COQUILLE RIVER ESTUARY MANAGEMENT PLAN

VOLUME III

PART 3

“LINKAGE", CUMULATIVE EFFECTS OF DEVELOPMENT AND STATEWIDE GOAL EXCEPTIONS

Table lists noted in the original adoption of the CREMP were within exceptions that have been completed in Coos County

LIST OF MAPS AND CHARTS

NOTE: These maps and charges are contained in a separate oversize Map Atlas.

1.	Plan Map: Land Use Designations	Set of 3;	Scale – 1” = 800 feet
2.	Coastal Shorelands Inventory	Set of 3;	Scale – 1” = 800 feet
3.	Physical Alternations		Scale – 2” = 1 mile
4.	Natural Hazards		Scale – 2” = 1 mile
5.	Freshwater Wetlands		Scale – 2” = 1 mile
6.	Estuarine Wetlands Habitats		Scale – 2” = 1 mile
7.	Recreations Sites		Scale – 2” = 1 mile
8.	Historical, Botanical, Geologic, and Cultural Resources Map		
9.	Dredge and Fill Sites/Mitigation or Restoration Sites		Scale – 1” = 800 feet
10.	Existing Land Use	Set of 3;	Scale – 1” = 800 feet
11.	Existing and Potential Sites for Water-Depending/Related Activities	Set of 3;	Scale – 1” = 800 feet
12.	Stream Depths		Scale – 2” = 1 mile
13.	Riparian Vegetation		Scale – 2” = 1 mile
14.	Agricultural and Forest Lands		Scale – 2” = 1 mile
15.	‘Linkage’ Charts	Set of 2	
16.	Uses and Activities Charts	Set of 2	
17.	Official Zoning Map	Set of 3;	Scale – 1” = 800 feet

1. REQUIREMENTS OF COASTAL SHORELANDS GOAL #17: IDENTIFICATION OF COASTAL SHORELANDS BOUNDARY

1.1 The "Planning Area"

The Coastal Shorelands Goal states that its 'inventory requirements' shall be applied within an area known as the "coastal shorelands planning area." This area is intended to be for "inventory, study and initial planning for development and use to meet the Coastal Shorelands Goal" [LCDC Goals and Guidelines]. On the Coquille River Estuary, the Planning area is defined by the goal thus:

i. All lands west of the Oregon Coast Highway (U.S. 101), and

ii. Where east of U.S. 101, 1000 feet from the shoreline of the estuary

1.2 Criteria for Identifying Coastal Shorelands Boundary

The following criteria are applied within the Planning Area in order to define the Units of the Coastal Shorelands Boundary, the extent of which shall include at least:

i. Lands, which limit, control or are directly affected by the hydraulic action of the coastal water body, including floodways;

ii. Adjacent areas of geologic instability;

iii. Natural or man-made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;

iv. Areas of significant shoreland and wetland biological habitats;

v. Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, and areas having characteristics suitable for aquaculture;

vi. Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal water areas; and

vii. Coastal headlands.

1.3 Application of the Coastal Shorelands Criteria

These features are mapped at a scale of 1" - 800 feet on the set of maps titled "Coquille River Estuary Management Plan: Coastal Shorelands Inventory." The Coastal Shoreland Boundary is defined as the upland extent of any of these seven (7) types of area, as mapped, within a limit of 1000 feet when east of U.S. 101. For the purposes of the Coquille River Estuary Management Plan, the criteria have been interpreted as follows:

i. This includes any land within the floodplain of the Coquille River as shown by the HUD Flood Hazard Boundary Maps.

ii. This is interpreted as any steep bluffs with over 50% slope or with earthflow/slump topography, as shown on the D.G.M.I. Natural Hazard Map. [Bulletin 87, Environmental Geology of Western Coos and Douglas Counties; Oregon, D.G.M.I., 1975] Areas of streambank erosion are not mapped, but are assumed to be included. The purpose of this criterion is to identify those unstable areas, which may affect, or be affected by, the estuary, so as to control erosion or mass movement effectively.

iii. This criterion includes primarily riparian vegetation, which has been identified from air photo interpretation and on-site inspection. Riparian vegetation is characterized as normally a continuous narrow bank of trees and brush of typical species (willow, alder, myrtle, ash, spruce), about 30 feet wide in most places. In some places, riparian species are found in wider areas in the floodplain, often associated with wetland conditions. These areas are only included if they are contiguous with the riparian fringe. Non-contiguous floodplain woodlands in the floodplain are not considered riparian, even if the species are similar.

iv. Significant shoreland and wetland habitats are identified from U.S. Fish and Wildlife Service Wetland maps [National Wetland Inventory] and Oregon Department of Fish and Wildlife [Pete Perrin, personal communication, 5/81].

v. This criterion includes sites identified as suitable for port development, boat repair, recreation (e.g., boat ramps) and aquaculture. Note that the goal specifies areas that are "necessary" for water-dependent/related uses. It is not possible to state which areas are "necessary" until later in the planning process after "needs analysis". Thus, for the purposes of shoreland boundary identification, all potential sites are included in the inventory.

vi. & vii. No areas in the Coquille River Estuary are identified as having "potential for exceptional coastal experience" in "Visual Resource Analysis of the Oregon Coastal Zone." (OCCDC, 1975) There are also: no coastal headlands.

It should be noted that certain criteria, particularly the floodplain and certain wetland habitats, extend considerably beyond the 1000 feet distance from the shore. It was originally proposed to extend the Coastal Shorelands Boundary to the upland limit of any of the seven (7) identification criteria (i.e., to the edge of the floodplain in most areas); however, the goal does not require this. There appears to be, no overriding reason to define a broad shoreland area (in some places over 2 miles wide) encompassing the entire agricultural bottomland of the Coquille Valley. The 1000 foot study area is ample for accommodating any water-dependent/related sites. Features like the floodplain and wetlands are adequately addressed in the Coos County Comprehensive Plan under Goal #7 the (Natural Hazards) and Goal #5 (Open Spaces). While the boundary passes through a number of wildlife habitats (freshwater wetlands), an agreement has been reached with the Oregon Department of Fish and Wildlife [ODFW] that the continuation of traditional agricultural practices including maintenance of current levels of drainage, and Exclusive Farm Use zones are consistent with the protection of their resource value [see Section 9.6.4, Freshwater Wetlands]. Therefore, the same degree of protection is afforded, whether the wetland is inside or outside of the Coastal Shoreland Boundary. Thus, there is no problem with the difference in requirements between Goal #5 (applies outside shoreland boundary) and Goal #17 (applies inside shoreland boundary); Goal #17 is more specific in protecting significant wildlife habitat while Goal #5 has broader language allowing consideration for conflicting uses. Where the Plan has identified significant habitats where other uses would not be compatible (e.g., saltmarshes), these areas are entirely within the shorelands boundary.

1.4 Description of Coastal Shoreland Area Unit

The Coastal Shorelands Boundary is shown on the Coastal Shorelands Inventory maps and is described as follows:

1.4.1 Mouth to Bullards Bridge

Along the Bandon waterfront the boundary marks the upland limit of land considered necessary for water-dependent/water-related uses in conjunction with the boat basin. The floodplain of Ferry Creek to head-of-tide is also included. On the eastside of the bay, the edge of the floodplain marks the boundary where it coincides with Riverside Drive; and on the Bandon North Spit the floodplain also marks the boundary.

1.4.2 Bullards Bridge to Bear Creek

On the north bank, the boundary is generally defined by the floodplain or 1000 feet from the shore, whichever is less. There is no head-of-tide on Sevenmile Creek, as the tide is now controlled by a tidegate. However, part of Offield Creek is still influenced by tide. The shoreland boundary extends up to 1000 feet past the tidegate within the floodplain in both cases. On the south bank, the boundary is again defined by the floodplain, or 1000 feet. Upstream from Rogge Mill the steep bank reduces the shoreland area to a narrow riparian strip. Upland areas begin to narrow the shoreland area again downstream from Parkersburg. At Bear Creek, which is tidal for some 1 3/4 miles, the boundary again follows the floodplain up to 1000 feet, except for two areas of geologically unstable uplands.

1.4.3 Bear Creek to Riverton

This section of the river flows through a narrow valley bottom; consequently, the shoreland boundary is frequently less than 1000 feet from shore. However, there are four locations where the boundary takes in geologically unstable and steep uplands within 1000 feet. There is also a short extension up to 1000 feet above head-of-tide on Lampa Creek. Just above Bear Creek, the shoreland boundary passes through a "wet meadow" wetland area.

1.4.4 Riverton to Coquille Bridge

The river passes through a broad floodplain area where the shoreland boundary is generally defined by the 1000 foot mark, though in some places the river passes close to uplands; here, as elsewhere, North Bank Road is appropriate as the shoreland boundary as it follows the edge of the floodplain. About two miles above Riverton the boundary again passes through a large wet meadow area on the south bank and a smaller area on the north bank. Tidegates are found on Hatchet Slough, Iowa Slough, Fat Elk Creek and Beaver Slough, and the boundary is adjusted accordingly to take in the tidally-influenced portions. No head-of-tide is identified by DSL on Cunningham Creek.

1.4.5 Coquille Bridge to Head of Tide on North Fork and South Fork

Again, the river passes through a mostly broad valley area, where the shoreland boundary is generally defined by the floodplain or the 1000' mark. The boundary again passes through some smaller wet meadow areas. There are several areas of riparian vegetation, which extend out from the river a few hundred feet. No head-of-tide is listed by DSL on Rink Creek, Glen Aiken Creek, Fishtrap Creek, Hall Creek, Grey Creek, Grady Creek, Catching Creek, or Matheny Creek. Thus, no deviation of the boundary is needed.

2. ANALYSIS OF COMPLIANCE WITH ESTUARINE RESOURCES GOAL (#16) BY "MANAGEMENT UNIT"

2.1 The Concept of "Linkage" and the "Linkage Matrix"

The Plan must show there is correspondence between the Plan Shoreland and Aquatic use designations and the uses and activities allowed therein and the factual material in the inventory. Due to the complex nature of Goal # 16 (Estuarine Resources) and Goal # 17 (Coastal Shorelands) there are many requirements to satisfy. The process of justifying plan designation and use/activity decisions based on the inventories is referred to as "linkage". A "linkage matrix" is the basic tool in the process, which sets out in graphic form a summary of all the steps necessary in justifying Plan designations and uses/activities in each area according to the specific requirements of the goals.

2.2 Structure and Function of the "Linkage Matrix"

The completed "Linkage Matrices" for Goal #16 (Estuarine Resources), Goal #17 (Coastal Shorelands) and Goal # 18 (Beaches and Dunes) are included with the maps. There are two sets of matrices for Goal #16, Goals #17 and #18. The matrix dealing with broad designations is constructed with each of the goal requirements along the horizontal axis and all the Aquatic or Shoreland "Management Units" down the vertical axis. The Use/Activity Matrix shows what uses and activities are permitted and with what conditions, in each of the aquatic and shoreland units. There are 25 separate aquatic management units and 75 shoreland management units; a map showing the unit boundaries is included in the map package. There are also 16 categories of uses and 11 categories of activities considered within each aquatic unit and 18 uses and 9 activities in each shoreland unit. Definitions of uses and activities are listed in Section 5. The units are differentiated according to physical or biological features and proposed or existing uses.

Each of the boxes in the matrix indicates whether or not the use designation or permitted uses/activities for that particular unit are in compliance with a particular goal requirement. In most cases, the goal requirements are explicit: in some cases, however, some interpretation of the goal is needed, where its requirements are more general in nature. The final columns indicate whether each unit is in compliance with the goal, both as to its designation [e.g. Development] and as to the uses allowed in that particular units. Whenever the answer is "NO", an exception to the goals is required. One of the purposes of the "Linkage Matrix", then, is to indicate whether or not an exception is required. Conversely, where the answer is "YES", it has been demonstrated that the designation or uses/activities in that unit have complied with the applicable goal(s).

2.3 Justifications of Designations for Aquatic Management Unit

2.3.1 Development Management Unit

- Unit #1: This is the authorized channel, and is therefore automatically a "Developed" unit according to Goal #16 [a "priority development area" on the Linkage Matrix],

- Units #4, #5 and #18: Each of these units should normally be in a "Conservation" Management Unit because of the presence of significant habitat of "less-than-major" importance. However, the goal allows some flexibility in cases where a unit is "partially altered" or "adjacent to development of moderate intensity". If shown to be needed such units may be designated "Development".

- Unit. #4: This is an area of tide flat which is partially altered by old pilings and is bordered by a fill, riprap and the causeway leading to the deteriorated Moore Mill truck shop. It is also adjacent to moderately intense development (the existing small boat basin, and the Bandon waterfront). It is

needed for the development of the Bandon Boat Basin expansion for which an Army Corps of Engineers Environmental Impact Statement and permit has already been approved. Surface occupation will, however, be minimal [floating docks]. Compatibility with adjacent estuarine and shoreland areas is considered high, since the entire area is devoted to the boat basin and related uses. The minimal amount of dredging required here is justified, as this is a water-dependent use for which a public need is amply demonstrated [see Section 7.3.1]. Adverse impacts will be minimized by using a floating dock design requiring no fill.

- Unit #5 (Ferry Creek Flat): This area of tidal flat is partially altered due to the presence of old pilings, riprap, and fills on three sides (Moore Mill truck shop, sewage treatment plant and Moore Mill). It is also adjacent to the deteriorating Moore Mill structure and lies immediately east of the Bandon boat basin expansion. The presence of clam beds and algal beds would otherwise place it in a Conservation Management Unit; however, it is shown to be needed for water-dependent development (see Sections 7.4.1 and 7.5).

- Unit #18: This is an area of narrow tideflat and small saltmarshes, remnants of a once larger extent. Early development in the area has left small fills in what was once saltmarsh. The unit is partially altered by old pilings and docks, as well as fills. It is also adjacent to other development of moderate intensity (Prosper docks and the marine ways). It is considered needed for future development and similar uses. There are no other suitable sites for this use in the Bandon area, where shoreland back-up area is needed more for uses related to fish processing. Fill will be required to construct bulkheads and prepare shoreland back-up areas for water-dependent uses. Dredging will be required to allow boat access to upland sites. Adverse impacts can be minimized by imposing appropriate conditions on dredge or fill permits on a site-by-site basis. Compatibility with adjacent uses is generally high because of the water-dependent development character of the area. Because of minor impacts due to dredging, the unit is only moderately-compatible with the natural channel [Conservation designation].

- Unit #14 [fronting Bullards Dock]: This unit includes an area of tidal flat which consists of rock rubble which has resulted from the erosion of an old fill that at one time provided shoreland access to the old Bullards Dock. The subtidal portion is an area of deep water close to the shoreline. The eroded area contains no attached vegetation and may be considered an altered area of "minimal biological significance". The shoreline here continues to experience erosion and may require structural protection to protect it. (The shoreline immediately downstream in Bullards Beach State Park has been riprapped in the recent past.) During its active period in the 1950s, an access channel was maintained to the old Bullards Dock. New dredging will be required in the event that the owners wish to develop an industrial use on the adjacent site, which requires barge transportation (See Sections 5.3.3 and 7.5). A bulk loading operation for chips or similar material had been proposed for this site. A small fill would be needed to build a bulkhead if this is preferred to a dock on pilings. There is, in any case, a need for a small bulk loading facility on the Coquille with a vacant upland site and potential for good road access. This is the best-suited site for this purpose, because of its close proximity to Highway 101. Adverse impacts can be minimized by supporting a dock on pilings, or by bulkheading using a minimal volume of fill. Compatibility with existing shoreland uses is only moderate because of the proximity of the park, although there is a substantial vegetative buffer, and overnight camping areas are some distance away. Compatibility with the natural channel (Conservation) is moderate because of the probability of minor disturbance from dredging. Energy benefits outweigh costs because barging is an energy-efficient mode of transportation, and relatively little energy should be expended in construction and dredging.

- Unit #19: This is an area of intertidal mud flats, intertidal high saltmarsh and freshwater marsh or swamp. The intertidal parts would normally be placed in a Conservation designation, as they are

tracts of tidal flats and marshes of "less-than-major" extent. This area is proposed for the development of a recreational marina [see Section 7.5]. An Exception has been taken to Goal #16 (and also to Goals #3 and #17) to justify the dredging actions necessary to construct the marina [see Part 3, Section 5.5]. Other goal considerations ("need", consequences, alternative locations and compatibility) are therefore addressed in the Exception Statement

2.3.2 Conservation Management Unit

- Unit #2: This unit is a narrow strip immediately adjacent to uplands that are subject to erosion problems. It is a partially altered area that is adjacent to existing development of moderate intensity and contains a tideflat, seagrass and algae bed that qualifies the area for a conservation designation. Development of the unit is limited to shoreline stabilization measures deemed necessary to protect adjacent uplands from erosion.

- Unit #8: This is the natural river channel from above the maintained navigation channel to above Prosper. It is entirely subtidal, and contains none of the "significant habitat" areas, which would automatically place it in a Natural or Conservation Management Unit, nor is it in a "priority development area". However, it fits best the Conservation category because it is suited to "long-term uses of renewable resources that do not require major alteration of the estuary", and will be "managed to conserve the natural resources and benefits". Main uses are water-borne recreation and production of fish resources with some commercial boat and barge use. It also is partially altered by old pilings in the channel. Dredging at Prosper docks and other moorages, would, however, be considered "maintenance dredging of existing facilities" which is permitted in Conservation areas under Goal # 16.

- Unit #21: This is the natural river channel from above Prosper to the head-of-tide. It is placed in the Conservation designation for the same reasons as Unit #8. It is also partially altered in a number of places by old pilings and docks. In general, compatibility with adjacent areas is high, as shoreland uses are agricultural for the most part. Where developed uses occur on shorelands adjacent to these units, it is expected that no alteration of the estuary will occur that would not be permitted under Goal #16 in Conservation areas.

- Unit #15: This area is a small saltmarsh and tideflat west of Bullards Bridge with a narrow algae bed, qualifying it as a Conservation unit. The adjacent shoreland unit is designated "Recreation" and there is an alternative possibility of industrial use [see Section 7.5]. It is expected that if a water-dependent recreational use is developed, a dock of some type will be needed. This must occupy the water surface by "means other than fill" to be permitted in a Conservation unit. This area has also been identified as a possible restoration site [see Section 9.10.3].

- Units #6 and #25: These two units are small tidal tributary streams of the Coquille (Ferry Creek and Bear Creek). These are entirely subtidal. Ferry Creek is channeled and passes through Bandon's commercial district. Thus, it is considered partially altered and adjacent to development of moderate intensity. Bear Creek has no characteristics that fit any of the designations precisely; however, it is placed in the Conservation designation for similar reasons to those given for the main river channel (i.e., it passes through agricultural lands, and maintains biological productivity; it is used by anadromous fish species).

- Units #12, # 17, #20, #22, #23 and #24: All of these units contain smaller areas of significant habitat which qualify them for the Conservation designation.

1. Unit #12 is an area of shore along either side of the bay, which contains a few minor algal beds.

2. Unit # 17 is a number of small tideflat areas with minor algal beds upstream from Bullards Bridge on both banks. Parts of this unit are partially altered by old pilings and existing docks (Rogge Mill and Prosper) and are adjacent to development of moderate intensity (Rogge Mill). It is possible that minor dredging will be required at the docks (maintenance dredging of existing facilities).

3. Unit #20 is a tidal marsh channel within an old diked meadow, which contains intertidal flats.

4. Unit #22 consists of a number of strips of fringing saltmarsh.

5. Unit #23 is Randolph Slough, which contains an area of tideflat fringing the main channel. It is also partially altered by riprap and old pilings.

6. Unit #24 is a small saltmarsh below Parkersburg. In each case, compatibility with adjacent uplands and estuarine areas is high; uplands are primarily agricultural lands. Where developed upland uses exist, no conflict is expected to occur with the purposes of the Conservation Management Unit.

2.3.3 Natural Management Unit

Natural management units on the Coquille River contain at least one of the "major" habitat areas specified in Goal #16. Determination of what constitutes "major" habitat areas was made by ODFW staff [Reese Bender, personal communication, 7/8/81].

- Units #2, #3, and #7: These units are comprised of two areas, which are considered major tideflats; both areas contain smaller algal beds. It should be noted that there is only moderate compatibility between this designation and adjacent aquatic areas, due to possible impacts from maintenance dredging and future jetty construction.

- Unit #11: This unit consists of general areas of major saltmarsh together with associated major tideflats, algal beds, and clam beds. The adjacent shoreland designation is also "Natural Resource"; the land is used for recreation in conjunction with Bullards Beach State Park; thus, this designation is highly compatible with adjacent uses.

- Units #10 and #13: These two units are comprised mostly of major tracts of saltmarsh and tideflat (the "Bandon saltmarsh") to the east of the channel, the largest Natural management area in the estuary. There are also clam beds in each of these units, but the "major" habitat resources override this consideration, and place them in the Natural designation. There is a potential restoration site in Unit #10.

- Unit #16: This unit might have been placed in the Conservation category due to the presence of small mudflats and algal beds; however, the main area is a "major" saltmarsh. Therefore, the entire intertidal system is placed in the Natural designation. As noted in Section 9.10.3, there is a potential restoration site here.

2.4 Justification of Uses/Activities for Aquatic Management Unit

2.4.1 Introduction

The Estuarine Resources Goal lists the types of uses and activities that may be permitted in each type of management unit in the Comprehensive Plan Requirements (Management Units) section. For this reason, it should normally be clear what uses/activities may be allowed without an Exception. However, certain findings are required by the Goal. Many uses/activities are allowed "where consistent with the resource capabilities of the area and the purposes of [the] management unit". In "Development" management units, certain uses may be allowed "as appropriate". There are other specific conditions placed on uses and activities, either by the Statewide Planning Goals or by the Oregon Administrative Rules. The Use/Activity Matrix summarizes all the requirements in two columns plus footnotes: first column indicates whether the use/activity may be allowed; the second column makes a finding of Goal conformance and notes what conditions or additional findings will be required. This indicates conditions that must be placed on certain uses/activities to ensure goal compliance. Commercial, industrial and recreational uses are categorized into water-dependent, water-related and non-water- dependent/non-water-related uses to ensure compliance with use requirements in the Goal.

Policy #2 [General Schedule of Permitted Uses and General Use Priorities] supplements the Use/Activity Matrix by summarizing the Goal requirements for uses/activities and general priorities. This policy provides formal policy language as legal "underpinning" for the Uses/Activity Matrix.

2.4.2 Uses/Activities Permitted in Development Management Unit

Development Aquatic Management Units are generally intended for bridge crossing support structures and dredging necessary for installation, bridge crossings, installation of tidegates in existing functional dikes, water-dependent commercial enterprises and activities, protection of habitat, nutrient, fish, wildlife and aesthetic resources, temporary alterations, waste/storm water discharge, research and educational observation structures, navigation, water-dependent, water- related industrial and commercial uses may be allowed. Water-related commercial/industrial uses are permitted in Units #1, #4, #5, (Bandon waterfront) and #18 (Prosper) because of the wide variety of port-related uses occurring, it would be impractical to exclude uses which are closely related to water-dependent uses. Other units are reserved for particular water-dependent uses. It is not considered consistent with the purposes of the above development units to permit non-dependent/related uses, because there is so little waterfront space available on the Coquille for water-dependent uses. Mining/mineral extraction is allowed in Unit #1, where this is an existing use (Robertson's) which is dependent upon access to deposits of gravel off the Bandon waterfront. Aquaculture is not considered consistent with the development designation because of the impact of intensive port development and the wide availability of other undeveloped sites. High intensity water-dependent recreational uses are considered consistent in Units #1, #4 and #5 because of the general compatibility of commercial and recreational boat moorage on the Bandon waterfront. Similarly, marinas are considered "appropriate" here for the same reasons. Mitigation/Restoration is allowed in several Development Management Units, since there are resources, which could be restored as an integral part of a project if feasible. Other uses/activities related to navigation and industrial/commercial development (like dredging, fill, navigation structures, structural shoreline stabilization) are normally permitted because this is consistent with the primary purpose of these units. Unit # 19 is proposed for a recreational marina. This is a use permitted by Goal #16 in Development units subject to the finding that it is consistent with the resource capabilities and purposes of the management unit. Similarly, water-related and non-dependent/ related uses not involving fill are permitted subject to these findings. A large dredged marina of the type proposed is more appropriately placed in a Development unit, because of the degree of alteration involved. This site has the capability of being dredged out to form a large marina, which can be protected from river currents by a bulkhead along the same alignment as the existing bankline. A large

recreational marina is therefore consistent with the resource capabilities and the purposes of the management unit. See the Exception (Part III, Section 5.5.5) for consistency findings for other proposed non-water- dependent uses.

- In Unit #19, commercial uses, non-water-dependent recreational uses, and utilities would only be consistent with the resource capabilities of the area if ancillary to the marine development.

2.4.3 Uses/Activities Permitted in Conservation Management Unit

A small number of uses/activities are permitted outright in Conservation Aquatic Management Units, as specified in the Goal:

- All uses/activities permitted outright in Natural Management Unit (except for "temporary alterations");
- High intensity, water-dependent recreation including boat ramps, marinas and new dredging for boat ramps and marinas;
- Minor navigational improvements;
- Mining and mineral extraction, including dredging necessary for mineral extraction;
- Water-dependent uses requiring occupation of the water surface by means other than fill;
- Research and Educational Observation;
- Navigational Aids;
- Active and Passive Restoration;
- Aquaculture requiring dredge or fill or other alteration of the estuary;
- Communication facilities;
- Waste water/ storm water discharge meeting state and federal water quality standards.

A number of other uses/activities are only allowed "where consistent with the resource capabilities of the area and the purposes of [the] management unit". Uses not mentioned in the Goal will require an Exception.

i. High Intensity, Water-Dependent Recreation including boat ramps, marinas and new dredging for boat ramps and marinas: Permitted in Units #8, #12, #15 and #17: In each case it is only allowed where occupying the surface "by means other than fill", as required by the Goal, unless, suitable findings can be made to allow minor filling (see Policy #6). Units #8, #12, #15 and #17 all abut parts of the shoreline at some point with historic recreational uses. There may be some need in the future to provide moorage for recreational boating or some other similar intensive use in these aquatic areas. Resources are either subtidal or narrow intertidal flats with minor aquatic beds. Uses on pilings or similar structures would have only minor impacts and would be consistent with the resource capabilities and purposes of the management unit.

ii. Dredging necessary for on-site maintenance of Existing Functional Tidegates and associated drainage channels: Permitted in Units #8, #12, #15, #17 and #21. Subject to Policies #5 and #8 (Fill and Removal and Mitigation) Units #8 and #21 (the natural channel), contain a number of boat ramps and small docks that need maintenance on a regular or occasional basis. Unit # 12 contains the Bullards boat ramp. Unit #15 has no facility at present, but a dock may be constructed in conjunction with shoreside recreational facilities. Unit #17 contains the Rogge Mill loading dock and several small recreational docks, which may need occasional maintenance. In each case, maintenance dredging is consistent with the resource capabilities of the area (subtidal areas or small

intertidal flats) and with the purpose of the management unit.

iii. Minor Navigational Improvements: Permitted in Units #8, #12, #15, #17 and #21. Minor navigational improvements may include new dredging to "scalp" shoaled areas (see definition). Units #8 and #21 (natural channel) have identified problems with shoaling, which might required removal in the future. This would require only minor removal, and provided it is timed to avoid seasons of anadromous fish passage, is not expected to impact natural resources. Dredging would be in subtidal areas, and would not have a significant effect on estuarine productivity. Units # 15 and # 17 are likely to see some degree of use by recreational or commercial boats. Thus, minor navigation improvements may be necessary. If the conditions listed here are met, such activities would be consistent with the purposes of the unit; findings will be reviewed at the time of permit application.

iv. Mining and Mineral Extraction, including dredging necessary for mineral extraction. Permitted in Unit #21. Mineral Extraction is only permitted in this Conservation Unit, between the natural channel from Prosper to head-of-tide. There are substantial gravel deposits near Myrtle Point in the highest tidal reaches. Resources would likely be replenished by transport from the upper Coquille system each winter. Removal would be consistent with the resources, provided it took place during low water periods (outside season of anadromous fish passage). Regulation of mineral extraction is by the Division of State Lands (see Policy #11).

v. Bridge Crossing Support Structures and dredging necessary for their installation: Permitted in Units # 15, # 17 and #21. Bridge crossings are existing uses in all these units. The Bullards Bridge has a central pier in the natural channel (Unit #8) and approach abutments lie beside Units #15 and #17. If any future improvement is needed, it would occur in these units rather than in Natural Units #13 and #16 that are adjacent to the bridge. Any necessary future abutment work would impact part of a minor saltmarsh and minor tideflats. Subtidal areas would be only minimally affected by work on the central pier or any replacement. Bridge crossings will be consistent with the resources and general purposes of the unit.

2.4.4 Uses/Activities Permitted in Natural Management Unit

Uses/activities may be allowed in Natural Management Units (Goal #16) without special assessment of the resource capabilities of the area, but subject to special conditions and other policies set forth elsewhere in this Plan. Note: existing man-made features may be retained, maintained and protected if existing on October 7, 1977 are:

- Undeveloped low-intensity, water-dependent recreation;
- Research and Educational Observations;
- Navigational Aids (such as beacons and buoys);
- Passive Restoration measures;
- Protection of habitat, nutrient, fish, wildlife and aesthetic;
- Bridge crossings;
- Cultural, historical and archaeological resources;
- Research and educational observation structures;
- Dredging necessary for on-site maintenance of existing functional tidegates and associated drainage channels;

Uses/activities may be allowed in Natural Management Units when it is established that such are consistent with the resource capabilities of the area and the purpose of the management units (Goal # 16) and also subject to special conditions and other policies set forth elsewhere in this Plan.

i. Aquaculture which does not involve dredge or fill or other estuarine alteration other than incidental dredging for harvest of benthic species or removable in-water structures such as stakes or racks (commercial, not archaeological stakes or racks). Permitted in Units #7, #10, #11, #13 and #16. Aquaculture requires bank access to the main stream of the river for a suitable site. Each of the above units has suitable access at some point to the bay subsystem, which is particularly well- suited to culture of anadromous fish. This is because this part of the system is a "nursery" in which natural stocks spend their juvenile period after spawning higher up the system. There are also natural clam beds in many parts of these units, which might be harvested or artificially propagated.

ii. Communication Facilities: Not permitted in any Natural Unit, due to the fact that they are not consistent with the resources or purposes of this unit, and suitable alternatives exist.

3. ANALYSIS OF COMPLIANCE WITH COASTAL SHORELANDS GOAL (#17) AND BEACHES AND DUNES GOAL (#18) BY "SHORELAND MANAGEMENT UNIT"

3.1 Introduction

The Coastal Shorelands Goal (#17) sets priorities for shoreland uses, requiring that preference be given in appropriate locations to water-dependent or water-related uses and activities. It also requires a high degree of protection for certain important natural resources (e.g. major marshes, significant wildlife habitats, coastal headlands, and exceptional aesthetic resources) and distinguishes between the uses allowed in cities and urban growth areas and those allowed in rural areas. The Beaches and Dunes Goal (#18) also applies wherever dunes fall within the Coastal Shorelands Boundary of the Coquille River. The "Linkage Matrix" for Goals #17 and #18 examines the appropriateness of the land use designation chosen for each unit and of certain uses permitted in the unit, when measured against the Goals' requirements.

3.2 Justification of Designations for Shoreland Management Units

3.2.1 Units within Cities and Urban Growth Areas

There are 24 units within the city limits of Bandon, Coquille or Myrtle Point and the urban growth area of Coquille. Goal #17 requires that sites "suitable for water-dependent uses" [WD sites] shall be protected for water-dependent recreational, commercial and industrial uses, citing four factors which indicate this special suitability. Only six of these units are considered WD.

They are as follows:

- Unit # 1 – The South Jetty: "Public Facilities" designation. The jetty is suitable for water- dependent recreation, for instance fishing.

- Unit #3 – The Bandon Waterfront: "Marine Commercial" designation. This area has a shallow-draft channel close to shore, with supporting land facilities. Protected areas are available which are subject to scour by the current of the river as it bends west toward the mouth. There are also outstanding water-dependent recreational opportunities at the boat basin. The "Marine Commercial" designation reserves the waterfront for water-dependent or water-related uses as the highest priorities, consistent

with the "Priority" requirements of Goal #17.

- Unit #8 – Moore Mill: "Industrial" designation. The site has a lumber loading dock with the shallow-draft channel alongside, and a water-dependent mill operation with associated log storage on the rest of the site.

- Units #9, #10 - North Jetty and Vicinity: "Public Facilities" and "Natural Resources" designations. Both areas are suited to water-dependent recreational activities (fishing), and are suitably protected.

The remaining 29 units do not have features which make them "WD", and are designated for more general urban uses. Certain units contain significant resources, which require protection.

- Unit #2 (Controlled Development) has a small freshwater lagoon on part of the site. This will be protected by the public review procedure, which is part of Bandon's Controlled Development Ordinance.

- Units #3 and #10 have archaeological sites in part of the unit. These will be protected as required in the appropriate policy (See Policy #18).

- Unit #47 (Agricultural Lands) contains a small wet meadow area. It is protected by appropriate policy language (see Policy #19).

3.2.2 Rural Units Containing Resources Requiring Protection and Use Restrictions

Four types of resources requiring protection under Goal #17 occur in rural shoreland units:

i. Major freshwater marshes;
ii. Significant wildlife habitats;
iii. Coastal headlands;
iv. Exceptional aesthetic resources.

Only two units contain freshwater marshes of "major" importance:

- Units # 11 and #22. Unit #11 (adjoins Bullards Beach State Park) is designated "Natural Resources"" which provides a high level of protection (See Uses/Activities Matrix). Unit #22 (above Prosper) is designated "Agricultural Lands".

Four units have archaeological resources on part of the unit. This does not preclude other uses, provided the site itself is protected as consistent with policy language in this Plan (see Policy 18). Three of these units are designated "Agricultural Lands" (Units #23, #26, #32); permitted uses will generally be compatible with protection of these sites.

- Unit # 14 is designated "Industrial". Permitted uses may conflict with strict protection of the burial site on the property. However, an agreement between the owner and the Indian tribe(s) is expected to ensure the protection of the archaeological site on part of the property (see Policy #18 for steps to protect this site in case of conflicting uses).

- Units #11 and #21 contain freshwater wetlands, which are considered "significant wildlife habitats" (see Section 9.6.4). Unit # 11 is designated "Natural Resources" as mentioned above. The Prosper mineral springs are considered a significant habitat for band-tailed pigeons.

- Unit #28 also has band-tailed pigeons habitat and the agricultural lands designation is considered appropriate, provided that riparian vegetation is protected as required in Policy #23.

3.2.3 Compliance with Agricultural Lands and Forest Lands Goals

Where a unit contains predominantly agricultural soils or meets the "forest land" criterion, uses should be consistent with one or another resource. Generally, such units are designated "Agricultural Lands" or "Forest Lands", where forest cover exists, according to the criteria set out in the Coos County Comprehensive Plan Agricultural Lands Element (Section 1.3) for distinguishing forest land from agricultural land. However, there are ten (10) units with different use designations. All are considered built on or committed to some non-forest or non- agricultural use.

- Units #25, #50, #57, #61, #63 and #74 are included in the "committed areas" set out in the Rural Housing inventory of the Coos County Comprehensive Plan and are designated Rural Residential or Rural Center.

- Units #20 and #40 are part of the "committed areas", which due to their riparian location are considered better suited to the Industrial designation than to residential use.

- Unit #59 is committed to an industrial use (primarily a log pond).

- Unit # 12 is part of Bullards Beach State Park, and though it contains "agricultural soils" is committed to recreational use.

3.2.4 Compliance with Coastal Shorelands Goal Restrictions on Dwellings

Goal #17 requires findings for dwellings not on pre-existing parcels within coastal shorelands, but allows for single-family dwellings on existing parcels of land if otherwise compatible with the Goal. Eight (8) units are within "committed areas" and are designated Rural Residential or Rural Center. The matrix asks whether single dwellings on existing parcels are compatible with adjacent shoreland or water areas, affected by natural hazards, or compatible with riparian vegetation and wildlife habitats. Dwellings are considered broadly compatible with adjacent shorelands and coastal waters in all units except #30. Each of the eight units is affected by flooding; several are in part or wholly covered by riparian vegetation. On units with partial coverage, if dwellings can be sited so as not to affect riparian vegetation, they may be permitted subject to the strategies on riparian vegetation, significant wildlife habitats and floodplain regulations (see Policies #23, #17 and #27 respectively). Dwellings are also permitted on existing parcels, with the same findings as above, in the Agricultural Lands, Forest Lands, and Recreation designations. Dwellings on agricultural lands are also subject to the appropriate restrictions on uses with Exclusive Farm Use zones, as required by ORS 215.213 (see Policy #28). Only in Unit #22, which is reserved for a mitigation/restoration site, are dwellings considered generally incompatible. As with the rural residential units, natural hazards (either flooding or mass movement) affect all these sites, and most are also in part covered with riparian vegetation. In reality, there is not likely to be a significant incidence of new dwellings in these shoreland units because of flood hazards.

3.2.5 Compliance with Goal Restrictions on Land Divisions and Other Uses

Land division and other uses are only permitted when no other urban/urbanizable or upland sites are available, and when they are compatible with riparian vegetation and habitat values. Unit #20, at Prosper, is a site well suited for back-up land for marine repair and boat building operations. It is an area

historically in industrial use with good access to the river channel. There is a need in this rural area for this type of land (see Inventory, Section 7.5D) because back-up land in the Bandon waterfront is better used for fish processing or other fishing-related activities. Land divisions will probably need to occur in order to assemble suitable sites. "Findings for land divisions in other rural shoreland areas will be made on a case-by-case basis."

3.2.6 Compliance with Goal Requirements for Water Dependent/Related Uses

Only six (6) units are found to be needed for water-dependent commercial or industrial uses and water-related uses outside cities or UGAs.

- Unit #20, (Prosper waterfront), as mentioned above (3.3.4), possesses flat back-up land, easy access to the channel, is an area of historic importance for boat building and repair, and is within reasonable distance of the Bandon waterfront.. It is needed for boat building and repair because adequate flat back-up land is scarce in Bandon, where any available land is better used for fish processing or other fishing-related uses.

- Unit # 14 (Georgia-Pacific Bullards Dock) is needed for a small bulk-loading facility. This is its historical use and has good access to Highway 101 and to the channel. The Bandon waterfront does not possess a vacant site of suitable size to accommodate even a small bulk- loading terminal. More intensive uses (e.g. fish processing) will compete successfully for the scarce sites, which exist on the Bandon waterfront.

- Unit #13 is ideally suited to a tourist-oriented, water-dependent/related use due to its location next to Highway 101.

- Unit #16 (Rogge Lumber) is an existing water-dependent mill with a loading dock for shipment of lumber by barge. It is appropriate to identify this site as suitable for water-dependent industrial use.

- Unit #40 (Riverton waterfront) is identified as being suitable for water-dependent uses because of the following characteristic: it is within an established rural community, with good back-up sites and easy access to the river channel, which is particularly deep at this point. The southeast bank is well-scoured by the current due to its location on the outside of a slight curve. There is a need for a site to accommodate storage and sorting space for operations to clear the river of old pilings and log debris. A site here has been used for this purpose until recently. There are currently no small vacant sites in Coquille or its UGA, which could be made available for this type of use. In any case, the channel is shallower and the bank more prone to erosion because of channel alignment. No site is usable in Myrtle Point because of silting of the channel. The site needs to be in the middle river section because this is where most of the problems with log debris and old pilings exist. As mentioned in the analysis of potential water-dependent sites (see Section 7.5E), there are coal resources in the Riverton area and the waterfront could also be used for a small coal barging facility in the event that these seams are worked. This site provides opportunities for small- scale water-dependent uses in the middle river section which do not exist in cities or UGAs.

A number of units also permit water-dependent recreational uses. Some are designated Recreation, and are set aside specifically for water-dependent uses (or water-related use if justified; see Unit # 13). Several units are designated Rural Residential; appropriate water- dependent uses are moorage docks and boathouses. Units designated Agricultural Lands also allow water-dependent recreational uses as conditional uses. This is consistent with ORS 215.213(2)(c) and (d), which permit the following uses in Exclusive Farm Use (EFU) zones subject to a conditional use process:

> "private parks, playgrounds, hunting and fishing preserves and campgrounds," and "parks, playgrounds or community centers owned and operated by a governmental agency or a non-profit community organization".

Provided the use both conforms to EFU statutes and is water-dependent, it is permitted in shorelands in the Agricultural Use designation. Appropriate uses would include boat ramps and fishing shacks [like those proposed near Riverton; see Section 8.1.4]. Where riparian vegetation or significant wildlife habitats exist, it is noted that water-dependent recreational uses are only permitted if they are "maintained or protected", as required by Goal #17.

3.2.7 Protection of Dredged Material Disposal Sites and Mitigation Restoration Sites

Units #10, #14, and #20 are specifically set aside for dredged material disposal.

- Unit #10 is designated Natural Resources, which effectively excludes any pre-emptive uses.

- Units #14 and #20 (Industrial) are only intended as a disposal site for spoils from dredging in adjacent estuarine areas, in order to level the site or raise the level of back-up land above the 100-year flood level. This would take place prior to any substantial shoreland development in this area. However, dredged material disposal is permitted in a number of other units [see Shorelands Uses/Activities Matrix] with appropriate safeguards.

Units #11, #23, #26 and #29 have sites set aside for mitigation.

- Units #11 and #29 are designated Natural Resources, which effectively protects them from other development.

- Units #23 and #26 are designated Agricultural Lands, but structures, which would otherwise be permitted in this designation, are not permitted within the designated mitigation sites (see Shorelands Uses/Activities Matrix).

3.2.8 Consistency Determination

Goals # 17 and #18 Linkage Matrix, together with the findings in the above explanatory narrative, have established that the use designations for each of the shoreland units are consistent with the requirements of the Goals in every case. This process also deals with the Goal requirements relating to several types of uses and activities, and the conditions under which some of them may be permitted. These requirements are embodied in the Shorelands Uses/Activities Matrix, which is based on the Linkage Matrix (see Section 3.3 for explanatory narrative on Shorelands Uses/Activities Matrix).

3.3 Justification of Use/Activity Matrix for Coastal Shorelands, Beaches and Dunes Goals

3.3.1 Introduction

Uses and activities permitted in each of the 75 shoreland management units are laid out in a separate Uses/Activities Matrix. As with estuarine units, the uses and activities permitted are to a large degree determined by the Coastal Shorelands Goal. For instance, uses in areas with major marshes or other important natural or cultural resources shall be "consistent with the protection of natural values". The

Shorelands Linkage Matrix itself determines where several types of uses and activities (e.g. dwellings and land divisions) are to occur. In other units, (for instance in Exclusive Farm Use units) the Oregon Statutes govern the specific uses that may be permitted, with conditions as necessary. In Forest Land units, uses are governed (in a more general way) by the Goal. Units in urban/urbanizable areas that are "suitable for water- dependent uses" [WD] are protected for water-dependent industrial, commercial or recreational uses, as required by the Coastal Shorelands Goal.

As with the Aquatic Units, reference is made to specific policies, which provide policy statements on conditions, which shall apply to uses/activities. Footnotes are also used for the same purpose, where no formal policy is necessary.

3.3.2 Units Designated "Industrial", "Marine Commercial"

Where suited for water-dependent uses, these units permit water-dependent/water-related industrial or commercial uses, and any other applicable and appropriate uses/activities (e.g. log storage, mineral extraction, utilities, fill, dredged material disposal, diking, land divisions and shoreline stabilization). Other uses are only permitted subject to the findings in Policy #14 (General Policy on Uses within Coastal Shorelands). These units at Riverton also permit water- dependent/related recreational uses, because these sites are suited to a variety of uses. Aquaculture is permitted in these units because of their suitability for small-scale, low-impact uses.

- Units #45, #52, #54, #59, #66 and #68 are currently occupied by non-water-dependent/ related uses and since they are far up-river on a narrow, shallower reach of the estuary, are not considered water-dependent uses. Therefore, non-water-dependent/related uses are permitted, subject to the general priority requirements of the Goal.

3.3.3 Units in Urban/Urbanizable Areas

Sites in these areas, which are found to be WD are to be protected for water-dependent industrial, commercial and recreational uses. Such sites are found in Units #1, #3, #8, #9, #10, and #67.

- Units #3 and #8 are designated "Industrial" and have a range of possible uses. The others (boat ramps, jetties, parks) are found suitable primarily for recreational uses (designations "Recreation", "Public Facilities" or "Natural Resources"). All other sites in these areas are not considered WD and are designated for non-water-dependent uses, based primarily on existing use patterns.

3.3.4 Units Designated "Agricultural Lands"

Uses in these units must conform to the Exclusive Farm Use requirements of Goal #3 and ORS 215.203, as well as to the Coastal Shorelands Goal. Certain uses other than farm use are therefore permitted as conditional uses (e.g. mineral extraction, water-dependent recreational uses, and dwellings not in conjunction with farming). Farm dwellings and utilities are permitted, consistent with ORS 215.203. Several other farming-related activities are also permitted, subject to policy language protecting riparian vegetation and significant wildlife habitats (diking, drainage and tidegating, dredged material disposal, fill, shoreline stabilization). Restoration may be possible in lower-river agricultural shorelands, but is not permitted, since it may require an exception. However, mitigation actions for intertidal development elsewhere on the river are permitted [see LCDC Estuary/Agricultural Land Exception Policy 8/5/77].

3.3.5 Units Designated "Forest Lands"

- Units #15, #17, #19, #35 and #38: Uses permitted in these units include those generally permitted in

Goal #4 and are consistent with the uses permitted elsewhere in the County on forest lands [see Coos County Zoning Ordinance]. However, some uses are not applicable due to location, or are subject to conditions due to natural resources or natural hazards. Uses generally permitted are timber propagation, mining/ mineral extraction, residential uses and utilities. However, Unit #17 is a freshwater marsh shown on the Freshwater Wetlands inventory map; this marsh is subject to Policies #17 and #24. Mitigation is permitted here (though it is not a designated potential site), but mineral extraction, and residences are not. Only timber propagation/selective harvest-is permitted, consistent with the Forest Practices Act. Farm use is appropriate in low-lying forested areas. Water-dependent recreational uses are appropriate in Unit #19 due to its direct waterfront access.

3.3.6 Units Designated "Rural Residential" and "Rural Center"

- Units #18, #25, #30, #50, #57, #61, #63 and #74: Normally permitted uses in these units are residences, utilities, and shoreline stabilization. However, residences are not appropriate where only a narrow strip of land subject to flooding lies in the shoreland boundary, while the true residential area is upland (as in Unit #30, Parkersburg). Certain units permit water- dependent recreational uses (e.g. small boat docks) where already in existence (Units #18, #30, #50), or where direct river access is available (Units #61 and #63).

3.3.7 Units Designated "Recreational"

- Units #12, #13, #24, #39, #51 and #58: All these units except #13 are State or County owned. Uses generally permitted are water-dependent/ related recreational uses, mitigation and utilities. Non-dependent/related uses are permitted in Unit #12 (Bullards Beach State Park) as existing. Aquaculture is permitted as this is considered a lower-impact use, which is compatible with recreational use. It is considered appropriate to designate publicly owned sites for aquaculture use. Activities generally permitted are dredged material disposal (for boat ramp maintenance only), fill (subject to policies protecting wetlands), and shoreline stabilization. The last two activities are considered necessary to protect boat ramps or other proposed recreational uses. Unit # 13 permits a wider variety of uses as it has special potential due to its location on Highway 101 and a certain degree of flexibility of use is considered appropriate. The overall concept for the site is as a tourist-oriented water- dependent recreation site with a range of upland facilities. Hence, water-dependent/related commercial uses, marinas (shoreside facilities) and residences, in addition to other uses, are permitted under appropriate conditions [see footnotes and policies in Matrix].

4. CUMULATIVE EFFECTS OF USES AND ACTIVITIES IN DEVELOPMENT MANAGEMENT UNITS

This section addresses the Goal requirements for uses/activities in Development Management Units, "the cumulative effect of all such uses, activities and alterations shall be considered and described during plan development and adoption" [Goal #16, Management Units, Development].

The following aquatic units are designated "Development": #1, #4, #5, #14, #18, and #19.

- Unit #1 is the authorized channel plus the existing and proposed Bandon Boat Basin (entirely subtidal).

- Unit #4 is the intertidal flat portion of the proposed Bandon Boat Basin expansion.

- Unit #5 is the Ferry Creek tidal flat which is needed for water-dependent development and may

require fill.

- Unit # 14 is the subtidal and narrow intertidal area requiring dredge and possibly minor filling behind a bulkhead for access to a future bulk-loading facility at Bullards.

- Unit #18 comprises small saltmarsh areas with an adjacent subtidal area along the Prosper waterfront, which will require dredging to accommodate marine construction/repair activities.

- Unit #19 contains an intertidal flat and a high saltmarsh, which is proposed for a large recreational marina.

The following alterations are expected to occur in Development units during the planning period:

- Maintenance dredging of authorized shallow-draft channel, possibly including dredging to increased depth.
- Fill for proposed breakwater for Bandon Boat Basin expansion.
- Maintenance dredging of existing Boat Basin.
- New dredging of proposed Boat Basin expansion.
- Fill for water-dependent uses at Ferry Creek flat.
- Limited amount of dredging and possible minor fill for bulk heading at Bullards bulk-loading facility.
- Dredging and minor fill of limited areas at Prosper.
- Dredging of a recreational marina at Prosper.

The effects of these actions are considered as follows:

i. Sub-Tidal Dredging: The effects of subtidal dredging on estuarine resources are expected to be fairly minor. Even with channel deepening, anadromous fish populations are not expected to be affected, provided activities are timed to avoid periods of migration. The main effect would be the displacement of benthic organisms, possibly including some clam populations. However, these organisms are expected to recolonize the dredged areas from surrounding populations in a season or two.

ii. Intertidal Dredging: Other than for the Prosper marina, dredging is expected to affect only a small intertidal area (narrow tidal flat and two small saltmarshes). These areas are considered insignificant compared with the total area of these resources on the Coquille. For a statement on the impacts on intertidal flats and marshes connected with the marina proposal, see the Exception (Part III, Section 5.5.3).

iii. Subtidal Fill: The breakwater will permanently displace an area of benthic organisms, possibly including some clams. Similar impacts will occur from any fill in the subtidal area fronting the Ferry Creek flat.

iv. Intertidal Fill: Minor fills along the Prosper waterfront will affect remnants of saltmarsh and tidal flats, which have seen substantial alteration in the past. Cumulatively, there is expected to be a fairly loss of estuarine resources from these actions, if maximum permitted dredge and fill occurs. Adequate mitigation will be required for dredge and fill operations to offset the cumulative effects.

In addition to the uses/activities which are expected to occur, a number of others are to be permitted in

these units, should the need arise. These are mainly low-impact uses/activities like navigational structures/improvements, pilings/dolphins, docks/moorage, utilities, and shoreline stabilization. Compared to dredge and fill, these uses would have insignificant effects on the estuary. Water-dependent/related industrial, commercial (and in some cases recreational) uses are permitted in these units, as appropriate. Again, the cumulative effects of these uses are expected to be minor compared with the dredge and fill activities needed to accommodate them. Note that mineral extraction: (gravel) is permitted in Unit #1. The effects of gravel extraction are expected to be minor because the resource is self-renewing over a period of time.

The Plan has considered any upland alternatives in cases where the estuarine surface area is committed to surface uses. In the case of the breakwater, there are no upland alternatives. The fill in the Ferry Creek flat is needed because future expected land demands for uses in conjunction with expanded fishing operations cannot be met in upland areas (see Sections 7.4.1 and 7.5). In cases where uses like docks and moorage occupy the water surface by means other than fill there is an obvious need to have direct access to the water, which upland sites will not fulfill adequately.

5. EXCEPTIONS TO STATEWIDE LAND-USE GOALS

5.1 Exception Statement for Coquille River Bridge Replacement at Coquille to Goal #3 (Agricultural Lands)

EXCEPTION DELETED (Project completed)

5.2 Exception Statement for Bandon South Jetty Replacement to Goal #16 (Estuarine Resources)

EXCEPTION DELETED (Project completed)

5.3 Exception Statement for Bandon Recreational Boardwalk to Goal #16 (Estuarine Resources)

EXCEPTION DELETED (Project completed)

5.4 Exception Statement for Fill for Water-Dependent Uses at River Mile 1.4 [North of Moore Mill] to Goal #16 (Estuarine Resources)

EXCEPTION DELETED (Project completed)

5.5 Exception Statement for Dredged Marina at Prosper to Goals #3 (Agricultural Lands), #16 (Estuarine Resources) and #17 (Coastal Shorelands)

5.5.1 Introduction

This Exception Statement has been prepared to justify an exception to certain provisions of Statewide Planning Goals #3, #16 and #17 for the purposes of allowing a recreational marina at River Mile 5 on the Coquille River. The criteria used as a basis for the findings and conclusions in this statement are the four tests identified in Goal #2, Part II-Exceptions:

1. Purpose – Why these other uses should be provided for;

2. Alternatives – What alternative locations within the area could be used for the proposed

uses;

3. Consequences – What are the long-term environmental (biophysical), economic, social and energy consequences to the locality, the region, or the state of not applying the goal;

4. Land Use Compatibility - Are the proposed uses compatible with other adjacent uses?

The specific proposed uses and Goal provisions being addressed in this statement are described below:

- Site Location and Proposed Uses: The Prosper site is located at River Mile 5 of the Coquille River immediately upstream from the community of Prosper, Oregon (tax lot 501, Sec. 16, T. 28S, R. 14W). This site is approximately 3 miles by road from "Old Town" Bandon, or 2.5 miles east of U.S. 101 on Prosper Road.

  The proposed uses discussed in this Exception are of two types: marina uses located within the Coquille River Estuary Coastal Shorelands Boundary (CSB) and upland uses located adjacent to the marina across Prosper Road. The marina uses include a recreational marina intended primarily for live-aboard yacht moorage (temporary occupancy), public fishing pier, and floating marina-related shops (e.g. ship's chandlery, gift shops). The marina-related shops are proposed as non-water-dependent uses not requiring fill as defined by the Statewide Planning Goals (see Proposed Exception discussion below). The marina and public fishing pier are proposed as water-dependent recreational/ commercial uses.

  The proposed upland uses include a yacht club, hotel/ convention center, tennis courts, nature trails, parking lot, and sewage treatment facilities. Only the marina uses fall within the CSB and jurisdiction of the U.S. Army Corps of Engineers (Section 404 of the 1977 Clean Water Act, and Section 10 of the 1899 Rivers and Harbors Act) and the Oregon Division of State Lands (ORS 541.605-541.665). Coos County recognizes that the combined marina and upland uses need to be evaluated in this Exception so that the Department of Land Conservation and Development (DLCD) and other reviewing agencies have adequate information with which to examine the marina permit applications currently filed with the Corps and Division of State Lands. For this reason, the term "proposed uses" in this Exception means both the marina and upland uses described above.

- Proposed Exceptions: Three Exceptions to justify the proposed marina uses discussed above are presented below. The Exceptions are needed because development of the Coquille River Estuary Management Plan has shown that it is not possible to apply Goals #3, #16 and # 17 to the Prosper site for the proposed uses.

  An Exception to Goal #3 is required because the site contains Soil Conservation Class III W "agricultural soils" which must be protected for farm uses under Goal #3 (Agricultural Lands). A recreational marina is not a farm use as defined by the Goal.

  The estuarine portion of the site is a tidal marsh and intertidal flat, which are both "significant habitat" which are smaller and of less biological importance than "major tracts" of these habitat types elsewhere in the estuary. Therefore, according to Goal #16 (Estuarine Resources), they would normally be placed in a Conservation management unit.

  This Exception will provide the four-fold findings to justify a Development Management Unit for the entire area of the proposed marina. In addition, findings are included to support a conclusion that the non-water-dependent, non-water-related uses (floating marina-related shops) are consistent with the resource capabilities and purposes of the proposed Development Management Unit.

An Exception to Goal #17 is required because the marina site has been identified as "significant wildlife habitat", which must be protected under Goal #17 (Coastal Shoreland Uses # 1) for uses "consistent with protection of natural values". The proposed marina would not protect the existing natural shoreland values.

5.5.2 Why the Proposed Uses Should Be Provided for

The following findings provide the compelling reasons and facts to show why the proposed uses should be provided for. In general, the project is needed to help overcome the problems of severe unemployment and narrow economic base, which characterize the Coos County and Bandon area economy. The project would help overcome these problems because it would:

1. Provide new jobs and local revenues;

2. Contribute to economic diversification by providing jobs and investment in tourism and marine industries sectors of the economy;

3. Provide a facility that would enhance the attractiveness of the area as a tourist destination.

4. Provide for a coast-wide need for moorage of large yachts, which is not being met by other marinas (existing or proposed) in Oregon.

- New Jobs and Local Revenues: The proposed uses should be provided for because they will provide the area with much needed employment opportunities and basic revenues. Coos County and the Bandon area have in recent years suffered severe losses in the lumber and wood products and construction industries, with layoffs spreading beyond these two sectors due to business closures in retail service trades. As of June 1, 1982, the number of unemployed persons in Coos County was 3,420, or 12.6% of the civilian labor force (Oregon Employment Division, June, 1982). These figures reflect the slightly better economic conditions associated with summer employment. The March, 1982 unemployment rate was 15.3% (4,260 persons), slightly below the average unemployment rate for 1981 which was 15.9% (4,640 person) (Oregon Employment Division, May, 1982).

  The proposed uses and adjacent boatworks offer an opportunity to partially offset the area's unemployment by providing up to 100 short-term construction jobs and 70 to 80 new full-time permanent jobs. Assuming an average annual income of $15,000 per employee, the economic benefit of permanent payrolls would be $1.2 million. Further, assuming an economic multiplier of 2.4, $2.88 million would be expected annually in total local payrolls (personal communication, Coos-Curry-Douglas Business Development Corporation, March, 1982). Additional local expenditures would result from visitor and operating expenditures. Assuming the 175 yacht owners spend $2,000 each in the local area on food, clothing, marine equipment, yachting accessories, etc., such expenditures would total $350,000 annually. The total annual local payrolls and expenditures equal $4.63 million. Additionally, $21 million of fixed investments would be added to the local tax base.

  The daily operations of the marina alone would account for 34 of the new permanent jobs estimated above, and would draw from both the skilled and unskilled portions of the local labor force. Some of the skills and trades to be employed include river pilots, dockhands, boatwrights, electricians, mechanics, sail/rigging specialists, maintenance and grounds keepers, management and office personnel and security. According to the project proponents, training for some skills would be accomplished through apprenticeship programs.

- Economic Diversification: Goal #9 (Economy of the State) states that local jurisdictions should diversity and improve areas which have underutilized human and natural resources and are characterized by chronic unemployment or a narrow economic base. Economic diversification is greatly needed in Coos County to reduce the area's historical dependence on the lumber and wood products industry. As stated in the Coos County Comprehensive Plan, "Coos County's economy is unstable. The County experiences long periods of unemployment when the rate of unemployment is markedly higher than state and national averages; the impact of this unemployment is increased because of the County's excessive dependence on the lumber and wood products industry. Diversified industrial development plays a key role in the health of Coos County's economy" (Draft Coos County Comprehensive Plan, 1980 pg. FF-40).

  Providing for the proposed uses would help diversify the local economy by providing new full-time basic jobs that are not dependent upon the lumber and wood products industry. As discussed above under "New Job and Local Revenues", jobs and revenues related to the project would occur within the marine industries and tourism sectors of the economy. The marine industries have traditionally been important to the area because of its orientation toward shipping, fishing and recreational boating. According to the Bandon Comprehensive Plan, tourism is the fastest growing sector of the coastal economy (City of Bandon, 1978, pg. III-23). Benefits to this sector would result from new visitation by marina users and increased or prolonged visitation by other visitors to the upland facilities.

  It should also be noted that the proposed boatworks adjacent to the marina, will augment the expansion of the Bandon Small Boat Basin and the area's commercial fishing fleet. There is currently no dry dock/marine ways facility available on the Coquille River, yet the need for such facilities will be greatly increased by the presence of the new 90-slip Bandon Small Boat Basin (operation is expected to begin in 1984). Though the boatworks is not a part of the proposed uses for this Exception, some of the employees of the marina will be used by the boatworks to repair vessels moored in the lower estuary. Thus, boat repair facilities and services available at the Prosper site would support economic diversification efforts by the Port of Bandon.

- Tourist Destination Facilities: With the current depressed economic conditions in Coos County, much attention has turned to promoting tourism. A recent report to the Coos County Economic Action Team titled "Tourism in Coos County: A Visitor Profile" found that the average length of stay by visitors is 1.6 days (University of Oregon, 1982, pg. 22). This finding verified a locally known fact that Coos County is mostly a pass-through point for visitors rather than a destination center. In 1981, the Coos-Curry-Douglas Economic Improvement Association recognized the problem and noted that the number one impediment to tourist and recreation development in the region was "inadequate planning, coordinating, and promotion of tourism, particularly in the creation and promotion of destination facilities" (CCD-EIA, 1981). Increasing the length of stay by visitors is an important and needed objective to be met in promoting tourism, and attractive destination facilities are one important component in meeting that objective.

  The proposed marina is intended to provide live-aboard moorage for yachts and other recreational craft. This service, together with the boat repair, yacht club, and hotel/convention center, will draw boat owners from a wide area specifically to visit Prosper. Thus, the proposed uses will be a destination center for the marina users. Beyond satisfying the needs of strictly marina users, the hotel/convention center will provide a facility to attract other visitors (including large groups) to stay longer than the current average of 1.6 days.

  The proposed uses would augment other local efforts to enhance the attractiveness of the area as a tourist destination. With the help of a $1.2 million grant from the U. S. Department of Housing and Urban Development, the City of Bandon is "rehabilitating" its historic "Old Town" through reconstruction of the

Bandon arch, common design standards for Old Town buildings, improved public parks and parking, and new infrastructure. Promotional campaigns to market the area have also been initiated by the Bandon Chamber of Commerce, Coos Bay Chamber of Commerce, and Coos County Economic Action Team.

- Need for moorage for large yachts: There has been a marked and steady increase in the number of boats in excess of 30 feet in length in the past five years, and the boat manufacturers and dealers are anticipating that this trend will continue. [9] All available moorages for boats of this size on the Oregon Coast have lengthy waiting lists, and all proposed expansions of existing marinas and new proposed projects in sum will not satisfy the need for these moorage spaces. Shilshole Bay Marina on Puget Sound, a marina quite similar in amenities to this proposal, has a waiting list of over 750 boats, [10] this suggests that the shortage of space is not confined to the Oregon Coast.

  Prosper Development conducted an initial market survey to determine whether there is sufficient demand for slips for live-aboard yachts. Their promotional brochure was sent out to a mailing list of about 25,000 owners of pleasure boats over 30 feet in length in California, Oregon and Washington. These owners were asked specifically if they were interested in buying a boat slip in a quality destination-resort setting with full amenities, including repair facilities for a price in the $50,000 - $100,000 range. This question clearly targeted the wealthier owners. About 300 positive responses were received or about 1.2% of the mailing list, indicating a level of interest sufficient to support a business decision to proceed with the project. According to the proponents, a 1% positive response is considered good by market analysts, on a purely speculative survey. (Carl Sandstrom, pers. com, Dec. 1982). About 75% of the positive responses came from Southern California. Some of the respondents followed up with phone calls. These responses indicated to the proponents a stronger demand in the 50 foot plus size class, and they consequently changed their initial plans to provide 250 slips starting at 30 feet. Their current design (175 slips in the 50-150 ft. range) is targeted at the part of the market where their results indicated the greatest unmet demand.

  Other evidence of an increasing need for recreational moorage space, is provided by broad demographic data and studies of recreational boating.

  A thorough survey review and analysis of existing and projected moorage needs was prepared for DLCD in 1979. [11] This study, in summary, stated there was a consensus o n need for additional moorages in estuaries with good access to the ocean. [12] In Oregon, the projection of that study was that a population growth of 45,000 persons in any given year could add 45 boats per year in the category of recreational vessels of 26 feet in length and over. [13]

  The census projections for the states of Oregon, Washington, and California for the decade of the 1980s are for the following additions to population:

Oregon	1980 – 1985	173,000
	1985 – 1990	171,000
Washington	1980 – 1985	263,000
	1985 – 1990	265,000
California	1980 – 1985	1,543,000
	1985 – 1990	1,507,000 [14]

  If the ratio of one new recreational vessel 26 feet or greater for each 1000 persons added is accurate for Oregon, this decade could add 344 boats in this category in Oregon. If California and Washington have a similar ratio, 3578 more boats would be added to the waiting lists for moorage spaces.

The United States Coast Guard documents an increase of 46.6 percent in the number of registered recreational vessels in use over 65 feet in length in the most recent five-year period for which figures are available:

1976	-	1,351 vessels	
1977	-	1,526 vessels	
1978	-	1,728 vessels	
1979	-	1,855 vessels	
1980	-	1,981 vessels	[15]

The Oregon State Marine Board keeps records on vessels by length and by use, but does not classify boats within uses by length. Thus, for the purposes of this exception Oregon figures are of limited usefulness.

Further evidence of a need for recreational moorage is derived from a survey of existing marinas on the Oregon Coast, including data on numbers of slips by size class and vacancy rates. A complete list of existing marinas is shown in Table 1.

The list of existing moorages on the Oregon Coast, which could accommodate the demand for year-round recreational moorage for vessels in excess of fifty feet is very limited. From the aforesaid DLCD inventory and demand analysis of facilities in Oregon estuaries, as supplemented by information obtained from the State Marine Board, only the following seven marinas have any physical capability to accommodate recreational boats over 50 feet.

- Garibaldi Basin

  Tillamook Bay Estuary – 175 spaces for permanent moorage for boats 40 feet to 75 feet; 100 percent occupancy in active season (50 percent commercial); utilizing a lottery for the waiting list. [8,9]

- South Beach Marina

  Yaquina Bay estuary – 600 permanent moorages mainly for vessels up to 48 feet only 10 slips for larger boats; [10] 75 percent occupancy in 1982 with anticipated 100 percent occupancy by 1983. [11]

- Port of Newport Commercial Boat Basin

  Yaquina Bay Estuary – 498 permanent moorages for vessels up to and exceeding 75 feet; 85 percent commercial; use exceeds capacity. [12]

- La Paz Yacht Harbor

  Yaquina Bay Estuary – 130 permanent moorages for boats up to 32 feet; One space for 58 foot boat; one space for 68 foot; 90 percent occupancy. [13]

- Charleston Boat Basin

  Coos Bay Estuary – 324 permanent year-round spaces for boats 30 feet up to 90 feet; limited 100 foot berthing; 70 percent commercial; 100 percent occupancy with waiting list. [14]

- Hanson's Landing

Coos Bay Estuary – 50 permanent spaces for boats 40 feet up to 80 feet; 75 percent commercial; 100 percent occupancy with waiting list. [15]

- Waterland RV Park and Marina, Florence

  Siuslaw River Estuary. Two spaces for 100' boats. Otherwise, all spaces are for 16-50' boats.

As this list indicates, there are very few slips available that are capable of accommodating recreational boats over 50 feet. Garibaldi Basin is full during the active season, and half the boats are commercial. South Beach has only 10 slips for boats over 50 feet, and is expected to be fully occupied by 1983. The Port of Newport Commercial basin is over capacity and serves mainly commercial boats. Similarly, the Charleston and Hanson's Landing marinas on Coos Bay are fully occupied and serve mainly commercial boats. La Paz yacht harbor has only two slips for larger boats and is 90% occupied. In any case the only marina with theoretical with the capability to meet the need, lacks all of the advantages and amenities of a destination resort planned for Prosper: a boatworks, ship's chandlery, yacht club, hotel/motel, tennis courts, nature trails, etc. The proposed boatworks, for which a permit has already been approved, would be a special attraction, as it will provide repair and overhaul facilities for larger yachts during the inactive season. The permits, which were obtained for the proposed boatworks, have expired and would again, have to be applied for in order to commence the proposal. In sum, there is no existing marina on the Oregon Coast with any unused capacity, which could qualify as a "destination resort". Nor are there any marinas in Coos County with .any space available at all for new boats of any size. There is, therefore, clearly a shortage of recreational boat slips on the Oregon coast, particularly in the larger size classes.

There have been a number of proposals for new marinas up and down the coast, which might be considered as alternative sites to meet this need. For instance, recreational marinas have been proposed at Pony Slough and Indian Point in the Coos Bay Estuary Management Plan, based on need projections for that estuary. However, no specific proposals for numbers of slips or boat sizes have been made, so it is not possible to assess whether these sites could better meet the need for moorage for larger pleasure craft that has been identified for this project. It is therefore only practical to compare the Prosper project with other proposed marinas, which have reached the design stage.

A survey of all coastal towns and counties performed by Prosper Development Company during the week of December 6, 1982 as requested by DLCD revealed only five new proposed marinas:

1. Clatsop Investment Company in Astoria proposes 100 slips on the Columbia River Estuary for boats from 30 to 50 feet.

2. Botts Marsh on Nehalem Bay has a commercial marine development proposed for 220 slips, accommodating 60 to 70 foot fishing vessels. Nehalem Bay, however, has a hazardous bar, and most boating is done inside the bay. (27)

3. A development on Tillamook River at Old Mill Marina is limited to boats of 20 feet in length.

4. A development by the Port of Bay City is intended for large commercial fishing vessels.

5. A private development at River Mile 2.3 on the Chetco River proposes a 250 boat marina for boats up to 30 feet length in conjunction with an RV Park. This project would require the dredging of a 2 mile channel to a depth of 10 feet. This project is currently on hold and permit applications have been withdrawn.

None of these current proposals will satisfy the need for a destination resort for large recreational yachts, nor the demand for moorage spaces for these boats.

- Conclusions: As stated in the above findings, the proposed uses will add new jobs and revenues to the local economy. Given the magnitude and type of new employment opportunities and local revenues estimated, together with the high levels of unemployment and depressed business conditions present in the local economy, the proposed marina and upland uses would be expected to contribute significantly to improving economic conditions. As a hypothetical comparison, if such a project had directly employed 75 Coos County persons and indirectly employed another 75 Coos County persons in 1981 (economic multiplier of 2.0), the project alone would have employed 3.2% of the year's average number of unemployed persons (4,690).

  The proposed uses should be provided for because they will diversify the local economy by encouraging increased tourism and recreation, and new/expanded business opportunities for local marine industries. Such diversification would contribute to meeting Coos County's Industrial and Commercial Lands Goal, which states, "Coos County shall strive to diversify and improve its regional economy".

  The proposed uses should be provided for because they will satisfy a local need for tourist destination facilities, and improve and promote the attractiveness of the area as a tourist destination.

  Finally, it is possible to conclude that there is a distinct shortage of moorage for recreational craft on the Oregon coast, particularly in the larger size classes. There is no existing or proposed marina, which is specially designed for live-aboard yachts. The proponent's market survey indicates a significant level of interest in purchasing yacht slips within the price range cited. Demographic trends indicate a continued growth in ownership of pleasure boats on the west coast as a whole, and Coast Guard figures show a significant rate of growth in pleasure craft over 60 feet in length.

5.5.3 Alternative Locations and Consequences

Various alternative locations along the Oregon Coast have been discussed above in connection with the need for yacht moorage, showing that current available or proposed alternatives will not meet the need, which has been identified. The following section will discuss the locational advantages of the Coquille Estuary compared to other estuaries on the entire west coast and then discuss alternative locations within the Coquille Estuary.

- Locational advantages of the Coquille Estuary. A recreational marina at River Mile 5 on the Coquille River has a number of significant locational advantages versus other potential locations within the identified market area; i.e., the coast of Oregon, Washington and California. The Coquille Estuary's physical position in relation to other recreational/ residential yacht marinas in the market area places it roughly midway between the San Francisco and Puget Sound yacht marina concentrations. It is, therefore, a logical coastwise cruising stop for inter-marina cruising and a sensible home port selection for the many yacht owners who plan cruises around seasons of the year. Yacht owners can enjoy a mild year- round climate on the Coquille Estuary and elect to cruise northern waters in summer and southern waters in winter.

  The Coquille Estuary is a natural site for a recreational yacht marina. Prosper has had a history of maritime commerce for over one hundred years and this prolonged use has not detracted from its considerable beauty and charm. It is an aesthetically pleasing site for a marina and it has its practical aspects also. It is storm-sheltered, close to the ocean and situated on the longest cruising river on the Oregon coast (the Columbia excepted).

The Coquille River Estuary has many positive characteristics, which enhance its habitability as compared to other existing and potential marina sites in the market area. It is removed from large urban population centers with their attendant crime, congestion, hectic life style, high cost of living and high cost of moorage. This advantage has particular appeal to people past middle age who are seeking a quiet home port and retirement area, and who expect to have reduced or fixed incomes at retirement. The proponents' conversations with yacht owners in the market area revealed a strong interest in the Coquille River for an entirely unexpected reason: fear of nuclear war. There is a reasonable belief that the southern Oregon coast is one of the safest locations in the United States because it is far from probable nuclear targets and its prevailing winds minimize fallout from other targets.

The Coquille River Estuary has an advantage over nearly all other potential locations because yachts using the estuary will not be in competition with other types of vessels for channel, maneuvering, fairway and moorage space. The Coquille River Estuary does not presently have the large vessel traffic associated with an industrial port nor is it likely to have it again in the future. Oregon's Land Conservation and Development Commission has classified the Coquille Estuary as a "shallow draft development estuary" permitting entrance jetties and a navigation channel up to 22 feet deep. This limits future traffic, for practical purposes, to commercial fishing boats shall draft lumber barges and recreational boats.

Above River Mile 1.3, where the maintained channel ends, future channel dredging (other than minor shoal removal) is not permitted by the Plan, due to the fact that it is a Conservation Management Unit. However, the portion of the river up to Prosper has a history of excellent natural flushing action without dredging, and is entirely adequate for yacht use (Carl Sandstrom, Pers. Comm. Dec. 1982). Newer sailboats of 50'-150' length are expected to draw from 8'-10'. Channel depths are 18-20 ft. at Prosper, and have been relatively constant for the last 20 years (ibid.) Below Bullards Bridge opposite the Bandon Marsh, controlling depths are shallower (as little as -8 ft MLLW). However, on most conditions of tide, this would cause no problems.

As discussed in section 7.3.1 of this Plan, there is a proposal to deepen the entrance channel to -20 feet MLLW, from the current -13' MLLW. The current channel depth causes problems for the larger lumber barges when loaded, even at high tide. However, even the current channel depth is usually adequate for boats with 8-10 feet draft. Larger (60'-90') mid-water trailers, some of which use Bandon harbor, are comparable in draft to larger yachts when fully loaded. These boats must cross the bar two hours either side of high tide during swells. Otherwise, during calmer weather, they can cross the bar at most tidal stages. Similar constraints will probably exist for the larger yachts with the bar at current depths. (ibid) The Coquille River has an advantage over certain other shallow draft ports for boats of 8'-10' draft because there is no need to conduct special channel dredging to make the project feasible. For instance, compare the Chetco River Marina proposal, which would require a two-mile channel.

In summary, the competitive advantage enjoyed by the nearby industrialized Coos Bay Estuary, further relegates the Coquille River to a fishing vessel and yacht river. It is precisely this lack of very large commercial vessels found in industrial ports, which makes the Coquille highly desirable for large pleasure craft. These two types of vessels do not "mix" well within an estuary. Nearby commercial traffic degrades the quality of recreational moorage, and moorage space becomes too expensive for residential use in an industrial port. California estuaries have found it necessary to construct expensive artificial "harbors" to avoid this conflict and thus create a residential setting with the specialized support facilities yachts require close at hand. The Coquille Estuary already has the site at Prosper, the estuary has been designated for shallow draft usage, and the estuary is currently underutilized for that purpose.

- Recreational Marina Siting Criteria. The characteristics used in identifying and evaluating potential recreational marina sites are described below. These locational criteria presume that the site in question is

available, affordable, and potentially developable given planning and permit considerations.

1. Size – Size requirements vary widely. For the Prosper project, 175 slips (or a minimum of 12 surface acres) have been identified as the general size of the project.

2. Controlling depths and dredging requirements – Adequate existing river depths and site elevations to minimize initial dredging and excavation. Adequate river scouring to minimize maintenance dredging.

3. Weather and natural hazards – Exposure to storms, tides, wind-driven waves, and flooding hazards. Orientation to river currents will also influence flushing in the marina basin.

4. Road access and utilities – Minimum expense and difficulty in providing adequate road access, electricity, potable water and sewage disposal.

5. Upland acreage – Upland requirements vary widely. For the Prosper project, from 5 to 10 acres are required for parking and accessory upland uses (a yacht club, and hotel/convention center).

6. Adjacent land uses – Absence of uses incompatible with marina operation and aesthetics.

7. Privacy and aesthetic appeal – This criterion is subjective and varies widely. For the Prosper project, a site with a secluded, natural setting is required to provide an alternative to the typical crowded, urban area yacht moorage. A secluded, natural setting is also required to provide a relaxing setting for hotel and restaurant users.

- Selection of Alternative Locations. Three alternative marina locations on the Coquille River have been identified as potentially fulfilling the recreational marina siting criteria discussed above. These sites include:

    1. Prosper (Preferred Alternative)
    2. Ferry Creek
    3. Bullards Bridge

    Several other sites have been considered but were ruled out from further evaluation in this Exception. Use of the Bandon North Spit was rejected because of estuarine resources ("major" tideflats and marshes identified in Coos County, 1981), poor road access, lack of utilities and water, and erosion/accretion problems along the shoreline. Sites along the Coquille north bank between Bullards Bridge and Randolph Island were rejected because the floodplain is so low-lying (pastures are below the level of the river in some places) that site preparation for new roads and back-up land would be prohibitively expensive. The area is used for pasture presently and it is not known if land would be available for the proposed uses. The north bank would also offer relatively little protection from extreme south-southwesterly winds in winter.

- Alternative Locations Descriptions and Consequences: This section describes each alternative marina location and the environmental, economic, social and energy consequences associated with development of the proposed uses.

- Prosper Site Description: The Prosper site is located at River Mile 5 immediately upstream from the community of Prosper, Oregon. It is large enough to accommodate a 12-acre marina capable of providing 175 slips (for boats 50 to 150 ft). Controlling depths are -18 feet (MLLW) in the main channel and -12 feet (MLLW) as close as 100 feet from the existing shore. The site location on the south bank of the river at the foot of a steep ridge offers good protection from winter storms.

The site is approximately 2 miles by road from U.S. 101 and 3.5 miles by road from Bandon's "Old Town". There is sufficient upland area for a dry-dock/marine ways, hotel/convention complex and parking. Adjacent land uses include agriculture and open space. The privacy and aesthetics of the site are considered excellent due to its seclusion and pastoral setting. The hill to the south of the marina offers spectacular views of the Coquille Valley landscape, bend in the river at Bullard's Bridge, and the Pacific Ocean.

The community of Prosper was first settled by permanent residents in the 1870s. The location was selected because it provided protected moorage, deep water, and was only five river miles from the Coquille bar. During the period from .1880 to 1920 Prosper did, in fact, prosper. At one time, it had a larger payroll than neighboring Bandon and boasted a direct ocean passenger and freight line to San Francisco, three sawmills, box factory, shingle mill, two general stores, post office, salmon cannery and a large shipyard. By the 1950s much of the commercial and industrial activity was gone from Prosper. However, boat building, repair, and moorage continued. Today, Prosper has 12 homes, and small boat docks and vacant land line the river where the lumber mills, shipyards and a cannery once stood.

- Prosper Site Environmental (Biophysical) Consequences:

    1. Marina dredging and construction would remove the following intertidal habitats: 0.50 ac. of mixed sand/mud shore; 0.56 ac, low saltmarsh; 5.05 ac. medium-high saltmarsh. The total intertidal area affected equals 6.11 acres. (Wetland identification/measurements based upon on-site evaluation and mapping by Philip Quarterman, Coos County Planning Department and Ted Boss, U.S. Environmental Protection Agency).

    2. In addition to the intertidal habitats described in finding (1) above, the following non-tidal areas would be affected: 6.70 ac. of forested swamp wetland (Sitka spruce/red alder/skunk cabbage); 0.31 ac. "transitional" freshmarsh; other upland areas (dike, road, small spoils piles) not exceeding 0.25 ac. all together. The total non-tidal area affected equals 7.26 acres (source - same as finding 1).

    3. Dredging in subtidal areas (below MLLW) includes approximately 15,000 cubic yards of sandy river bottom. Grain size analysis has shown the material to consist of 95.5% sand (Umpqua Research Company, 3/25/82).

    4. The areas described in finding (2) above have been designated "significant wildlife habitat" (as defined by Goal #17) "elsewhere in this Plan: (See inventory maps and Inventory and Factual Base, Section 9.6.4)". The significance of the habitat values at the site is primarily based upon the site's use by birds. During the months of winter flooding (roughly November through March), migratory and resident waterfowl make transitory use of the entire floodplain of the Coquille Valley, including the Prosper site. When high groundwater and winter flooding do not inundate the site, it is suitable for use by raptors (e.g., red-tailed hawk) and perching birds (e.g., western meadowlark) as a feeding area. Perchers such as the meadowlark nest in grasslands and probably nest at the site. The site is not used for nesting by resident or migratory waterfowl. General geographic characteristics, which partially distinguish the Prosper site from the other thousand of acres of wet- meadow floodplain in the Coquille Valley, include:

        (a) adjacent trees and forest "edge" habitat;
        (b) "proximity" to the lower estuary and sea coast;
        (c) lack of grazing at the site;
        (d) presence of several plant communities including saltmarsh.

Development at the Prosper site will eliminate the habitat areas discussed above. With the possible exception of waterfowl, some organism moralities would be expected as birds and other wildlife are displaced and competition for available habitat is increased. The large amount of similar wetland habitat in the Coquille Valley suggests that displacement moralities for waterfowl would be extremely minor. No endangered or threatened species are known to use the site.

5. Reimers et.al. (1978) reported that the intertidal habitats along the lower riverine section of the Coquille River appeared to provide important fish rearing areas. Seining data are not available to confirm the importance of the Prosper site itself. The site's high saltmarsh and Corophium brevis beds reported upstream at Randolph Island (RM 6.7) and Bear Creek (RM 8.3) would suggest that the Prosper site probably receives some use as a fish feeding rearing area. Reimers et.al. (1978) reported finding 12 species of fish in the lower river with juvenile shiner perch and Chinook salmon being the most important.

   Dredging of the intertidal areas would be expected to slightly reduce primary productivity and eliminate use of the area for fish feeding/rearing. Some secondary impacts to fishery resources would result from increased wave wash of the shoreline by boats and reductions in water quality by boat-related pollutants.

   Excavation and dredging of the upland areas would not be expected to harm fish because the work would occur behind a protective dike. River dredging would occur during the fall and early winter (October 1 to January 15) to minimize adverse effects to water quality and aquatic species.

6. According to the Oregon Department of Environmental Quality, existing water quality in the project area is good (personal communication, Glen Carter, DEQ, March 1982). In the summer the water in the lower estuary is vertically well mixed and flushed regularly by the ocean tides. Water temperatures and dissolved oxygen in the project vicinity are well within acceptable levels and are moderated by the tides. For additional discussion, see "Part 2, Inventory and Factual Base" (Section 2.4.2-2.4.3).

   Construction impacts associated with dredging in the river (15,000 cubic yards) will include temporary increases in suspended sediments. Grain size analysis of the river bottom samples showed the material to consist of 95.5% sand, with volatile solids less than or equal to 1.3% by volume (Umpqua Research Company, 3/25/82). Given the nature of the materials to be dredged, increases in turbidity are expected to be localized and followed by rapid settling (99% settled in 2 hours - Umpqua Research Company, 3/25/82). Maintenance dredging requirements have been estimated at 1,500 cubic yards annually. (See Appendix ‘A’ for Dredged Material Disposal Data.)

   Excavation of the marina (400,000 cubic yards) will be done behind a protective dike and will require 4 to 5 months to complete. This activity would occur in the summer and fall months to fully utilize land-based equipment. Sediments are expected to enter the river only when the dike is removed to allow filling of the marina.

7. According to calculations of the tidal prism ratio for the marina, complete flushing of the marina should occur on an average of every 2.90 diurnal cycles or approximately 36 to 48 hours. This rate of flushing would be expected to minimize water quality problems associated with released contaminants (small oil and gas spills) and stagnant water (algal blooms).

   Marina orientation and configuration play a large role in water circulation, flushing, and general water quality. The entrance to the marina will be parallel and open to the river for 672 feet. The

average length of the marina will be 960 feet and width ^ 600 feet. Water depths will be -10 feet (MLLW) at the marina sides and slope out into deeper water (-18 feet) of the river channel. The perimeter of the marina will be curved to promote water circulation.

- Prosper Site Economic, Social, and Energy Consequences:

8. The proposed marina and adjacent boatworks, yacht club, and hotel/convention center are expected to provide up to 100 short-term construction jobs and 70 to 80 new full-time permanent jobs. It is anticipated that 90% of the work force would be local people. Assuming an average annual income of $15,000 per employee, the economic benefit of permanent payrolls would be $1.2 million. Further, assuming an economic multiplier of 2.4, $2.88 million would be expected annually in direct adjustment payrolls (personal communication, Coos-Curry-Douglas Business Development Corporation, March, 1982).

   Additional local expenditures would result from the proposed uses. Assuming the 175 yacht owners spend $2,000 each in the local area on food, clothing, marine equipment, yachting accessories, etc., such expenditures would total $350,000 annually. Operating expenditures from the shipyard, marina, restaurant, and hotel/convention center are estimated to be in excess of $1.5 million annually.

   The total annual local expenditures equal $4.78 million. Additionally, $21 million of fixed investments would be added to the local tax base.

9. The economic consequences discussed above would aid in offsetting current severe unemployment and depressed economic conditions in Coos County. According to the Oregon Department of Economic Development: “Coos County has suffered severe losses in employment in its wood products and construction industries, with layoffs spreading beyond these two sectors due to business closures in retail and service trades. Since 1979, employment in lumber and wood products industries has declined from about 5,000 to 3,500 jobs. Total employment in the County declined from about 22,000 jobs to 18,000 during the same time period. The area's already high unemployment rate of 8 percent has doubled to more than 16 percent. The outlook is for more layoffs in wood products and construction, substantial increased in unemployment and further reductions in purchasing power”. (Personal communication, John Groupe to Ed Zajonc, 2/3/82).

10. The economic consequences would aid in diversifying the local and regional economy through development in a sector other than lumber and wood products.

11. The hotel/convention center near the marina would provide a much needed tourist destination facility to the area. In 1980, Coos-Curry-Douglas Economic Improvement Association adopted a tourism development objective of “Improved Tourist Facilities Such as Major Tourist Attractions or Destination Resorts, Convention Centers, Overnight Accommodations, improved Sport Fishing Facilities and Services, improved Water oriented Facilities including Water Impoundments...” (CCDEIA, 1980, pg. IV-6). The proposed uses would also be consistent with the Bandon Comprehensive Plan's economic development goal “To enhance the economic well-being of the residents of Bandon by encouraging the expansion and diversification of the City's economy” (Bandon Comprehensive Plan, pg. V-5, emphasis added).

12. The proposed uses would increase traffic on Prosper Road. The project proponents are currently working with Coos County to widen and resurface the road, and install curbs, gutters and sidewalks. Traffic control through speed bumps or signage will be included in the road improvements.

13. A field examination for potential historic and archaeological sites was conducted on 4/28/82 by Reg Pullen, Bureau of Land Management archaeologist. Mr. Pullen found no historic or archaeological sites at either the boatworks/dry dock or marina sites. A number of Indian fishing weirs and lithic debris exist on the adjacent upstream property.

14. Agricultural soils at the marina site have been identified as Clatsop silty clay loam (SCS IIIw). The top layer, 8-28" of silty clay loam with organic matter, is underlain by silty clay and very fine sand.

    The site had not been used as pasture in over twenty years. Rehabilitation of the site for pasture would require repair of the dike and removal of undesirable plant species.

    The suitability of the site for agricultural uses is considered low based on the following facts:

    (a) Its size is 12 acres, which is below the typical farm size in Coos County (23.7% of all County farms are in the 10-49 acre class with the next largest class being 260-499 acres at 13.1%; Coos County, Comprehensive Plan, Part 1, C-13)

    (b) The only abutting pasture land is immediately upstream, effectively limiting use of the site for pasture to a dairyman who is also using that abutting upstream property. The upstream property is used only for low-intensity grazing and is designated in the Draft Coquille River Estuary Management Plan as a mitigation site.

    (c) Very little cultivation of Coquille Valley land for feed or crops presently occurs so close to the river due to soil saturation.

14. a. Community attitudes in Prosper towards the proposed uses have been informally polled and reported by Coos-Curry Council of Governments (1982, pg. 40-41). Six local persons gave favorable responses when told about the project, with no negative responses. Forest Kemp, a resident of Prosper for 40 years, stated "There is very little community spirit in Prosper anymore; there is no place to congregate with your friends. It's quite possible that this may provide a good place to get together. I understand that they will have a public fishing pier. Fishing is one of my favorite activities and I can't get to the river around here. A public fishing pier sounds like a fine idea. I think this project will do a lot for community spirit".

- Ferry Creek Site Description. The Ferry Creek site is located at River Mile 1.1 within the City of Bandon. The site is a 6-acre intertidal mudflat capable for mooring about 100 boats (30' and longer) if converted to a marina. Controlling depths in the river are -13 feet (MLLW) in the federally maintained channel, and grade quickly up to datum (0.0 feet MLLW); an access channel to the dredged marina would be required. Exposure to ebbing river currents hazards would necessitate a breakwater to be built to protect the marina entrance. Road access to the site is available from First Street and Riverside Drive. All utilities are available. There is limited upland acreage (1-2 acres) located across First Street and Riverside Drive. Adjacent uses include the Bandon sewage treatment plant, Moore Mill, Bandon's Old Town, and the proposed Bandon boat basin. The site's location and adjacent uses significantly reduce the privacy of the area for yacht moorage.

  Ferry Creek Site Environmental (Biophysical) Consequences:

  15. The area is made up of intertidal algal beds on sand and mud substrate, except for the small Ferry Creek channel, which is unconsolidated materials. A fill would remove these beds for the

estuarine system; thus, some loss of primary production in the estuary would be expected. The 6-acre area represents 13% of the aquatic beds downstream of the U.S. 101 bridge (Oregon Department of Fish and Wildlife, 1979).

16. The habitat types described above are suitable for various benthic invertebrates. Clams were found at the site in a survey by Gaumer et.al. (1973). This study noted the area to be one of the principal digging areas in the Coquille Estuary. Peak activity is in March. Dredging would remove the area from further clam production, as well as habitat for other invertebrate species.

17. Survey data are not available on fish use of the area; however, the habitat types described above indicate the area probably is used for feeding and rearing of various species. According to the Oregon Department of Fish and Wildlife, the Ferry Creek system is one of several tributaries to the Coquille River undergoing enhancement activities under the Department's Salmon and Trout Enhancement Program. Dredging at the confluence of Ferry Creek and the Coquille River would be expected to reduce the number of returning fish, even with the placement of culverts or a maintained channel running through the site (personal communication, Bill Mullarkey, 4/23/82).

18. Shore bird and waterfowl use of the site would be changed. Displacement of birds to other intertidal areas would result in increased competition for those areas.

19. The drainage from Ferry Creek would require culverts or other channeling during construction.

20. Hydrologic impacts are difficult to determine without extensive study. Erosion of the North Spit could be accelerated without the use of breakwaters, groins, or shore protection measures.

21. Dredging would be required for this site. Water quality impacts would primarily be a temporary increase in turbidity in the area.

- Ferry Creek Site Economic, Social, and Energy Consequences:

22. The vacant buildable upland areas near the Ferry Creek site are very small (1-2 acres) and would probably not be able to accommodate more than the marina's accessory uses (parking, storage, utility buildings, etc.). Thus, the hotel/convention center could not be accommodated at this alternative site.

23. Construction of the marina and accessory uses would be expected to provide about 25 short-term construction jobs. New full-time permanent jobs for marina operation would be about 15 to 20 jobs. As with the Prosper site, 90% of the work force would be local people. Assuming an average annual income of $15,000 per employee, the economic benefits of permanent payrolls would be $300,000 annually. Further, assuming an economic multiplier of 2.4, $.72 million would be expected annually in direct and indirect payrolls. These jobs and payroll estimates assume a smaller project than in finding (8) above.

24. Additional local expenditures would result from the proposed uses at the Ferry Creek site. Since fewer boats than at the Prosper site could be located at Ferry Creek (100 boats), less additional local expenditures ($.75 million) would be expected [see findings (8) above].

25. Findings (9) and (10) above would apply to the Ferry Creek site.

26. No historic or archaeological sites have been documented for the site; therefore, no impacts are expected.

27. With development of the site, traffic along Riverside Drive and First Street would increase.

28. The fill would result in a loss of the clamming and other recreational opportunities currently present.

29. The sewage outfall for the Bandon sewage treatment plant presently runs through the Ferry Creek mudflat. This line would need to reroute around the marina. The aesthetic appeal of the plant itself is considered very poor.

30. The Ferry Creek site is presently designated "Development" in the Bandon Comprehensive Plan and a "Development Management Unit" in this Plan (See Aquatic Linkage and Use/Activity Matrices and Section 2.3.1). Both these plans recognize the site as potentially fulfilling identified water-dependent industrial land needs. Use of the site for a recreational marina would preclude industrial uses.

- Bullards Bridge Site Description: This alternative site is located on the west side of the north end of Bullards Bridge at River Mile 3.1. The developable acreage at the site is about 10 acres, which is bounded to the west by the old Georgia-Pacific dock and to the north by several residences. To include upland uses, a marina at this site would need to be limited to about 5 acres (accommodating about 100 slips). Based upon 1963 bathymetric data, the river bottom slopes down to -14 feet and -17 feet MLLW about 100 feet from datum (MLLW). The location of the site on the outside "erosion shore" of the river suggests that natural scouring maintains the controlling depths; however, the site is also a deposition spot on the river for drift logs and other flood deposited debris. The aspect of the site is southerly; thus exposure to winter winds and waves is direct. Road access would presumably come directly from U.S. 101. Water and sewer facilities would need to be developed on-site. Adjacent land uses include U.S. 101, Bullards Beach State Park, and two residences. The privacy and aesthetics of the site are somewhat diminished by the adjacent campground, and noise from the highway and Rogge Lumber Company across the river.

- Bullards Bridge Site Environment (Biophysical) Consequences:

31. Habitat types that would be eliminated at the Bullards Bridge site include roughly four acres of intertidal area and six acres of "swampy" upland. The intertidal area consists of some aquatic beds, open mudflat, log-covered mudflat, and about 1 acre high saltmarsh partially covered by logs. The upland area is a "swampy" forest with Sitka spruce found at the forest edge, red alder found dominating the interior, and water-tolerant understory such as skunk cabbage found in most low-lying areas. Field observations (7/1/82, Coos-Curry Council of Governments) shows no salt-tolerant species growing in the forest understory, suggesting that the "tidal marsh" classification in Oregon Department of Fish and Wildlife (1978, pg. 25) is slightly exaggerated. This Plan agrees with the above field observations (See Estuarine Wetlands Habitat Map).

32. Development of a marina at this site would eliminate non-mobile organisms and displace others to other areas. Increased competition for other available habitat would be expected with such displacement. In terms of numbers of organisms, perching birds would be the largest wildlife group affected.

33. According to field work by the Oregon Department of Fish and Wildlife, the "northern shore of the channel, the shore along Bandon marsh, and spit shores were heavily used by shiner perch and juvenile Chinook salmon during the "summer" (in Oregon Department of Fish and Wildlife, 1979, pg. 33). Use of the site by salmonids for feeding and rearing would be very limited

following marina construction.

34. Water quality impacts associated with dredging would include temporary increases in turbidity and reductions in dissolved oxygen as siltaceous organics are suspended. Based on field observations (7/1/82, Coos-Curry Council of Governments) a layer of organic sediments lies underneath the mud at the site.

35. A groin or breakwater would be required to protect the marina from drift logs and other flood deposited debris, and wave action.

Bullards Bridge Site Economic, Social, and Energy Consequences:

36. The local employment and payrolls increases estimated for the Prosper site in finding (8) above would generally apply to the Bullards Bridge alternative, although at a reduced level due to the smaller scale project that could "fit" in the Bullards Bridge site. Findings (9) through (11) above would also apply to the Bullards Bridge site.

37. An access road from U.S. 101 to the site would be required. Special designs would probably be required to minimize congestion and hazards that would result from north-facing traffic turning west to the project site.

38. No historic or archaeological sites have been documented for the Bullards Bridge site. A burial mound from the Coquille Tribe is located about 500 feet west of the west end of the site.

39. Other social impacts at the Bullards Beach site would be those associated with the development of more intensive land uses than are currently present. The area is now undeveloped, and as such, contributes to the seclusion of Bullards Beach State Park. "With the construction of the proposed uses, camping at the State Park would be accompanied by more noise and general activity in the area. Significant landscape changes, as viewed from U.S. 101, would also occur.

- Comparison of Alternative Locations – Conclusions:

  Based upon the above findings, it is concluded that the selection of the Prosper site best serves both the public interest and the applicant's interest. The Prosper site can accommodate the full scale of development desired (175-slip marina and back-up land for parking and accessory uses, a yacht club, and hotel/convention center), whereas the other alternatives would require a reduction in scale of the project or offsite location for some upland uses. All three alternatives appear equal in terms of existing controlling depths. However, the location of the Prosper site would require less maintenance dredging than the other alternatives.

  The Prosper site by far offers the most protected moorage due to its south bank and river mile location, and the "wind-blocking" hills to the south. Of the three sites, the Prosper site is the only one which would not require a groin or breakwater fill to block swift currents, sediments, and flood debris. All three sites have potential problems associated with utilities, new road construction, and/or traffic congestion increases; resolving those problems appears the least difficult for the Ferry Creek site.

  Adjacent land uses are most compatible for the Prosper site. This conclusion is based on the assumption that the Bandon sewage treatment plant, Moore Mill, U.S. 101, and Rogge Lumber company are less desirable adjacent land uses, as compared to agricultural lands and a boatworks. Finally the Prosper site by far offers the most privacy and secluded, natural setting with which to attract users.

In comparing the three alternatives, the relative long-term adverse environmental consequences are difficult to evaluate. This is due to the different contribution each alternative location makes to the Coquille Estuary's existing functional characteristics and processes. Both the Ferry Creek and Bullards Bridge alternatives have intertidal areas and aquatic vegetation, which contribute nutrients year-round to the estuary. In contrast, the wetlands of the Prosper site have higher productivity per acre but contribute nutrients to the estuary during only a portion of the year. Therefore, it is concluded that the wetlands of each site are not truly comparable in terms of significance to the estuary, the region, or the state. Similarly, all three sites provide some habitat for species that are a part of the estuarine system.

The above discussion is not intended to convey that any of the alternative sites are so unique that their loss to the estuarine system could not be mitigated. In comparing which of the alternatives could be most readily mitigated with "like" habitat, the Prosper site appears to rate the most favorably. This conclusion is based upon Prosper's riverine location where the opportunities for a large mitigation activity (5+ acres) are very good relative to the lower estuary.

Long-term water quality consequences would not be expected to be significant for any of the alternatives due to existing good water quality in the Coquille River. Calculations for flushing of the Prosper site marina show a 36 to 48 hour flushing cycle which is very good for maintaining water quality.

The social impacts for the Prosper site are considered the greatest of the three sites since, this small community, would receive new business, increased visitation, increased traffic, etc. The desirability of this impact is a very subjective evaluation. Based upon community reactions received at one local meeting and limited interviews, community acceptance is favorable. Social impacts at the Bullards site would be substantial relative to existing conditions.

The economic consequences are greatest for the Prosper site because this site can accommodate the full scale of proposed uses. Since the Prosper site can best accommodate the proposed uses, it is best suited to improve and diversify the area's economy.

5.5.4 Compatibility with Adjacent Uses

- Adjacent Uses: The lands immediately across the river from the chosen site (Prosper) are designated "Agriculture" this Plan. The upland portion of the Prosper site is designated "Forest Lands" in the Draft Coos County Comprehensive Plan, and is zoned "Interim Rural Residential-5". Immediately downstream of the Prosper site, the Plan designation is "Industrial", with interim zoning of "Marine Industrial".

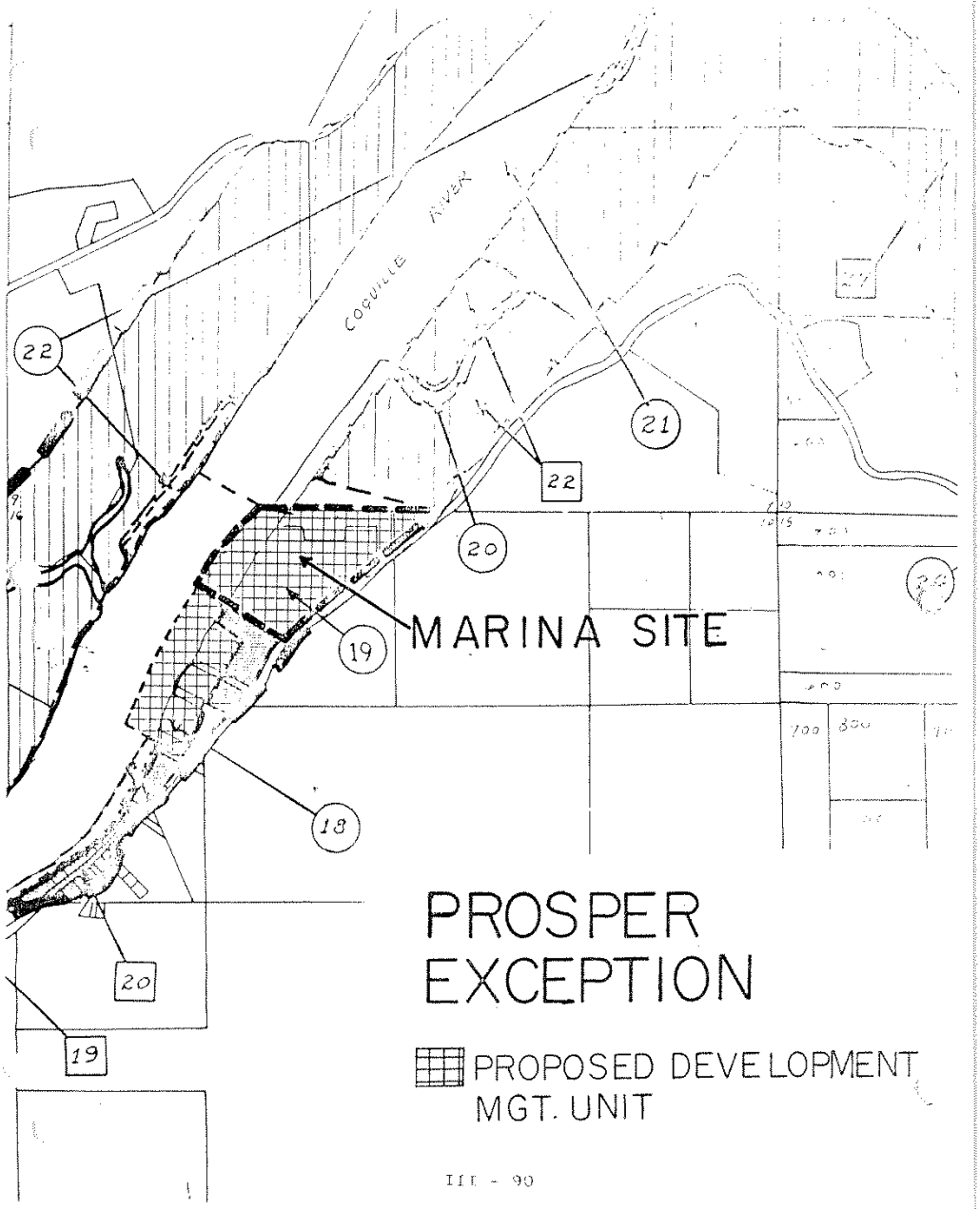
  The land upstream of the Prosper site is used for low-intensity grazing and has a well- developed system of small tidal channels, which support salt-tolerant vegetation. In contrast, the pasture land across the river lies behind maintained dikes and tidegates, and is part of an operating farm. The upland portion of the Prosper site is not currently used beyond the forest "Open Space" uses. Immediately downstream from the Prosper site is a mix of marine, industrial and residential uses.

- Conclusions: Based upon the above discussion, the proposed uses are completely compatible with the open space and marine industrial uses which are found directly adjacent to the Prosper site. As discussed above under social consequences, the proposed uses will increase traffic and general activity in the community of Prosper, which is located 1/4 mile away from the marina site. The compatibility of the marina and hotel/convention center with rural residential uses in Prosper is largely a subjective evaluation dependent upon how the community accepts the changes. As discussed in finding (14a), initial reaction from Prosper residents has been very favorably supportive of the project. Therefore, it is concluded that the proposed uses are compatible with the adjacent rural residential uses in the community of Prosper.

5.5.5 Summary and Overall Conclusions

This Exception has addressed the four tests required by Goal #2 (Land Use Planning) for the proposed uses. In summary, the marina should be "provided for" because it will create needed basic jobs, help diversify the local economy, enhance the overall attractiveness of the area as a tourist destination and help to satisfy a growing need for moorage for large recreational boats. Alternative sites have been identified and evaluated. It is concluded that the Prosper site would best serve both the public interest and the applicant's interest because of the site's locational characteristics and potential to create the most favorable economic consequences, while minimizing adverse environmental consequences. Coos County and the project proponents recognize the authority of the Oregon Division of State Lands to require mitigation for fill and removal actions in intertidal areas. Finally, the Exception has addressed the compatibility of the proposed uses with existing adjacent uses and found no land use compatibility conflicts associated with the selected alternative.

Based upon the findings and conclusions-presented above, Coos County concludes that sufficient compelling reasons and facts exist to justify the proposed water-dependent uses at the Prosper site. These reasons and facts, therefore, support the designation of a Development management unit at the Prosper site for the purpose of allowing a dredged recreational marina and other marina-related uses, which are non-agricultural or "inconsistent" with the protection of existing natural shoreland values. Within the Development management unit, the proposed non-water- dependent uses (floating marina-related shops) are concluded to be consistent with the resource capabilities and purposes of the management unit. This conclusion is based upon the "non-interference" with fish use in the marina that would be posed by the floating shops and the fact that the shops would improve the marina's ability to attract visitors and business to the area.


COQUILLE RIVER
22
21
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MARINA SITE
19
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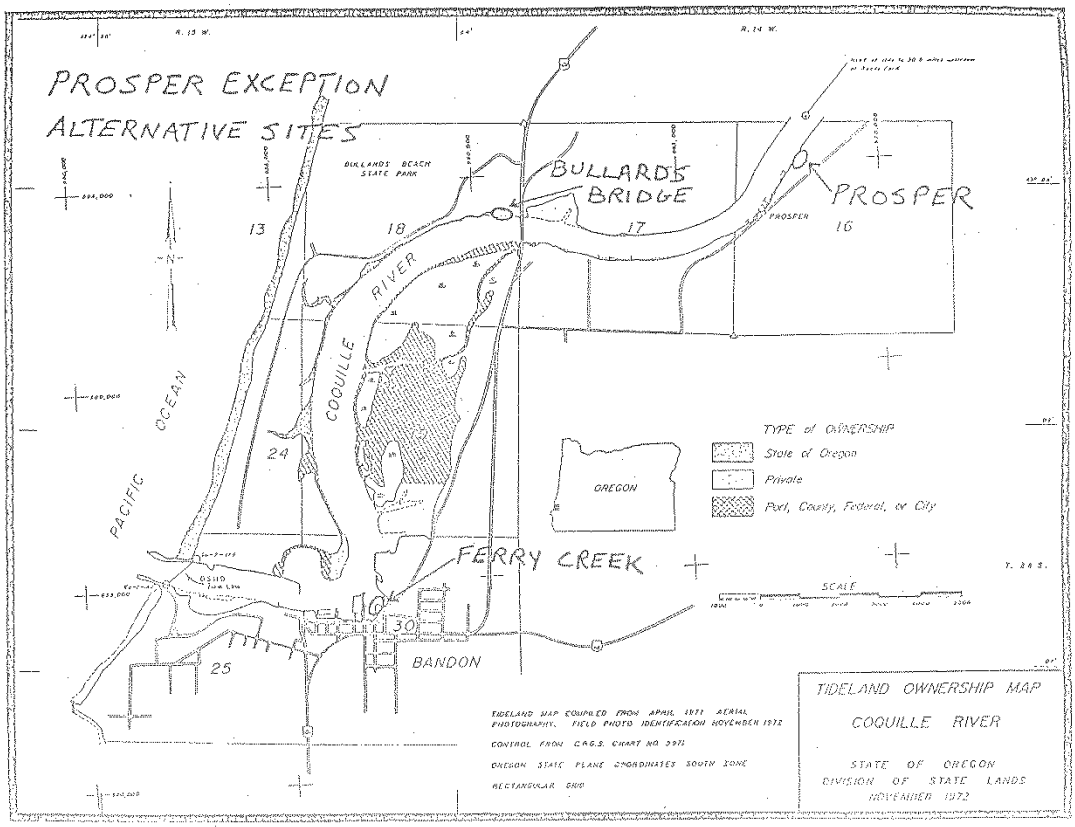
PROSPER
EXCEPTION
PROPOSED DEVELOPMENT
MGT. UNIT
III - 90


PROSPER EXCEPTION
ALTERNATIVE SITES
BULLARDS BEACH STATE PARK
BULLARDS BRIDGE
PROSPER
PROSPER
RIVER
COQUILLE
PACIFIC OCEAN
FERRY CREEK
BANDON
OREGON
TYPE of OWNERSHIP
State of Oregon
Private
Port, County, Federal, or City
SCALE
TIDELAND OWNERSHIP MAP
COQUILLE RIVER
STATE OF OREGON
DIVISION OF STATE LANDS
NOVEMBER 1972
TIDELAND MAP COMPILED FROM APRIL 1971 AERIAL PHOTOGRAPHY. FIELD PHOTO IDENTIFICATION NOVEMBER 1972
CONTROL FROM C.&G.S. CHART NO. 5971
OREGON STATE PLANE COORDINATES SOUTH ZONE
RECTANGULAR GRID

FOOTNOTES

1. Personal communication, Mike White of Northwest Marine Trade Association, December 14, 1982.

2. Personal communication, Carl Meyersahm, Operations Manager, August, 1982.

3. “Commercial and Recreational Boating Facilities in Oregon Estuaries,” 1979.

4. Ibid., at 4.

5. Ibid., at 7.

6. U.S. Census Bureau, "Illustrative Projections of State Populations, 1975-2000", II-A.

7. Personal communication, George Rounds of National Marine Manufacturers Association, December 9, 1982.

8. “Commercial and Recreational Boating Facilities,” supra, 15 16.

9. See Table I representing data chart obtained from State Marine Board on December 14, 1982.

10. Ibid., 29, and attachment A.

11. Personal communication, Jim Edwards, Operations Manager, December 9, 1982.

12. “Boating Facilities,” supra, 31.

13. Ibid., 32-33.

14. Ibid., 54-55 and attachment A.

15. Ibid., 55.

APPENDIX 'A' – DREDGED MATERIAL DISPOSAL DATA

COOS-CURRY COUNCIL OF GOVERNMENTS
P.O. BOX 647
NORTH BEND, OREGON 97459
756-2563

APPENDIX 'A'

MAILED PDC. JS

TO: Prosper Development Company

FROM: Jack Sabin

SUBJECT: Collection and Testing Parameters for Dredged Material Disposal at an Ocean Site

DATE: June 21, 1982

Please find enclosed a list of parameters to be used for bulk sediment analysis and elutriate testing when dredged material is being proposed for ocean disposal.

Procedure for sediment collection: a total of ½ to 1 gallon of material collected from 3 sample sites. Samples to be collected from actual material to be used for ocean disposal (loamy sand layer 6'-10' deep). The samples are to be placed together in a clean 1 gallon container and stored on wet ice.

Procedure for ocean water collection: a total of 2 gallons of ocean water to be collected from the ocean disposal site. The water to be obtained by using a hose overboard to a depth of 15'-20'. Water should be pumped through the hose for a few minutes to clear out any possible contaminants. Store water sample on wet ice.

Transport sediment and water sample on ice to Umpqua Labs.

Umpqua Labs to perform the following tests:

Volitile Solids -- if greater than 1.3% of total dry weight --- Elutriate Testin

Grain Size Analysis -- if less than approximately 0.075mm - Bulk Sediment Analys

JS/ab

Enclosure

cc Umpqua Research Company

WE WENT TO THE OKPA SITE FOR THIS.

7-1-82

Prosper Development Company
Prosper Boatworks and Marina

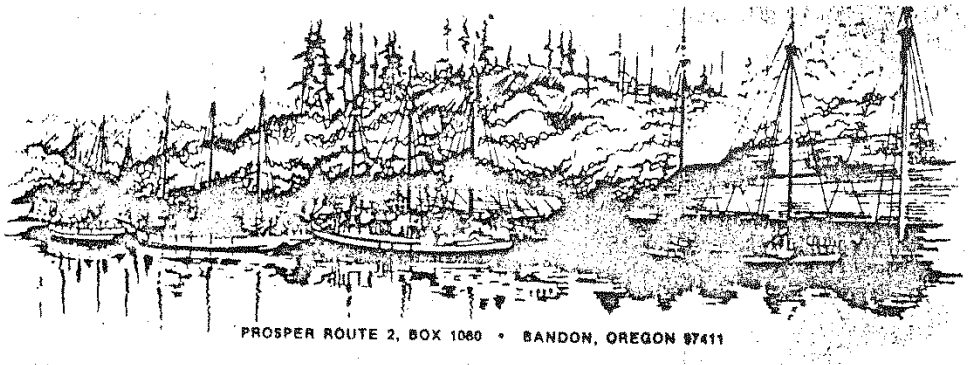
Bulk Sediment Analysis Parameters

Parameters	EPA Region V Guidelines	Prosper Marina Test Results
Total Organic Carbon		
PCB ug/kg	10,000 HP	

Elutriate Testing Parameters

Parameters	Marine Guidelines	Freshwater Guidelines	Prosper Marina Test Results
Arsenic ug/l	508	440	
Cadmium ug/l	59	1.5	
Chromium	44	2,200	
Copper ug/l	---	12	
Cyanide ug/l	30	52	
Lead ug/l	668	74	
Mercury ug/l	3.7	.0017	
Phenols ug/l	---	---	
Zinc ug/l	170	180	
Oil Sheen	visual	visual	
Pesticides/ Herbicides	Mass scan for petro-hydro carbons		

Note: Test parameters: , EPA (Carl Kassenbaum) and ACOE (Pam Moore) June 1982.



PROSPER ROUTE 2, BOX 1060 • BANDON, OREGON 97411

5 August 1982

Portland District
U.S. Army Corps of Engineers
P.O. Box 2946
Portland, Oregon 97208

Attention: Jerome Simpson

Subject: Proposed dredged material disposal for marina project, Public Notice #071-0YA-5-004488.

Dear Mr. Simpson;

During the past eight months we have explored in depth, the options available to us for disposal of our dredged materials. All single upland disposal sites capable of containing the entire dredged material surplus are either classified as wetlands and unavailable for fill or at such a distance and in such a location as to make barge or truck transportation to the site economically impractical.

The following table summarizes dredge, fill and disposal quanities:

	Thousands of Cubic Yards
Material used on-site in the project	155
Port of Bandon existing fill permit	8
Temporary storage of clay for sale on our own property at upland location	130
Surplus dredged materials	159
Total material dredged	452

We have advertised the 159,000 cubic yard surplus for sale locally and the response has been sufficient to dispose of the entire surplus. Most of these sites have not been inspected by us and we realize many are probably wetlands and ineligible for fill.

III OF

It is, therefore, our intention, proposal and request to dispose of all surplus dredged materials at sea in Dump Site 69 as indicated in our public notice. We will continue to advertise the sale of surplus materials and, in the event we can identify upland, non-wetland sites that meet disposal requirements, the ocean disposal quantity of 159,000 cubic yards will be reduced accordingly.

We expect to begin sample collection shortly, using the parameters outlined for us in the enclosed memorandum and attachment from the Coos - Curry Council of Governments. An earlier preliminary soil survey by SCS indicated that the material proposed for ocean disposal (the layer below six feet) is primarily composed of sand and gravel.

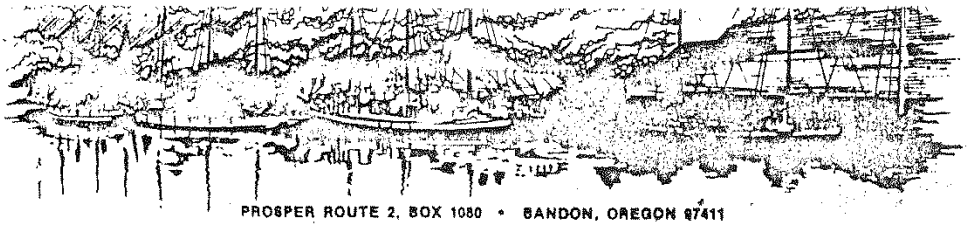
Very truly yours

Chris Kappos
Prosper Development Co.

CK/pc

enclosures

cpy: NMFS
USFW
DEQ
EPA
DSL
ODFW
Coos County
Port of Bandon
CCCOG



PROSPER ROUTE 2, BOX 1080 • BANDON, OREGON 97411

Outgoing Correspondence Permits

November 12, 1982

Oregon Div. of State Lands
1445 State St.
Salem, OR 97310

ATTN: Earl Johnson

RE: 071-OYA-5-004488, Prosper Development Co.

Dear Mr. Johnson:

Please find enclosed results of soil testing from Umpqua Research Company. If you have any questions, please call me.

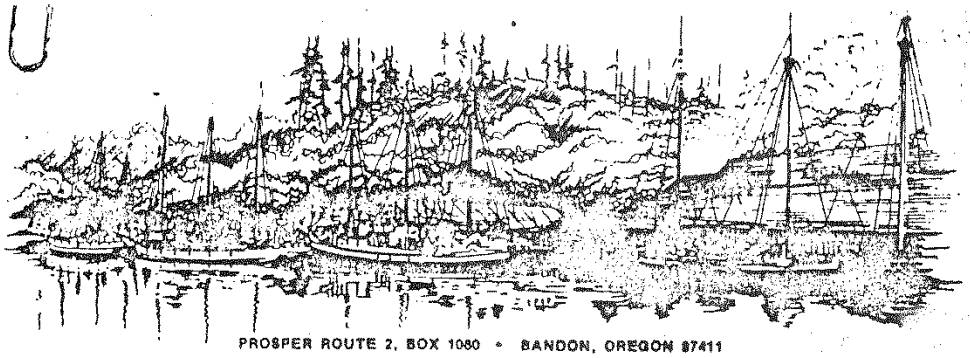
Yours truly,

Chris Kappos

CK:sp

Encl.

III 07



PROSPER ROUTE 2, BOX 1080 • BANDON, OREGON 97411

November 12, 1982

U. S. Army Corps of Engineers
Portland District
Regulatory Functions Branch
P. O. Box 2946
Portland, OR 97208

ATTN: Jerome Simpson

RE: 071-OYA-5-004488, Prosper Development Co.

Dear Mr. Simpson:

Please find enclosed results of soil testing from Umpqua Research Company. If you need the original copy from the lab or if you have any questions, please call me.

Yours truly,

Chris Kappos

CK:sp

Encl.

UMPQUA RESEARCH COMPANY

626 N.E. Division St. • P.O. Box 791 • Myrtle Creek, OR. 97457
Phone (503) 863-5201
EPA APPROVED, OREGON STATE CERTIFIED LABORATORY NO. 73

URC Sample No. 20908-6
Date Received 9-8-82
Time Received 1305
Date Reported 10-28-82

Print all applicable information in box below

Sample Bottle Number ..... Time Collected ..... Date Collected .....

Mailing Address: Prosper Development Co.
Attn: Carl Sandstrom
Name .....
Prosper Rt. 2, Box 1080
Street .....
Bandon OR 97411
City ..... State ..... Zip .....

Sample Location:
Name .....
Street .....
City ..... State ..... Zip .....

Water Source: Spring ☐ Stream ☐ Well ☐ Chlorinated: Yes ☐ No ☐ Sample Type: Routine ☐ Resample ☐ Check ☐
Sample Point .....
Collector's Name .....

RECEIVED 10-30-82

TEST	U.R.C. Sample Number	20908-6					
	Sample						
pH	pH Units						
Specific Conductance	µMHO/CM						
Volatile Solids	5%	4					
Grain Size Dist.							
Sieve Size (mm)	By weight						
4.75	%	ND@1					
3.35	%	ND@1					
2.36	%	ND@1					
2.00	%	ND@1					
1.18	%	ND@1					
0.85	%	ND@1					
0.60	%	ND@1					
0.425	%	ND@1					
0.300	%	ND@1					
0.150	%	70					
0.075	%	8					
<0.075	%	21					

N.D. - NONE DETECTED AT LEVEL INDICATED

Approved by .....

TTT - 00

UMPQUA RESEARCH COMPANY

626 N.E. Division St. • P.O. Box 791 • Myrtle Creek, OR 97457
Phone (503) 863-5201
EPA APPROVED, OREGON STATE CERTIFIED LABORATORY NO. 73

URC Sample No. 20816-2
Date Received 8-16-82
Time Received
Date Reported 10-28-82

Print or type applicable information in box below.

Sample Bottle Number
Time Collected
Date Collected

Mailing Address
Name Attn: Carl Sandstrom
Street Prosper Rt. 2, Box 1080
City Bandon State OR Zip 97411

Sample Location
Name
Street
City State Zip

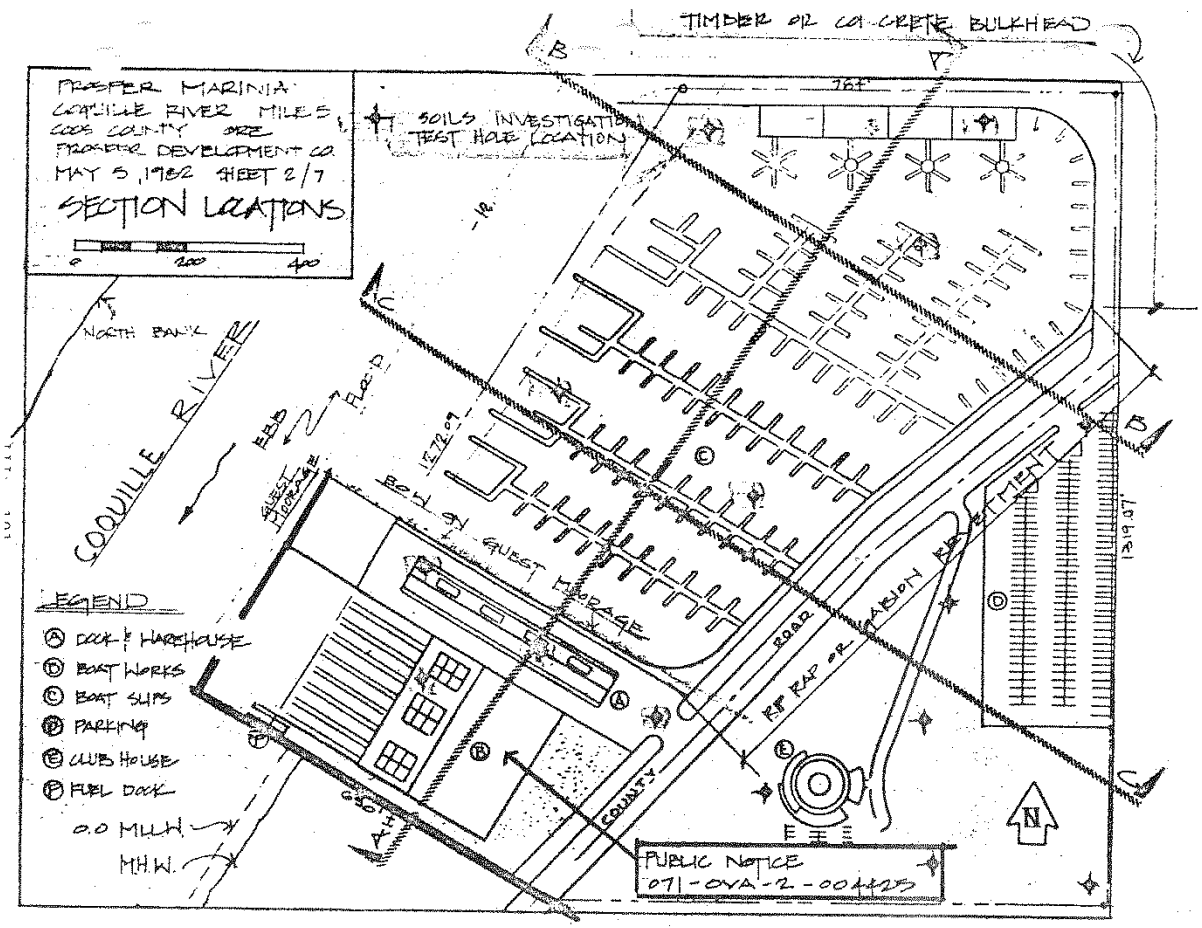
Water Source: Spring ☐ Stream ☐ Well ☐ Chlorinated: Yes ☐ No ☐ Sample Type: Routine ☐ Resample ☐ Check ☐
Sample Point
Collector's Name

RECEIVED 10-30-82

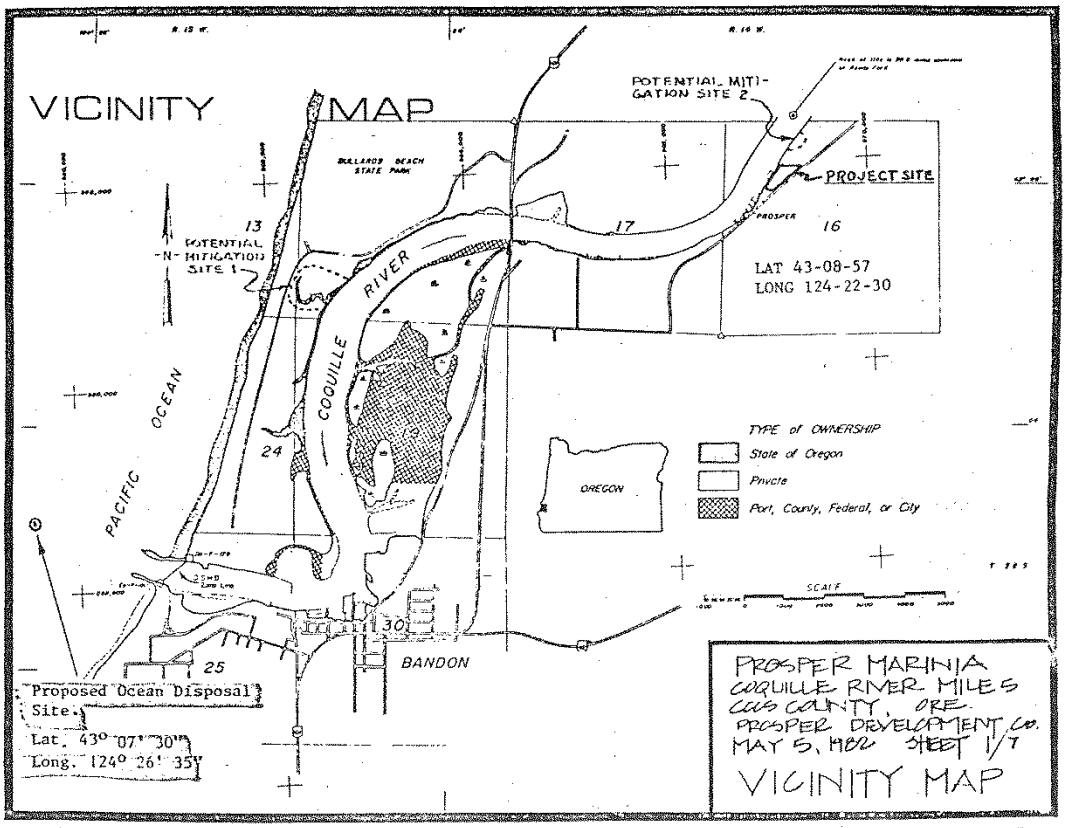
TEST	U.R.C. Sample Number	20816-2					
	Sample	Dil. H2O	1+4 Sediment				
pH	pH Units						
Specific Conductance	uMHO/CM						
TOC	mg/l	ND@0.5	5				
PCB	mg/l		ND@0.001				
As	mg/l		ND@0.01				
Cd	mg/l	0.002	0.019				
Cr	mg/l		ND@0.02				
Cu	mg/l	0.11	0.14				
Cn	mg/l		ND@0.02				
Pb	mg/l	ND@0.01	0.037				
Hg	mg/l		ND@0.001				
Phenols	mg/l		ND@0.005				
Zn	mg/l		0.04				
Oil Sheen			N.D.				
Pesticide/Herbidide							
Endrin	mg/l		ND@0.00004				
Lindane	mg/l		ND@0.00002				
Methoxychlor	mg/l		ND@0.0002				
Toxaphene	mg/l		ND@0.001				
2,4-D	mg/l		ND@0.002				
2,4,5-TP (Silvex)	mg/l		ND@0.0002				

ND NONE DETECTED AT LEVEL INDICATED

Approved by


TIMBER OR CONCRETE BULKHEAD
PROSPER MARINA
COQUILLE RIVER MILE 5
COOS COUNTY OREG
PROSPER DEVELOPMENT CO
MAY 5, 1982 SHEET 2/7
SECTION LOCATIONS
SOILS INVESTIGATION TEST HOLE LOCATION
NORTH BANK
COQUILLE RIVER
EBB
FLOOD
GUEST MOORAGE
BOAT SLIPS
GUEST MOORAGE
ENTRANCE
ROAD
RIP RAP
COUNTY
LEGEND
A DOCK & WAREHOUSE
D BOAT WORKS
C BOAT SLIPS
P PARKING
E CLUB HOUSE
F FUEL DOCK
0.0 MLLW
M.H.W.
PUBLIC NOTICE
071-OVA-2-001425
N

004488 (Coquille River - Marina)



Sheet 1 of 7