grazing on high salt marsh.
- B. Conditional Uses (uses possible where consistent with resource capabilities and purpose of Management Unit. These uses require findings that the use is consistent with the resource capabilities of the area and with the purposes of the management unit).
1. Aquaculture facilities;
 2. Communication facilities;
 3. Active estuary restoration;
 4. ~~Low-intensity grazing on high tidal marshes;~~
 4. Riprap revetments to protect structures existing prior to October 7, 1977;

II. Conservation:

A. Permitted Uses:

1. Uses listed in IA;
2. Aquaculture facilities not requiring dredge or fill;
3. Communication Facilities not requiring dredge or fill;
4. Active estuary restoration not requiring dredge or fill;
5. Low-intensity grazing on high tidal marshes,
6. Log storage (if under lease on date of ordinance adoption and meets state and federal agency requirements.

B. Conditional Uses (uses possible where consistent with resource capabilities and purpose of Management Unit. These uses require findings that the use is consistent with the resource capabilities of the area and with the purposes of the management unit):

1. High-intensity, water-dependent recreation;
2. Maintenance dredging of existing facilities;
3. Water-dependent uses requiring occupation of the water surface by means other than fill;
3. ~~Mining and mineral extraction.~~
4. Bridge crossing.
5. Minor navigational improvements;
6. New or expanded log storage sites;

7. Aquaculture requiring dredge or fill;
8. Active restoration requiring dredge or fill;
9. Erosion control structures;
10. Riprap to protect preexisting structures or specified values.

III. Development:

A. Permitted Uses:

1. Navigation aids;
2. Water-dependent commercial activities;
3. Water-dependent industrial activities.
4. Water-dependent public activities.

B. Conditional Uses (uses possible where consistent with resource capabilities and purpose of Management Unit):

1. Activities identified in IA and IB and in 2A and 2B above provided available development areas are not limited unnecessarily;
2. Water-related uses not requiring fill;
3. Nondependent, nonrelated uses not requiring fill;
4. Water-dependent uses requiring fill (fills must be evaluated as per Goal #16);
5. Inwater disposal of dredged material (as per fill requirements of Goal #16).

DESIGNATION OF ESTUARINE MANAGEMENT UNITS

(refer to lettered MUs on attached maps)

A. Development:

1. Extent: North and South jetties
2. Rationale:
 - a) Developed jetties;
 - b) Essential for navigation over bar.
3. Discussion: This MU encompasses only the jetties and not any tidal flats which may develop behind them. The nature of a jetty is one of development, as it is so closely tied to the economics of the estuary.

Maintenance of the jetties, and their possible future extension, are envisioned in this MU--any change in location of the landward side of the jetty would require that additional land be converted to this MU designation.

B. Natural

1. Extent: Specifically indicated on 1"=1,000' scale map. Generally--north side of the river from the entrance channel to Cannery Hill.

2. Rationale:

- a) Fish rearing (particularly fall chinook juveniles) and spawning;
- b) Seal haulout;
- c) Clam beds with species found only at this salinity level (i.e., piddock, gaper, cockle, and littleneck);
- d) Seagrass and algae beds;
- e) Aquaculture;
- f) Area of high quality biological habitat and unique consolidated substrate;
- g) Low-intensity recreational potential.

3. Discussion: The salinity range in this MU near the mouth of the river is much higher than the remainder of the estuary since the Siuslaw has a strong riverine influence. This factor causes the organisms found here to be much different than those in the remainder of the estuary. Seals are known to use the Cannery Hill area as a haulout and oceanic fishes can be found feeding here. The sand substrate is of high value for fish rearing, including fall chinook juveniles. The recreational and economic importance of this area extends beyond the limits of the MU because of this fish rearing capacity. The abundance of clams is also of high recreational value.

C. Natural:

1. Extent: Specifically indicated on 1"-1000' scale estuary map #1 in the Appendix. Generally--north side of the river from river mile 1.2 to Cannery Hill.

2. Rationale:

- a) Fish rearing (particularly fall chinook juveniles) and spawning;
- b) Seal haulout at upriver portion;

B. Conservation

1. -Extent: The two cove areas landward of the north jetty at river mile 1. Boundaries are as shown on the 1"=1000' scale map.
2. Rationale:
 - a) Sand substrate;
 - b) Minor clam beds;
 - c) -Existing aquaculture facility on adjacent shorelands north of upriver-cove;
 - d) -Site protected from adverse weather and sea conditions;
 - e) -Shorebird use.
3. Discussion: The Port of Siuslaw has plans to develop a harbor of refuge in the upriver cove when the jetties are extended. The cove area does contain clams although preliminary testing indicates no major concentrations and that biological productivity is minor in the context of the estuary as a whole. The site will provide good shelter with reconstruction of the jetty and has the additional advantage of proximity to the river mouth. The State Marine Board cites a 12 percent increase in larger boats in Lane County in 1979 and supports development of the harbor to help provide moorage for existing boats and anticipated future increases in moorage need. Lane County supports development of the harbor of refuge contingent on the Port meeting the requirements of state and federal agencies and the criteria required for major dredging as specified in Policy 5 under Conservation. Special care should be exercised to protect the upriver Biddock Bay area from adverse development impacts.

The small cove area north of north jetty at approximately river mile .5 was formed by water washing through gaps in the existing jetty.--The cove supports shorebirds. It is anticipated that the cove will have to be partially filled to allow for jetty reconstruction and expansion although total filling of the cove should be avoided. The cove should be used only as needed for expansion and reconstruction of jetties, subject to state and federal agency requirements.

- c) Clam beds with species found only at this salinity level (i.e., piddock, gaper, cockle, and littleneck) predominantly outside of jetty;
 - d) Seagrass and algae beds predominantly in Piddock Bay area;
 - e) Area of high quality biological habitat with unique consolidated substrate;
 - f) Low-intensity recreational potential.
3. Discussion: The salinity range in this MU near the mouth of the river is higher than the remainder of the estuary since the Siuslaw has a strong riverine influence. This factor causes the organisms found here to be much different than those in the remainder of the estuary. Seals are known to use the Cannery Hill area as a haulout and oceanic fishes can be found feeding here. The sand substrate is of high value for fish rearing, including fall chinook juveniles. The recreational and economic importance of this area extends beyond the limits of the MU because of this fish rearing capacity. The abundance of clams is also of high recreational value.

D. Natural:

- 1. Extent: Exact boundaries on estuary map #1 in the Appendix. The tide flats in the cove area near the old County rock dock on the south bank of the Siuslaw River.
- 2. Rationale:
 - a. Algae beds;
 - b) Mud and ghost shrimp;
 - c) Seal haul-out in down-river portion;
- 3. Discussion: The salinity range in this MU is similar to the Piddock Bay area (MU"C") across the channel. Again this factor causes the organisms found here to be unique for the estuary as a whole and therefore should be protected. There appears to be a population of clams unique to this environment but their extent and exact location is undetermined.

Surface and subsurface organisms have colonized and increased as this cove area has slowly washed out from the shore. The erosion creating the cove is primarily due to two factors: 1) normal erosion on the outside of a bend in the Siuslaw River, and 2) additional bank sand removal where a small surface stream enters the river at this point.

There is a strong possibility that the Siuslaw River could break through the dune at this point of erosion, creating a new river mouth. Because of this danger, rip-rap has recently been placed along the bank adjacent to this MU. Additional riparian erosion control would be allowed in this Natural MU, as per the provisions of OAR 660-17-025(1)(a)(4) to protect a use existing as of October 7, 1977.

E. Development:

1. Extent: Exact boundaries shown on estuary maps #1 and 2 in the Appendix. Approximately from river mile 2 to a line one-quarter mile down river from the northern boundary of Section 27.
2. Rationale:
 - a. Existing Siuslaw Pacific Moorage serving commercial and recreational boats; area needed for future expansion;
 - b. River channel close to shore;
 - c. Truck access on adjacent shoreland;
 - d. Land available for water-dependent, water-related uses on adjacent shoreland.
 - e. The two resource areas identified in the Coastal Inventory (salt marsh and clam bed) have been found to be of minor significance. No other significant biological areas are listed for this management unit in the Inventory (Pages III-59 and 63).
3. Discussion: Two resource areas are identified in the Lane County Coastal Inventory: a narrow strip of low salt marsh along the southern portion of the management unit with a Piddock and Gaper clam bed at the northern boundary. Both of these areas have been included within the development designation as they have been determined through onsite evaluation to be of minimal biological significance. The salt marsh is a strip less than 10 feet in width; it is a rock shelf which drops off vertically to deep water. The hard rock surface supports a sparse population of plant and animal life. It is recommended that piling structures be given preference over fill in the area of the salt marsh and that the salt marsh remain open unless findings demonstrate that it is needed for development. The clam bed shown in the inventory is in fact deep water; evidence of an old clam bed can be seen in the nearly vertical bank of the river, but there is no significant population currently. It is recommended that piling structures be given preference over fill in the area shown as a clam bed.

This management unit was one of 10 locations in the estuary where local fisheries' specialists have taken seine and trawl samples. The Coastal Inventory lists fourteen species found in the seine sampling.

However, these species are not unique to this area, but rather are generally found in either the lower portion of the estuary or the estuary as a whole. The inventory does not list this management unit as being significant or of major importance as a fisheries resource.

F. Development:

1. Extent: Starting approximately one-half mile down river from the Highway 101 bridge to the north fork tideflats, opposite dredged spoils site #19.

2. Rationale:

- a. Area includes Bay Bridge Marina and Port of Siuslaw Holiday Marina;
- b. Shorelands are developed in urban uses;
- c. This Management Unit contains no significant biological areas as listed in the Lane County Coastal Resources Inventory (pages III, 58-63).

3. Discussion: The following subunits and uses have been designated by the City of Florence.

Unit F.1 (Bay Bridge Marina) - From the eastern boundary of MUJ.2 to the western boundary of Tax Lot 7900, T18-R12W-S34-12, near Kingwood Street. The channel is nearer the opposite shore in this unit. Existing development consists of a private marina which requires dredging. There is a small area of tidal marsh, a small mud clam bed and a small area of seagrass near the Ivy Street pump station. The substrate is primarily sand. The following uses are recommended:

- Navigational aids
- Water-dependent recreation
- Minor dredge or fill for water-dependent recreational use
- Approved sewerage outfall
- Riprap for protection of existing uses

Moorage facilities for recreational boats are considered appropriate in this area. Commercial or industrial uses are not considered appropriate, due to the proximity to residential development.

Unit F.2 (Old Town and Port of Siuslaw) - From the eastern boundary of Unit O.1 to the Munsel Creek Outlet. The channel and turning basin follow this shoreline for most of its length. Development in this area includes the Highway 101 bridge, permits for utility cable crossings, the city dock at the end of Laurel Street, piers, turning basin, Port of Siuslaw moorage facilities and dock, a boat ramp, marina and a spoils stockpiling site.

The substrate is primarily sand in the main part of the river and mixed sand and mud in the tideflat area. No significant areas of wetlands occur in the area although a small amount of salt marsh is found near the bridge. The following uses are recommended for this management unit:

- Maintenance of the river channel and turning basin
- Navigational aids
- Water storage areas where needed for water-dependent uses
- Riprap for protection of existing uses
- Water-dependent public, commercial or industrial uses and activities (with special conditions)
- Dredge or fill as required for water-dependent uses
- Aquaculture (release/recapture facilities)

-Communication facilities

The channel follows the shoreline for most of this MU and is considered appropriate for development. Existing development in adjacent shorelands will preclude extensive water-dependent development on this portion of the estuary; however, a small area of the shoreland east of the bridge is not developed at this time and water-dependent uses which do not conflict with the existing uses should be allowed. The area on either side of the bridge may be appropriate for dredged material disposal at some point in the future. Any proposed dredge or fill would require a permit from the Division of State Lands.

B. G. Natural:

1. Extent: Exact boundaries on 1"-1000' scale estuary map #3 in the Appendix. The tideflats at the mouth of the North Fork of the Siuslaw, both north and south of the Highway 126 bridge.
2. Rationale:
 - a) Extensive seagrass beds;
 - b) Benthic fauna, such as softshell and macoma clams and shrimp;
 - c) Major tract of tidal marsh and productive tideflats;
 - d) Shorebird use;
 - e) Low-intensity recreational importance.
3. Discussion: The extensive seagrass beds associated with this MU, aside from being extremely important for nutrient exchange, provide an excellent habitat for many organisms--both by direct attachment and as a result of its stabilizing effect on the substrate (W&H). One benefit of this biologically rich condition is excellent fish habitat. Furthermore, the tidal flats, because of their close proximity to the population center, are one of the most heavily used sites for recreational clam digging.

The Siuslaw has approximately 750 acres of tidelands, about 20 percent of the river's total estuarine habitat. Only the Salmon and Chetco River estuaries have smaller percentages of tidelands (OCCDC, Fish and Wildlife). Because of the unique value of these lands for nutrient productivity and biological habitat, combined with the scarcity of tideland in the Siuslaw, the importance of a Natural designation on this area is apparent.

Dredge Soil Disposal Site 19 A

(Dredge Spoils Disposal Site 19A). This unit is an area of approximately seven (7) acres, containing high salt marsh, north of Dredge Spoils Disposal Site 19. As required by Statewide Goal #2, the following Findings are adopted in support of an exception to Statewide Goal #16. This exception will allow designation of this estuarine area

as a Development Management Unit for potential use as a dredged material disposal site.

Goal Exception Findings

a. Why this use should be provided for.

Statewide Goal 16, implementation requirement (5) states: "Local government and State and Federal agencies shall develop comprehensive programs, including specific sites and procedures for disposal and stockpiling of dredged materials . . ."

The Siuslaw River is designated a shallow draft estuary. A navigation channel is maintained from the river mouth to the Davidson Mill at River Mile 16.5. In order to maintain the navigability of the river, it is necessary to dredge every three to five years in the area of Florence Shoal and the North Fork Shoal. Sites for disposal of the dredged spoils are needed for continued channel maintenance and to comply with Goal 16.

According to the Siuslaw River Dredged Material Disposal Plan by Wilsey and Ham, page 47, the Florence and North Fork Shoals will produce over one million cubic yards of spoils over the next twenty years. However, the total capacity of all sites within two miles of these shoals (Sites 14, 15, 16, 19 and 22) is 145,000 cubic yards. The transport of spoils beyond about 10,000 feet requires a large dredge with a booster plant and extra pipeline. A large dredge would normally be used for the major (8 to 12 year) channel dredging. The cost of bringing in additional equipment during the major dredging to utilize Sites 25 and 25A might be justified by the Army Corps of Engineers. However, the smaller (3 to 5 year) periodic shoal maintenance ordinarily uses a small truckable dredge. The cost of bringing in the larger dredge every 3 to 5 years would be prohibitive.

In a letter dated September 10, 1979, Mr. A. J. Heineman, Chief, Navigation Division, Army Corps of Engineers states:

". . . If Site #22 were not made available to the Corps of Engineers because of property use, wetland values, or other considerations at this time (if it were full to capacity), the utilization of Site #25 would probably cost at least \$1.25 per cubic yard in additional pumping costs and approximately \$20,000 of additional mobilization costs during the coming project." (Paragraph b, page 3).

"Future maintenance in approximately three to five years when only 30-35,000 cubic yards would exist in shoals at River Mile 5.5 and River Mile 6, costs for using alternative sites would escalate drastically. If Sites #19 and #22 were both available to the extent that we have indicated, required maintenance activities would involve only the mobilization and demobilization of a small truckable dredge to the site with short pumping distances and minimum overall costs, on the order of \$30,000 mobilization and \$1.50 per cubic yard. If Site #25 was to be used in lieu of Site #22, it would cost at least \$120,000 for mobilization and demobilization costs for a large dredge, booster plant, and attendant pipeline, and would also involve at least \$1.25/cubic yard extra pumping costs for the additional 10,000 or so feet of pumping distance. Thus, the total costs for the

required use of Site #25 in lieu of provision of Site #22 in its enlarged capacity could amount to more than \$150,000 for small scope maintenance activities in between those larger activities required for lower river reaches. (Paragraph c., page 3).

During the next 20 years we can project four minor shoal dredging operations and one major dredging. Total additional costs of pumping spoils to Site 25 would be as follows:

<u>Mobilization Costs:</u>	<u>4 x \$ 90,000 = \$ 360,000</u>	<u>(minor shoal dredging)</u>
	<u>1 x 20,000 = 20,000</u>	<u>(major channel dredging)</u>
	<u>Subtotal</u>	<u>\$ 380,000</u>

<u>Booster pump:</u>	<u>\$1.25 x 1,068,000 = 1,335,000</u>
<u>Total Additional Costs</u>	<u>= \$1,715,000</u>

The total additional costs of using Site #25 and other sites in excess of two miles from the Shoals is almost \$2 million in current dollars or \$86,000 per year.

b. What alternative locations could be used?

In examining alternative locations, upland sites were given first priority. The Dredged Material Disposal Plan drafted by Wilsey and Ham, November, 1978, recommends three options for disposal of dredge spoils from Florence and North Fork Shoals in River Segment Three. (Site 25A has been substituted for Site 26).

Option 1: Sites 19 and 22. Both sites are recommended stockpile sites, assuming that all spoils from the Florence and North Fork Shoals are deposited here and trucked away. This would require that over 53,000 cubic yards of spoils be removed from the two sites annually. However, there are several factors which weigh heavily against the success of this stockpiling option.

- Although sand has been available for removal in recent years, no significant amount has actually been removed because there is no demand.
- The State charges a royalty for the sand removal. This puts the stockpile site at a competitive disadvantage against other sand sources (such as the dune adjacent to the Florence Airport).
- There is no documented need for sand fill in the amounts available.

Conclusion: Option 1 does not provide a reliable solution for the disposition of dredge spoils because of its reliance on the stockpiling concept. Site #19 is full after the recent dredging and there is no history of demand for these spoils as fill. Site 19 is not available to accommodate future dredge spoils and other sites must be examined. Site 22 is at least half full and is projected to be full at the next dredging, possibly in three to five years.

Option 2: Sites 25, 25A, and 8. This option involves the use of sites which have adequate capacity to accommodate all of the projected dredge spoils. These sites are located up to four miles from the shoal areas to be dredged and would require the use of a large 24 to 27 inch pipeline dredge. As discussed above, the use of sites four miles distant involves considerable additional costs, especially for periodic (3 to 5 years) shoal dredging. Most important in the consideration of this option are the constraints on Site 8. Site 8 is located within the Dunes National Recreation Area. The Federal government has indicated that it would not permit the disposal of spoils from above the Highway 101 bridge, which are grey/brown in color, on the dunes at Site 8, which are white in color. Site 8 is a visible, highly scenic area and cannot be used for disposal of spoils from above the bridge.

Conclusion: Option 2 is not feasible because of the limitations on Site 8.

Option 3: Sites 25, 25A and 27. This option utilizes sites which have adequate capacity and are located upriver from the Highway 101 bridge. These sites are located up to five miles from the dredging sites and would require the largest 24 to 27 inch pipeline dredge. The Army Corps of Engineers has estimated that the cost of the larger dredge would be up to \$120,000 for each three-year dredging cycle (letter dated 9/10/79, J. F. Bechly, Army Corps of Engineers). Faced with these large extra costs, the Corps would have to consider "no dredging" as an option in its cost benefit analysis of the project. The Corps could also require the Port of Siuslaw to pay the extra costs, an amount which is far beyond the Port's resources.

Conclusion: Option 3 has not been shown to be financially feasible. If the Army Corps of Engineers would adopt this option along with the City, County and Port, then the dredge spoils sites provided by this option would be adequate. However, without concurrent adoption by the Corps this option is financially unfeasible.

The options discussed above exhaust the possibilities for upland sites contained in the Wilsey and Ham Plan. The remaining options include upland and estuarine sites. The estuarine sites which have been considered are Sites 19A, 20 and 21, shown on the attached map.

Option 4: Sites 22, 19A, 25 and 25A. This option would utilize Sites 25 and 25A for major channel dredging, which is scheduled every 8 to 12 years, and Sites 22 and 19A for the minor shoal dredging, which occurs every 3 to 5 years. This would avoid the prohibitively high cost of using the large dredge equipment on the minor periodic dredging. The minor shoal dredging can be done efficiently with a truck-transported dredge, according to the Army Corps of Engineers. The major channel dredging, which will occur once during the planning period and once just after the end of the planning period, would be done with a large pipeline dredge and pumping booster station to reach Sites 25 and 25A. The estimated needs for disposal of spoils at Sites 22 and 19A would be 20,000 cubic yards per year for periodic shoal dredging years, or a 20-year

total of 320,000 cubic yards. The estimated remaining spoils to be disposed of on Sites 25 and 25A would be 902,000 cubic yards (using the total figure of 1,222,000 cubic yards for 20 years, Wilsey and Ham, page 48). If Site 22 remains half empty after the 1981 dredging, there would be a remaining capacity of approximately 35,000 cubic yards, leaving 285,000 cubic yards to be deposited on Site 19A. If the average depth is limited to 16 feet, the total height would be approximately 23 feet when added to the base elevation; this would require an area of approximately 14 acres. Since the economics of transporting spoils may change with increased use of the port or change in national policy, the site should be used incrementally, impacting as little area as possible initially. Incremental use of the site should be determined as part of the permit review process upon recommendation of the Department of Fish and Wildlife and the Division of State Lands.

Two alternatives have been identified and there exists insufficient data for these agencies to determine which would have the least impact. First, the spoils could be placed adjacent to the existing fill on Site 19. This portion of the site has the advantage that the embankment on the north side of Site 19 would contain the spoils on one side. Disadvantages are that this area contains low salt marsh and two small drainages from the adjacent shoreland. Second, the spoils could be placed on the high saltmarsh adjacent to the school. This portion of the site avoids the low salt marsh but has the disadvantage of a large periphery exposing a maximum area to the danger of encroachment through spills and erosion. Due to the sensitivity of the site and the lack of a specific recommendation by the reviewing agencies at this time, the specific configuration should be determined upon the submittal of a permit to the Division of State Lands.

The money saved by making Site 19 available and conversely, the extra cost, if Site 19A were not available is estimated below:

<u>Mobilization Cost:</u>	<u>4 minor dredgings @ \$90,000</u>	<u>= 360,000</u>
<u>Extra Pumping Cost:</u>	<u>285 CY @ \$1.25/CY</u>	<u>= 356,250</u>
<u>Total</u>		<u>\$716,250</u>
<u>Total divided by 20 years</u>		<u>\$ 35,812/year</u>

Conclusion: Should it prove unfeasible to pump all of the dredge spoils to Sites 25 and 25A after Sites 19 and 22 are full, this is the best alternative. This option would allocate the uses as little estuarine area as possible.

This option would allocate the required total of 1,222,000 cubic yards of spoil to the following sites:

<u>Site 19 -</u>	<u>full</u>
<u>Site 22 -</u>	<u>135,000</u>
<u>Site 19A -</u>	<u>285,000</u>
<u>Sites 25, 25A -</u>	<u>902,000</u>
	<u>1,222,000 cubic yards</u>

Other Options, including Sites 20 and 21. Both sites were reviewed by the planning task force and were rejected, as they are tideflats. As such, these sites represent no improvement over Site 19A, which was also objected to by the resource agencies. The estuary in general has a higher proportion of salt marsh than tideflat.

Option 5: Sites 22 and 19A. This option assumes that the cost of pumping the spoils to Sites 25 and 25A is prohibitive and that all of the dredged material from this portion of the estuary would be deposited on Sites 22 and 19A. The total 1,222,000 cubic yards minus 35,000 cubic yards on Site 22 would leave 1,187,000 cubic yards to be deposited on Site 19A. At a depth of 20 feet, this would require approximately 36 acres.

Conclusion: This option involves the least cost but the highest environmental impact.

c. What are the long-term environmental, economic, social and energy consequences to the locality, the region, or State of not applying the Goal or permitting the alternative use?

1. Environmental Consequences. The environmental consequences of adopting option 4 (the use of site 19A for disposal of periodic minor shoal dredging spoils) would be the loss of approximately seven acres of high salt marsh to the estuary.

The Wilsey and Ham Coastal Resource Inventory describes the importance of tidal marshes (page III-50):

Due to their intense production of primary and secondary food essentials, tidal marshes are considered to be among the most productive of all eco-systems known to humans (Odum, et. al., 1974). Wetland plants in general, and marsh plants in particular, play an integral part in the aquatic food chain. The bay contains 756 acres of tideflats, and approximately 1,458 acres of marshlands (Akins and Jefferson, 1973). This estuary contains one of the largest and most diverse marsh expanses in the coastal zone.

The Wilsey and Ham Study further describes the immature high (salt) marsh on page III-51:

This is one of the dominant marsh types found in the Siuslaw Estuary, the best example of which is Cox Island, a 170- to 200-acre marsh. The bay just west of the North Fork bridge, and 50 acres of wetlands in the North Fork, also contain immature high marshes.

According to the data above, the loss of fourteen (14) acres of marshland would be less than one percent of the total marshland in the estuary and four percent of the saltmarsh located in the immediate area. It is difficult to say what the loss would be in terms of fish, bird, or other wildlife population. While marshes are important as primary and secondary food producers, the Siuslaw Estuary is particularly rich and abundant in this resource. In addition, use of Site 19A would be

subject to mitigation requirements of the Fill and Removal Law, administered by the Division of State Lands.

In this case, it is difficult to isolate consequences by locality, region, or State; rather, consequences must be looked at on the basis of the estuary as a whole. On an area basis, the direct effect of the proposed fill would be loss of less than one percent of the available marsh. However, it would be unrealistic to translate this into a one percent loss in natural values. Given that the estuary is particularly abundant in marshland and that mitigation requirements must be addressed, the ultimate effect of the proposed fill must be a significant order of magnitude less than one percent.

2. Economic Consequences. The economic consequences of allowing the use of Site 19A relate to the health of the fishing industry, both commercial and sport fishing, the use of the estuary for barge traffic, effects on tourism, and the direct costs of dredging.

Local. The direct effect of providing the dredge spoils disposal site close to the area of the North Fork and Florence Shoals is to save approximately \$90,000 per year. This extra cost would be prohibitively high to the Port of Siuslaw.

With an assessed value of \$325 million, the Port District would have to increase its tax rate by approximately eleven (11) cents per thousand dollars of assessed valuation, to pay the cost of pumping dredge spoils to the more distant sites. This would be an increase of 73 percent over the current rate of 15 cents. The Army Corps of Engineers has indicated (letter dated 9/10/79) that the extra cost might cause them to abandon the project. Continued dredging of the navigation channel and the bar crossing will maintain and encourage barge traffic on the river, use of the port for sport and commercial fishing boats, and development of new water-dependent industry.

Congress has appropriated \$30 million to finance the extension of the jetties at the river mouth. The voters have just approved a \$90,000 levy for the local share of this project. Without adequate dredge spoils sites to keep the channel open upriver, this project would be wasted. In fact, the closing of the channel at the Florence shoal would bring a halt to barge traffic to and from the Davidson mill, and tip the ratio of costs and benefits against the jetty extension project. The estuary is economically important to the area as a spawning and rearing environment for fish. There should be some consideration of any economic loss to the area due to the use of Site 19A for disposal of dredge spoils. As discussed under "environmental consequences" above, the loss of approximately seven acres of food producing habitat represents a very small fraction of the estuary, and the actual effect on fish populations would be a very small order of magnitude.

Regional and Statewide: The major effects beyond the local area will be maintenance and continued viability of Florence as a port, and any loss of the fishery resource. Without dredging of the

river, the Port of Siuslaw would lose what commercial fishing, recreational boating and barge traffic it has to other ports. Regionally and statewide the effects would be redistribution of existing activity and future growth. Regarding the fishery resource, the effect would be minimal. As discussed above under "environmental consequences," the marsh area which would be lost is considered to be a primary and secondary food source. The Siuslaw River in general and the portion of the river at Florence is particularly abundant in this resource. The effect on commercial catch of fish from this action would be a very small order of magnitude, if any. Given the relative abundance of this particular resource in the Siuslaw, it is likely that other factors would be the limiting constraints in determining ultimate fish populations and commercial catch.

3. Social Consequences. There have been no direct social consequences identified in relation to this action. As has been pointed out above, however, the provision of adequate spoils sites is critical to the continued dredging of the river as a whole and the jetty extension project. As fishing and boating are a principle recreational activity in Florence, the continued dredging and planned jetty improvements will have positive social consequences. The benefit will be particularly important to active retired people who live in Florence primarily for the recreational opportunities available. These social consequences are primarily local, rather than regional or statewide, although out-of-town visitors also benefit from these recreational opportunities.

4. Energy Consequences.

Local: There will be a direct energy savings by disposing of spoils close to the point of dredging, but since dredging occurs only periodically the total energy savings is moderate.

Regional and Statewide: The biggest energy savings from the proposed action are the indirect effects of maintaining the navigability of the river. Barge traffic from mills upriver to other coastal and overseas ports is the most energy efficient form of transportation available. The proximity of Florence to a prime fishing area, the Florence Banks, will save fuel for commercial fishing boats, if these boats are encouraged to locate in Florence rather than most distant coastal ports.

d. Compatibility with adjacent uses.

1. To the south of Site 19A is a small drainage and marsh. Dredged Material Disposal Site 19 is nearby. The spoils site will be compatible when the spoils are stabilized to prevent erosion.
2. To the west is a road and public school property. The actual dredging occurs infrequently and produces little noise, dust or other effects at the site of disposition. The change in use from marsh to spoils site will have no effect on the school.
3. To the north is private property and additional marsh. There will be no adverse impact on the private property and the owner has not

objected to the placement of spoils there, if a portion of the private property is needed. The remaining marsh area must be protected through construction of proper dikes to contain the spoils and/or adequate stabilization of the spoils, once deposited, to prevent erosion. Once stabilized, the spoils site will be compatible with the adjacent marsh.

4. To the east is marsh, tideflat, and Munsel Creek outlet. With adequate protection from erosion, the spoils site will be compatible with the adjacent natural area.

Policies Relating to Site 19A:

1. Until needed as a dredged spoils disposal site, no uses shall be allowed on Site 19A which significantly alter natural values.
2. In applying to the Division of State Lands for a permit to utilize Site 19A as a dredged materials disposal site, the Port of Siuslaw shall provide evidence in support of the following:
 - a) Sites 19 and 22 do not have adequate capacity to accept the projected dredged materials.
 - b) The Port has encouraged removal of dredged materials from stockpile Site 19.
 - c) Mitigation requirements of the Fill and Removal Law can be met.
 - d) The Port of Siuslaw has made and will continue efforts to secure federal funding of the extra cost of pumping spoils from the Florence and North Fork Shoals to Sites 25 and 25A.
3. Site 19A is reserved for spoils from the Florence and North Fork Shoals, with priority for use during the periodic (three to five year) minor shoal dredging. The Port shall seek federal funding of the extra transport costs of spoils to Sites 25 and 25A during major channel dredging.

D.1. CONSERVATION

1. **Extent:** A small portion of the tideflats south of Highway-126 and west of the North Fork of the Siuslaw. The exact boundaries are shown on the attached map. This Management Unit includes the estuarine portions of Tax Lots 2400 and 6300 in Township 18S Range 12W Section 26 3 1, Tax Lots 1200, 1300 and 1400 in Township 18S Range 12W Section 26 4 2, and the portions of 9th Street and Willow (Wall) Street which connect these parcels. The total area consists of approximately two (2) acres.
2. **Rationale:**
 - a. This unit is a mud and sand tide flat on the Habitat Map of the Siuslaw Estuary by the Oregon Department of Fish and Wildlife.
 - b. This unit is nearby but not included in a salt marsh and an algae/seagrass bed and is of less biological significance than these other areas.

- e. This unit has less than six hundred (600) feet of shoreline. The remaining thirty five hundred (3,500) feet from the eastern edge of this unit to the North Fork is designated Natural. All of the remaining tide flats in the area of the North Fork, the south side of the estuary and upriver have been designated as Natural. The cumulative effect of the designation of this unit is minimal.
 - d. This unit is adjacent to an area within the City of Florence which is zoned for commercial use.
3. Discussion: The tideflat area down river from the North Fork of the Siuslaw is a complex of habitats including mudflat, seagrass beds, algae beds, and salt marsh islands. According to the rationale above, this small unit can be identified as having characteristics which distinguish it from the remainder of the tideflats here as exhibiting less biological importance than is in a natural Management Unit. This area only comprises one-fourth of one percent (1/4 of 1-percent) of the approximately seven hundred fifty (750) acres of tidelands in the Siuslaw estuary; virtually all of the remaining tidelands have been protected as Natural. The conservation designation still provides a high degree of protection to the site, and will allow for the development of water-dependent commercial facilities which will be located on pilings. The economic value to the City of Florence far outweighs any loss of natural values which development in such a manner would result in.

E. H. Natural:

1. Extent: Exact boundaries shown on 1"-1,000' estuary map #5 in the Appendix. The North Fork salt marshes.
2. Rationale:
 - a) Major tracts of undisturbed marsh;
 - b) Diverse assemblage of marsh types;
 - c) Pure sedge marsh island (50 acres).
3. Discussion: This area is considered biologically important because of the proximity of four marsh types: mature high marsh, immature high marsh, sedge marsh, and sedge and bulrush marsh. The sedge and sedge/bulrush marshes are in good to excellent condition, but portions of the mature and immature high marshes have received considerable grazing pressure. However, it is important that grazing be limited to that level which will allow the marsh to retain its natural characteristics.

The sedge marsh island is particularly unique due to its extensiveness and purity.

These marshlands, all within the Siuslaw Estuary, are a major source of detritus (organic debris resulting from plant decay), and supply a key link between primary and secondary productivity in the marine ecosystems. They also play an important role in the estuarine system in prevention of siltation and erosion, absorption of pollutants, and in flood control.

Two small islands which consist of high saltmarsh and more terrestrial shrubbery are designated as mitigation sites. Overburden removed from these islands to create intertidal or subtidal environments here must not be deposited in the remainder of this MU.

F. I. Natural:

1. Extent: Specific boundaries shown on 1" -1,000' estuary maps #3 and #6 in the Appendix. Includes tidelands from Glenada east to and including Cox Island and South Slough.
2. Rationale:
 - a) Extensive marshes Cox Island, South and Siboco Sloughs;
 - b) Seagrass beds throughout the MU;
 - c) Herring spawning at Glenada Flats;
 - d) Swan wintering grounds;
 - e) Waterfowl feeding and resting grounds during fall migration;
 - f) Productive softshell clam beds;
 - g) Fish rearing throughout MU;
 - h) Wildlife value--including fur-bearers.
3. Discussion: The Siuslaw has one of the largest expanses of salt marshes in the state, even though it has a shortage of mudflats. It is preceded only by Coos Bay and the Columbia River for salt marshes (OCCDC Fish and Wildlife). It is also a very diverse marsh system, as exemplified by the marshes in this MU.

Although no estuary could survive with all efforts toward protection aimed solely at one isolated portion, because this MU is the largest undisturbed area within the system, its retention in a natural state is given highest priority. Cox Island has recently been donated to the Nature Conservancy with their intent being to keep it in its excellent natural state.

Glenada Flats and the area adjacent to Rose Hill are used as spawning grounds for herring. As this fish is important both recreationally and as forage for other fish (OCCDC Fish and Wildlife), these spawning grounds should remain unaffected.

Maps III-5 Wetlands and III-4 Biological Areas, from the Wilsey and Ham, Lane County Coastal Resources Inventory, present conflicting information regarding the character of the environment directly east of Siboco Slough. The area is shown as "high salt marsh" and "open field" respectively. Field review of the site shows the "open field" designation to be correct. A dike has been constructed here which apparently restricts normal tidal influences further east.

G. J. Natural:

1. Extent: Exact boundaries shown on 1" -1,000' scale estuary map #5 in the Appendix. The small marsh immediately west of Murphy's Mill.
2. Rationale:
 - a) Seagrass bed;
 - b) Healthy tideflat adjacent to industrial use;
 - c) Shorebird use;
 - d) Fish rearing;
 - e) Abundant benthic organisms.

Discussion: Although small, this tideflat is in a healthy state. Productivity rates are probably high due to the presence of eelgrass, an excellent habitat for several species, as well as a source of detritus. Its proximity to the mill indicates that the two can compatibly coexist.

K. Natural:

1. Extent: Exact boundaries shown on estuary map #7 in the Appendix. The narrow high salt marsh which is east of Cushman and both north of and parallel to Highway 126.
2. Rationale:
 - a. Fish rearing and feeding
 - b. Healthy high salt marsh
 - c. Undisturbed tidal flats
3. Discussion: This mud flat, salt marsh area is in an extremely healthy state despite its proximity to Highway 126. The site of the marsh was originally dredged in order to provide fill for the construction of the highway. The channel here presently receives upland drainage and experiences daily tidal influences.

L. Natural:

1. Extent: Exact boundaries shown on estuary map #7 in the Appendix. A small low salt marsh on the north bank of the Siuslaw, south of MU K.

2. Rationale:

- a. Low salt marsh community
- b. Bank stabilization

3. Discussion: While the Siuslaw Estuary is rich in high salt marsh habitat the occurrence of low marsh communities is relatively rare. These habitats frequently experience disturbance both through natural processes and through man's activities. A similar habitat appears to have been removed by diking on the south bank of the Siuslaw near this site. The low salt marsh is an important estuarine component because it provides input to the marine food web on a daily basis, as compared with the more seasonal input of the high salt marsh. Existing sites should be protected.)

H. M. Natural:

1. Extent: The mostly undiked area of high salt marsh at the extreme western tip of Duncan Island. Includes parts of 18-11-21-100 and 18-11-21-200 and three fringe marshes: one on the south side of Duncan Slough west of Lawson Creek and two others south of Duncan Slough. Exact boundaries shown on (1" -1000') estuary map #7 in the Appendix.
2. Rationale:
 - a) Major tracts of essentially undisturbed high salt marsh;
 - b) Bulrush and sedge communities;
 - c) Unique wildlife and aquatic values.
3. Discussion: This marsh area contains both high salt marsh and sedge and bulrush communities. It is adjacent to diked agricultural grazing lands and probably offers these lands some degree of erosion protection and absorption of pollutants and protection of the channel area from sedimentation are important functions of this marsh type.

I. N. Natural:

1. Extent: Exact boundaries on 1" -1,000 scale estuary map #8 in the Appendix. Marshes on the east end of Duncan Slough, both on the north and south sides of the Slough.
2. Rationale:
 - a) Unusual vegetation grouping, major marsh tract;
 - b) Band-tailed pigeon mineral springs habitat;
 - c) Waterfowl use area;
 - d) Fish rearing grounds.

3. Discussion: This large bulrush/canary grass marsh is in a transition zone between fresh and salt water; causing an unusual grouping of marsh plants. The slough is biologically significant to fish, waterfowl and band-tailed pigeons.

Although the band-tailed pigeon is not a threatened species, the mineral springs, an essential habitat for these birds, are somewhat rare. This particular spring serves the pigeon population of an approximately 20-mile radius and one may observe over 1,000 migrating band-tails on a late summer day (Carlson, ODFW).

J. O. Conservation:

1. Extent: The Estuary from the jetty to the Highway 101 bridge, excluding MU-G and that portion of the Estuary within the city limits of Florence. MUs B, C, D, E, and F.
2. Rationale:
 - a) Groin tideflats;
 - b) Old Rock Dock;
 - c) Recreational use;
 - d) Fish rearing and feeding.
3. Discussion: This portion of the Estuary is ocean dominated, with high salinity levels. This makes it an important area for marine species who either are reared here or use this as feeding grounds. This is also an important site for benthic (bottom-dwelling) organisms which prefer a sand environment. The old Rock Dock site is located adjacent to the South Jetty. Many agencies and local persons are concerned with rebuilding this recreational structure.

K. P. Conservation:

1. Extent: The Estuary from Highway 101 bridge east to the western tip of Duncan Island - also extending up the North Fork to the north boundary of MU-H. This excludes the areas covered by MUs B, D, E, F and G and lands within the city limits of Florence F, G, H, I, J, K, and L.
2. Rationale: Smaller tracts of tideflats and marshes;
 - b) Fishing, boating;
 - c) Private and commercial docks;
3. Discussion: This heavily used portion of the Estuary is important for recreational and economic needs of the area. It is biologically important, also, both in its own right and by virtue of its proximity to several NATURAL areas of the Estuary. Proposed uses should be carefully evaluated based on the limited surface area of the Estuary and the fragility of the ecosystem.

L. Q. Conservation:

1. Extent: From the western tip of Duncan Island upstream to the head of tide; excluding MUs I M and H N. Also on the North Fork from the north boundary of MU-J H to the head of tide.

2. Rationale:

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- a) Recreational uses;
- b) Fringe marshes and eelgrass beds.

Discussion: Recreation is the most important use of the Estuary in this area, although barging and log rafting also take place here. Fringe marshes are important sources of nutrients and should be respected. Docks should be consolidated whenever possible to cut down on occupation of the water surface.

M. R. Development:

1. Extent: The existing Army Corps of Engineers' dredging project including "over-dredge" as necessary.

2. Rationale:

- a) Essential for navigation needs.

3. Discussion: The Siuslaw River is typical of coastal waterways which have historically been used as transportation routes. Over the years, numerous public and private investments based on the river have been made for both industrial and recreational purposes. The continued use of these facilities is dependent on maintenance of the navigation channel.

LCDC has designated the Siuslaw a "shallow-draft" estuary, defined as having channels of 22 feet or less. The river's shallow nature and high rate of natural sedimentation, augmented by runoff associated with timber harvest activity, cause sedimentation and shoaling to be a major problem for existing navigational users.

CHAPTER III

Goal 17 - COASTAL SHORELANDSINTRODUCTION

Coastal shorelands, like the estuaries, are a unique and sensitive component of the coastal environment. The shorelands are valuable for the protection and maintenance of water quality, fish and wildlife habitat, recreation and a variety of water-dependent uses. Hence, they are an important environmental, aesthetic and economic resource. Planning policies for these areas must ensure the protection and wise management of this resource. Additionally, because of the natural hazards associated with shoreland areas, regulations must be developed to reduce the potential hazards to human life and property. Lane County has designated these areas into management units (MUs) in order to protect the unique natural values of shorelands areas, promote water quality, and to provide for economic use of shoreland resources such as water-dependent commercial, industrial and recreational uses and low-density water-oriented residential development consistent with identified shorelands values. These residential uses accommodate a need for water-oriented, retirement second home, and recreational living which cannot be accommodated in nonshoreland areas or in urban or urbanizable areas and which provide significant economic gain to Lane County.

When plan designations and zoning districts where shoreland designations are applied to lands in federal ownership, they shall serve to indicate local desires to appropriate federal agencies which should be taken into account in any federal planning efforts. At such time as any of these federal lands are transferred into non-federal ownership, the plan and zoning designations shall take effect. If no plan or zone designation exist, these must be applied prior to granting of any permits for development of the property. The implementation of these management unit designations by zoning shall be held in abeyance on these federal lands until such time as they may be transferred into state, County, or private ownership.

PLANNING AREA

All shorelands within 1,000 feet of the estuary, 500 feet of all coastal lakes and all lands west of Highway 101 were inventoried to determine the nature, location and general extent of geologic and hydrologic hazards and shoreland values. These values include fish and wildlife habitat, economic and recreational resources and prominent aesthetic features. This inventory information is documented in Lane County Coastal Resource Inventory and accompanying maps compiled by Wilsey and Ham. Based on this inventory information, shoreland areas were designated into five different management units if the inventory information indicated generally that these lands were: (1) lands which limit, control, or are directly affected by the hydraulic action of the water body, including floodways; (2) adjacent areas of geologic instability; (3) natural or man-made riparian resources; (4) areas of significant shoreland and wetland biological habitat; (5) areas necessary for water-dependent and water-related uses; (6) areas of exceptional aesthetic or scenic quality if derived from association with coastal water areas; and (7)

coastal headlands. However, inventory data is not of sufficient detail to determine precise biophysical shorelands boundaries. The management units represent areas which possess certain values, from agriculture and timber resources to wildlife or scenic values to residential or industrial development and which, based on inventory data, may have characteristics which require special protection beyond what is provided by existing zoning.

Shorelands within the inventoried area which did not meet the above criteria were excluded from management unit designations. The three areas where this occurs extensively are:

1. North of the Siuslaw River between Florence and Mapleton. In many instances steep hillsides and bluffs, which are not hydraulically influenced by the river, run north of the highway. These areas did not qualify as shorelands.
2. North of the Siuslaw River, west of Highway 101, between Florence UGB and the Lily Lake area. Much of this land is in federal ownership, both BLM and the Forest Service, therefore no management units were designated. Of the remaining land, only a small portion met the above criteria and received management units; this around sensitive wetland areas.
3. South of the Siuslaw River to the County line, west of Highway 101. Much of this land is within the Oregon Dunes National Recreation Area of the Siuslaw National Forest and received no management unit designations. The lakes in this area received shoreland management units; the remainder of the nonfederal ownership did not meet the criteria to be designated as shorelands.

During the public hearings process where adequate data were presented to indicate that land did not meet the shorelands criteria, they too were excluded. In some cases, the shoreland boundary extended beyond the planning area described in Goal 17 when necessary to protect a significant feature. Where physical barriers such as highways or railroads effectively limit the impact of shorelands areas on the water body and where flood waters will not come in contact with areas designated as geologically unstable, the areas were excluded. During the public hearings process where adequate data was presented to indicate that land did not meet the shorelands criteria, they too were excluded.

Lands west of Highway 101 south of the Siuslaw River were not placed in coastal shorelands management units since the area is within the Dunes National Recreation Area managed by the US Forest Service. Any development within this area is subject to requirements of the Beaches and Dunes portion of this document as the entire area is dune sheet.

Lands west of Highway 101 north of the Siuslaw River and south of Lily Lake were not placed in coastal shorelands management units for similar reasons. Much of the area is within the Sutton Lake Composite of the Siuslaw National Forest. The remaining land is subject to the requirements of the Beaches and Dunes portion of this document. Management units were designated around coastal lakes in these Beaches and Dunes areas, acknowledging the potential sensitivity of these water bodies to development, and the action of sand dunes.

RESTORABLE LANDS

Some of the lands identified here as estuarine shorelands previously functioned as integral segments of the estuary proper. For the most part these consist of high salt marsh environments which have been developed for pastureland through the emplacement of dikes. As the influence of saline waters is eliminated on these lands, the resident plant communities quickly develop a more terrestrial character. The overall reduction of water in the soil will also lower the level of the ground surface frequently a foot or more. If remnant tidal channels exist, the areas can sometimes be easily restored to the estuary, although since the elevation has often changed, the marsh regime that recurs may not be the same as that which was lost. If, through agricultural production, the lands have been mechanically altered, it may be much more difficult to restore them to estuarine production.

Because these pasture areas are presently being farmed and the dikes are in good repair, they do not truly qualify as "appropriate . . . for mitigation activities." However, they are mapped as "diked salt marsh" on the estuary maps in the Appendix for informational purposes and possible future estuarine mitigation use. These diked marsh areas are not mitigation sites. No special protection is proposed for these areas. Most are located on agricultural soils so agricultural zoning is, in most cases, required by Statewide Goals. Such zoning provides adequate protection.

SHORELANDS DREDGED MATERIALS DISPOSAL

Estuarine shorelands have been identified by the Siuslaw Dredged Material Disposal Task Force which are suitable for the disposal of materials removed from the Siuslaw River primarily to accommodate channel dredging. For the most part these sites are indicated in the Siuslaw River Dredged Material Disposal Plan which was adopted by ordinance #749 on October 18, 1979, including modifications adopted in Appendix "B" which slightly expanded site 22 near the turnaround basin, deleted sites 9, 10, 26, and 30 and added a new site, 25A.

Site 26 was withdrawn due to owner objections. To partially compensate for the loss of this site, 25A was added directly across the river. Affected agencies have indicated willingness to sign off provided disposal will not affect the low area close to the foothills.

A new site, #19A is being added at the request of the City of Florence and the Port of Siuslaw. This site is located north of existing site 19, east of Waterland Marina. An Exception to Goal 16 must receive approval from LCDC and the site must be approved by appropriate resource agencies prior to being used for dredged material deposition. The site is zoned by the City of Florence for disposal of dredged materials.

All shoreland sites designated for dredged material disposal shall be protected from new uses and activities which would prevent their ultimate use for dredged material disposal. Land zoned for this use may experience restrictions on placement of permanent structures which could restrict future dredged material disposal. Both the County and the City of Florence have a Dredged Material/Mitigation Combining District to implement this provision.

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Industrially zoned sites may also be designated for dredged materials disposal provided:

1. The materials may be constructively utilized to improve the site for developmental purposes; or
2. The disposal area is required by the business operation, and
3. Other uses which would prevent the disposal of materials as designated in the Siuslaw River Dredged Material Disposal Plan, are not allowed.

AREAS NECESSARY FOR WATER-DEPENDENT OR WATER-RELATED USES

The Florence Urbanizable area shorelands were inventoried to determine which areas are especially suitable for water-dependent or related uses.

- A) Suitability for Ship and Barge Facilities: As the Siuslaw is a shallow draft estuary, it has no potential to accommodate ships. There is barge traffic which is encouraged by the Port of Siuslaw. However, the lack of rail facilities within the city has caused barge loading facilities to be located upriver, outside the urbanizable area.
- B) Potential for Aquaculture: An existing aquaculture facility, the Domsea salmon release-recapture site, is located near the north jetty. This site is within Shorelands Management Unit 1 and has been protected through a Natural Resources Conservation designation. Munsel Creek outlet has been suggested as a potential aquaculture site. The outlet has been designated Natural (Management Unit G) and Natural Resources Conservation (Management Unit 5), although the potential for aquaculture is low, according to the Oregon Department of Fish and Wildlife.
- C) Marina Use: There are several protected areas which would require little dredging of the adjacent estuary for use as marinas. The estuary as a whole requires periodic dredging. Areas most suited for use as marinas are those which are close to the navigation channel and have good shoreline access.

Management Unit 1

An area adjacent to the north jetty has some potential for marina development, although such development would have to be consistent with the Conservation designation of the estuary portion of the site. The shoreland is relatively flat and accessible to the estuary. A road serves the area. The jetty protects the area from ocean waves. Several factors limit the development potential of the area; it is subject to ocean flooding and hence structures should be flood proof or of such small value that they could be replaced if damaged. Also, the area has scenic, recreational and resource values which should be conserved. This area has been designated Natural Resource Conservation (Management Unit 1).

Management Unit 2

This is the site of Siuslaw Pacific Marina on the west side of Rhododendron Drive and a solid waste land fill site on the east side of the road. The shoreline has relatively deep water off shore. In addition, the shorelands are relatively flat and no high banks block access to the water. The combination of road access, deep water and favorable terrain

lead to the designation of this area for water-dependent and water-related uses.

Management Unit 4

The area east of Maple Street (Unit 4.2) has the characteristics necessary for water-dependent and water-related uses. Located upriver from the Highway 101 bridge, it is far enough upriver to be protected from ocean storms and flooding. The navigation channel is accessible. Streets serve the area. This area is located in downtown Florence but has a small amount of vacant land available for development. The western portion of this Management Unit (Unit 4.1) is already developed in non-water-dependent and non-related uses.

D) Areas of Recreational Importance: There are several areas of recreational importance in the urbanizable area.

Management Unit 1

This portion by the north jetty includes a beach, dunes and scenic areas. Harbor Vista Park, located in Section 9, overlooks the river mouth and has the most spectacular view of any point on the estuary.

Management Unit 2

This area is a marina site and is of recreational importance. It may be developed to support commercial fishing to the exclusion of recreational use.

Management Unit 4

The eastern portion of this area has adequate land to support recreational marina facilities. The western portion is developed in a variety of uses and has no available land; a small public park on the shore provides access to a fishing pier.

The remaining shorelands within the Florence urbanizable area do not have characteristics which make them suitable for water-dependent or water-related uses.

Management Unit 1

Portions of this Management Unit in Section 9 on Map 1 have been identified as suitable for water-dependent and water-related uses. The remainder of this Management Unit is not suitable because high banks rising from the water block access to the river. These banks are unstable and in several areas there are active slides. The one suitable site is occupied by the Coast Guard station.

Management Unit 3

This area is almost completely developed in residential use. It is not suitable for water-dependent or water-related uses due to a large sand bar offshore which blocks access to the navigation channel. The land rises from the water to an elevation of up to twenty feet with unstable cut banks. The easternmost portion contains several dredge material disposal sites, which occupy the shoreline.

Management Unit 4

The western portion of this Management Unit has no available land for water-dependent or water-related uses, although a small park and fishing pier provide access to the estuary.

Management Unit 5

This area consists of a strip of riparian vegetation and also areas in the flood plain. The adjacent estuary is a tideflat and is not navigable. The Natural Resource Conservation designation does provide for aquaculture as a permitted use, but it is not likely that the site

will be developed. The tideflat is used for clamming and is accessible from Highway 126 through Management Unit G.

MANAGEMENT UNITS

Lane County's shorelands have been divided into five different management units: Significant Natural Area, Prime Wildlife Area, Natural Resource Conservation, Residential Development and Mixed Development. These management units are designated based on the admittedly generalized data supplied in the Lane County Coastal Resource Inventory. The exact boundaries of the shoreland areas within each management unit will be determined by on-site investigation as development proposals on these lands are received. Each management unit contains policies to protect specific shoreland values within the boundaries determined during the implementation process. Implementation will be by means of overlay zoning districts which will provide a procedure for determination of exact shorelands boundaries and will impose additional development and use criteria to protect the identified shorelands values.

The following section defines and sets use priorities for these MUs. The section is divided into three categories: Estuarine Shorelands, Minor Estuarine Shorelands and Lands West of Highway 101, and Coastal Lakes. The numbers of the individual management units correspond to the maps accompanying this report.

MANAGEMENT UNIT DEFINITIONS:

Significant Natural Area:

This management unit designates an area which may have a combination of physical, social or biological characteristics requiring protection from intensive human disturbance. These characteristics range from a municipal watershed to the cultural and social value of the sand dunes on the south shore near the mouth of the Siuslaw River. These areas serve multiple purposes, among which are education, preservation of habitat diversity, aid in water quality maintenance, and provision of intangible aesthetic benefits. This management unit takes a broader range of possibilities into account than strictly the biological values of an area.

Policies:

1. Uses shall fall within Priority 1 of the General Priority Statement (page 54). No use shall be permitted within a Significant Natural Shorelands Management Unit unless that use is determined to be consistent with protection of natural values identified in the Coastal Resources Management Plan's description of the Management Unit. Where timber harvest activities are permitted by the underlying zoning district, the Forest Practices Act shall be the document used to ensure compatibility of harvest plans. The Oregon Department of Forestry in consultation with the Oregon Department of Fish and Wildlife shall be the agencies to make that determination.

2. Artificial bank stabilization shall be allowed only to protect structures existing as of October 7, 1977 and only after other methods of bank stabilization which are less destructive to the resource have been considered, or unless the unique value of the resource itself is in danger.
3. Dredge spoil disposal appropriate only on the dunes in MU along the estuary, as indicated in the Siuslaw Dredged Material Disposal Plan.
4. Development shall not result in the clearance of natural vegetation in excess of that which is necessary for the actual structure(s), required access, fire safety requirements and the required septic or sewage disposal system. Parcels which exhibit vegetation-free areas suitable for development should utilize such areas for the building site where feasible. Areas which experience excessive vegetation removal shall be replanted as soon as possible.
5. Filling in coastal lakes adjacent to this MU not allowed.
6. Timber harvesting activities shall be consistent with Forest Practices Act rules. Lane County recommends that timber harvest plans consider both scenic and biologic values of the MU.

Lane County recognizes that maintenance of buffer strips and critical wildlife and aquatic habitat are considered under the Forest Practices Act. The County will make every reasonable effort to make the Oregon Department of Forestry aware of sites in the Lane County Coastal Resources Inventory that have unusual value as "riparian vegetation" or "significant wildlife habitat." These areas will be specially evaluated prior to approval of timber harvest plans to ensure the habitat has been adequately considered. considered.

7. Land division, including subdivisions and major and minor partitions shall be allowed, providing the division and the subsequent use is consistent with the Subarea Plan designation, the requirements of the corresponding zoning district and upon an affirmative finding by the County that the land division and subsequent use are consistent with shoreland values as identified in this Report and by on-site evaluation.

Land divisions not anticipated in the Subarea Plan, to occur in shorelands areas, shall be allowed only upon a finding by the governing body of the County that such uses satisfy a need which cannot be accommodated at other upland locations or in urban or urbanizable areas and are compatible with identified shorelands values.

8. Development on lots less than 10 acres in size shall be prohibited. Where lots less than 10 acres existed on the date of adoption of this report, development may occur if in conformance with the requirements of the parent zone and this Management Unit.

9. For any approved development on coastal lake or estuarine shoreland in this management unit, a minimum 100' building setback from the shoreline is required wherever practicable. Setback requirements on ocean shorelands in this MU will vary depending on the rate of erosion at the site and will require a County site review. Furthermore:
 - a. A band of natural vegetation no less than one-half the width of the setback shall be left in natural vegetation.
 - b. Existing lots which are too small to accommodate both the required management unit setback, the construction of a residence and other development requirements such as septic and replacement fields will be allowed to build in this setback zone following a County site inspection providing clearance of vegetation on the remainder of the lot is kept to an absolute minimum and other County requirements are met and hazard to life and property is minimal and acceptable.
 - c. Within the shoreside belt of natural vegetation the following kinds of modifications are allowable:
 - 1) Unsurfaced foot paths;
 - 2) Removal of hazardous vegetation as unstable streambank trees or trees otherwise vulnerable to blowdown may be allowed in unusual circumstances following review by the County or Oregon Department of Fish and Wildlife. Streambank trees, snags and shorefront brush are necessary for wildlife habitat.
 - 3) Replanting of areas modified in "c." above or other areas which have been previously cleared.
10. Construction or expansion of single-family, single-purpose piers is discouraged in favor of multiple-use, public or commercial piers. Applicants for such single-purpose piers shall be required to demonstrate that no viable alternatives (cooperative use of existing piers, nearby public facilities, mooring buoys, etc.) exist before approval of construction. Docks and piers existing on the date of Plan adoption may be rebuilt (not expanded) if damaged or destroyed.
11. New development proposed for this management unit shall blend to the maximum degree feasible with the surrounding vegetation and topography in terms of color, form and location. Design and site shall be reviewed to ensure that visual harmony is achieved consistent with the purposes of the management unit.
12. The filling in of freshwater marshes within this MU is not allowed. Freshwater marsh areas are found south of Sutton Lake between the two portions (MU 4) and in estuary shoreland's MUs 4 and 27.
13. Improvements to ocean shore areas (as defined in ORS 390.605) are subject to a permit from the Oregon Department of Transportation.

Prime Wildlife Area

Prime Wildlife Area includes areas of unique biological assemblages, habitats for the preservation of rare or endangered species and the maintenance of a diversity of wildlife species. These include areas of significant riparian vegetation and freshwater wetlands as identified in the Lane County inventory information. Species which inhabit these wildlife habitats have special requirements which should be considered to the greatest extent feasible in determining how the land is to be used.

Policies:

1. Uses shall fall within Priority 1 of the General Priority Statement (page 54). "No use shall be permitted within a Prime Wildlife Shorelands Management Unit unless that use is determined to be consistent with protection of natural values identified in the Coastal Resources Management Plan's description of the Management Unit. Where timber harvest activities are permitted by the underlying zoning district, the Forest Practices Act shall be the document used to ensure compatibility of harvest plans. The Oregon Department of Forestry in consultation with the Oregon Department of Fish and Wildlife shall be the agencies to make that determination."
2. Artificial bank stabilization shall be allowed only in unusual circumstances where natural erosion processes are threatening critical wildlife habitat or structures existing on or before October 7, 1977, provided that natural bank stabilization methods have been considered. Riprap used for bank stabilization must meet Army Corps of Engineers strength, size and design criteria unless the County Engineer determines this to be unnecessary and unadvisable.
3. For any approved development in this MU, a minimum 50' horizontal setback from the shoreline of the estuary or coastal lakes is required. Ocean shoreland setback will vary depending on current rate of erosion and will require a site review. Implementation will include the following:
 - a. Existing lots which are too small to accommodate both the required Management Unit setback, the construction of a residence and other development requirements such as septic and replacement fields which will be allowed to build in this setback zone following a County site inspection, providing clearance of vegetation on the remainder of the lot is kept to an absolute minimum and other County requirements are met.
 - b. Within the 50' setback, 30' adjacent to the shore shall be left in natural vegetation. Brush may be removed from the remaining 20' if revegetated and decks and similar structures may project into this area.
 - c. Within the 30' of natural vegetation the following kinds of modifications are allowable:
 - 1) Unsurfaced foot paths;

- 2) Removal of hazardous vegetation such as unstable streambank trees or trees otherwise vulnerable to blowdown may be allowed in unusual circumstances following review by the County or Oregon Department of Fish and Wildlife. Streambank trees, snags and shorefront brush are necessary for wildlife habitat.
- 3) Replanting of areas modified in "c." above or other areas which have been previously cleared.
4. Development shall not result in the clearance of natural vegetation in excess of that which is necessary for the actual structure/s, required access, fire safety requirements and the required septic or sewage disposal system. Parcels which exhibit vegetation-free areas suitable for development should utilize such areas for the building site where feasible. Areas of excessive vegetation removal shall be replanted as soon as possible.
5. State Fish and Wildlife biologists shall have a 14-day "review and comment" period to evaluate the impact of any development on critical habitats and to make suggestions concerning ways to avoid or mitigate identified adverse impacts.
6. Filling in coastal lakes adjacent to this MU not allowed.
7. Development on lots less than five acres in size shall be prohibited. Where lots less than five acres existed on the date of adoption of this report, development may occur if in conformance with the requirements of the parent zone and this management unit.
8. Timber harvesting shall be consistent with Forest Practices Act rules. Lane County recommends that timber harvesting activities be allowed in the Prime Wildlife Area under Forest Practices Act rules after consultation with Oregon Department of Fish and Wildlife to determine a harvest plan which will result in the least impact on wildlife inhabiting the designated area.

Lane County recognizes that maintenance of buffer strips and critical wildlife and aquatic habitat are considered under the Forest Practices Act. The County will make every reasonable effort to make the Oregon Department of Forestry aware of sites in the Lane County Resources Inventory that have unusual value as "riparian vegetation" or "significant wildlife habitat." These areas will be specially evaluated prior to approval of timber harvest plans to ensure the habitat has been adequately considered.
9. No dredge spoils deposition shall be allowed in the Prime Wildlife management unit.
10. Construction or expansion of single-family, single-purpose piers is discouraged in favor of multiple-use, public or commercial piers. Applicants for such single-purpose piers shall be required to demonstrate that no viable alternatives (cooperative use of existing piers, nearby public facilities, mooring buoys, etc.) exist before approval of construction. Docks and piers existing on the date of Plan adoption may be rebuilt (not expanded) if damaged or destroyed.

11. Land division, including subdivisions and major and minor partitions shall be allowed, providing the division and the subsequent use is consistent with the Subarea Plan designation, the requirements of the corresponding zoning district and upon affirmative finding by the County that the land division and subsequent use are consistent with shoreland values as identified in this Report and by on-site evaluation.

Land divisions not anticipated in the Subarea Plan, to occur in shorelands areas, shall be allowed only upon finding by the governing body of the County that such uses satisfy a need which cannot be accommodated at other upland locations or in urban or unbanizable areas and are compatible with identified shoreland values.

12. The filling in of freshwater marshes within this management unit is not allowed. Freshwater marsh areas are found within Estuarine shorelands MU 21 opposite the east end of Duncan Island, in section 18-11-12, and within Woahink Lake shorelands MU 2 (19-12-11) and Siltcoos Lake MU 4 (19-11-19 and 30) and MU 5 (19-12-35). Smaller freshwater marsh areas are also found on Siltcoos Lake within MU 5 (19-12-25).
13. Improvements to ocean shore areas (as defined in ORS 390.605) are subject to a permit from the Oregon Department of Transportation.

Natural Resources Conservation:

This designation is provided to allow for human activities dependent upon long-term use of natural resources--primarily agricultural and silvacultural--in harmony with natural systems of the coastal shorelands and waters. While this designation is not intended to entirely preempt change, it is meant to ensure that all changes occur with recognition of and respect for natural systems. Activities which enhance the renewable resources are encouraged, as well as recreation and public access to the coastal waters.

Policies:

1. Uses shall fall within, and respect, Priorities 1-4 of the General Priority Statement (page 54).
2. Dredge spoil disposal must provide adequate runoff protection and, wherever possible, maintenance of a riparian strip along the water. Those sites adopted as part of the Siuslaw River Dredged Material Disposal Plan are automatically approved.
3. Artificial bank stabilization shall be used only to protect public and private roads, bridges or railroads, or when natural erosion processes are threatening a structure which existed on October 7, 1977.
4. Construction or expansion of single-family, single-purpose piers is discouraged in favor of multiple-use, public or commercial piers. Mooring bouys, floating piers, launching ramps and dryland storage are potential alternatives. If this MU exists adjacent to a natural estuarine MU, no pier development shall be allowed. Existing or previously existing Recently destroyed or damaged piers may be replaced if destroyed.

5. Filling in coastal waters lakes adjacent to this MU shall be allowed only in very rare instances and after a complete study of potential physical or biological impacts upon the lake. The cumulative effects of all such fills shall be considered. Positive benefits must outweigh negative effects.
6. Forestry and agricultural practices shall take place in such a manner as to retain the flexibility of future shore land uses and to maintain the natural integrity of the estuary.

(Lane County recommends adoption of Forestry Practices Act rules requiring maintenance of riparian vegetative fringe on coastal rivers, lakes and tributaries consistent with the requirements of LGDG Goals-16 and 17 which require state agencies to take action to minimize man-induced sedimentation.)

Lane County recognizes that maintenance of buffer strips and critical wildlife and aquatic habitat are considered under the Forest Practices Act. The County will make every reasonable effort to make the Oregon Department of Forestry aware of sites in the Lane County Coastal Resources Inventory that have unusual value as "riparian vegetation" or "significant wildlife habitat." These areas will be specially evaluated prior to approval of timber harvest plans to ensure the habitat has been adequately considered.

7. Land division, including subdivisions and major and minor partitions shall be allowed, providing the division and the subsequent use is consistent with the Subarea Plan designation, the requirements of the corresponding zoning district and upon an affirmative finding by the County that the land division and subsequent use are consistent with shoreland values as identified in this Report and by on-site evaluation.

Land divisions not anticipated in the Subarea Plan, to occur in the shorelands areas, shall be allowed only upon a finding by the governing body of the County that such uses satisfy a need which cannot be accommodated at other upland locations or in urban or urbanizable area and are compatible with identified shorelands values.

8. For any approved development on coastal lake or estuarine shoreline in this MU, a minimum 50' building setback from the shoreline is required. Setback requirements on ocean shorelands in this MU will vary depending on the rate of erosion in the area and will be determined by County site review. Furthermore:
 - a. Within the 50' setback, 30' adjacent to the shore shall be left in natural vegetation. Brush may be removed from the remaining 20' if revegetated and decks and similar structures may project into this area.
 - b. Existing lots which are too small to accommodate both the required management unit setback, the construction of a residence and other developed requirements such as septic and replacement fields will be allowed to build in this setback zone following a County site inspection providing clearance of vegetation on the remainder of the lot is kept to an absolute minimum and other County requirements are met and hazard to life and property is minimal and acceptable.

- c. Within the 30' of natural vegetation the following kinds of modifications are allowable:
- 1) Unsurfaced foot paths;
 - 2) Removal of hazardous vegetation such as unstable streambank trees or trees otherwise vulnerable to blowdown may be allowed in unusual circumstances following review by the County or Oregon Department of Fish and Wildlife. Streambank trees, snags and shorefront brush are necessary for wildlife habitat.
 - 3) Replanting of areas modified in "c." above or other areas which have been previously cleared.
9. The District Forester of the Oregon Department of Forestry shall have a 14-day "review and comment" period to evaluate the impact of development proposed on lands zoned for timber production within the management unit. The DOF may make suggestions concerning ways to avoid or mitigate adverse impacts.
10. Only developments and activities which do not pose a threat to life or property from land instability, erosion or other natural hazards shall be allowed. Where the property is zoned for timber production, it is the responsibility of the Forest Practices Act to ensure that timber harvest activities pose no hazard to life or property.
11. Improvements to ocean shore areas (as defined in ORS 390.605) are subject to a permit from the Oregon Department of Transportation.

Natural Resources Conservation: (Florence Urban and Urbanizable Area)

This designation, when applied to lands within the Urban Growth Boundary of the City of Florence, is provided to allow for human activities consistent with long-term use of natural resources in harmony with natural systems of the coastal shorelands and waters. This designation is meant to ensure that all changes occur with recognition of and respect for those natural systems. Activities which conserve or enhance resources are encouraged, as well as recreation and public access to the coastal waters.

Policies (Florence Urban and Urbanizable Area):

1. Uses shall fall within and respect Priorities 1-5 of the General Priority Statement (page 54).
2. Dredge spoil disposal must provide adequate runoff protection and, wherever possible, maintenance of a riparian strip along the water. Those sites adopted as part of the Siuslaw River Dredged Material Disposal Plan are automatically approved.
3. Artificial bank stabilization shall be used only to protect public and private roads, bridges or railroads or when natural erosion processes are threatening a structure which existed on October 7, 1977.

4. Construction or expansion of single-family, single-purpose piers is discouraged in favor of multiple-use, public or commercial piers. Mooring buoys, floating piers, launching ramps and dry land storage are potential alternatives. If this MU exists adjacent to a natural estuarine MU, no pier development shall be allowed. Recently destroyed or damaged piers may be replaced if destroyed.
5. Filling in coastal waters lakes adjacent to this MU shall be allowed only in very rare instances and after a complete study of potential physical or biological impacts on the lake. The cumulative effects of all such fills shall be considered. Positive benefits must outweigh negative effects.
6. Forestry and agricultural practices shall take place in such a manner as to retain the flexibility of future shoreland uses and to maintain the natural integrity of the estuary.
7. Land division, including subdivisions and major and minor partitions shall be allowed, providing the division and the subsequent use is consistent with the Comprehensive Plan designation, the requirements of the corresponding zoning district and upon an affirmative finding that the land division and subsequent use are consistent with shoreland values as identified in this report and by on site evaluation.
8. For any approved development on coastal lake or estuarine shoreland in this MU, a minimum 50-foot building setback from the shoreline is required. Setback requirements on ocean shorelands in this MU will vary depending on the rate of erosion in the area and will be determined by site review. Furthermore:
 - a. Within the 50-foot setback, 30-feet adjacent to the shore shall be left in natural vegetation. Brush may be removed from the remaining 20 feet if revegetated and decks and similar structures may project into this area.
 - b. Existing lots which are too small to accommodate both the required management unit setback, the construction of a residence and other development requirements will be allowed to build in this setback zone providing clearance of vegetation on the remainder of the lot is kept to an absolute minimum and other requirements are met and hazard to life and property is minimal and acceptable.
 - c. Within the 30 feet of natural vegetation the following kinds of modifications are allowable:
 - 1) Foot paths.
 - 2) Removal of hazardous vegetation such as unstable streambank trees or trees otherwise vulnerable to blowdown may be allowed in unusual circumstances following review by the city governmental jurisdiction or Oregon Department of Fish and Wildlife. Streambank trees, snags and shorefront brush are necessary for wildlife habitat.
 - 3) Replanting of areas modified in "c." above or other areas which have been previously cleared.