

Assessment of Oregon's Regulatory Framework for Managing Estuaries



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And Development**

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1. Purpose

This project is a component of a multi-year effort by the Department of Land Conservation and Development to facilitate the modernization of local estuary management plans. This analysis is intended to produce a qualitative assessment of the current state regulatory framework for managing estuaries, including the provisions of and administrative rules for Statewide Planning Goal 16, Estuarine Resources, Statewide Planning Goal 17, Coastal Shorelands, and other program authorities, for the purpose of determining suitability to meet future needs for the management of Oregon's estuaries. The focus of this assessment is on the state and local authorities that comprise the estuary and shoreland management provisions of the Oregon Coastal Management Program (OCMP). It is recognized that various federal regulatory authorities play significant roles in estuary management and thus have a strong relationship to the operation of the state regulatory framework. However, except as necessary to inform the assessment of specific state programs or requirements, no attempt has been made to independently analyze federal regulatory authorities related to estuary management. Given the focus of this assessment on components of the OCMP, such detailed assessment of these federal authorities is beyond the scope of this analysis.

2. Introduction

Oregon's framework for the management of coastal resources is based primarily on its statewide program for coordinated land use planning. The statewide planning program is a partnership between local governments and state and federal agencies and is intended to balance often competing interests in land and resource management through locally developed comprehensive land use plans and implementing measures. These local plans and regulations apply to all lands in the state, including those in Oregon's coastal zone. The statewide planning program was created in 1973 by the passage of the Oregon Land Use Act (ORS Chapter 197) which established the Land Conservation and Development Commission (LCDC) and the basic policies of the program, including the authority of LCDC to adopt statewide planning goals and the obligation for all cities and counties to prepare and adopt coordinated, comprehensive land use plans in conformance with those goals.

Oregon's specific planning directives for estuary and shoreland resources are contained in Statewide Planning Goal 16, Estuarine Resources, and Goal 17, Coastal Shorelands. These goals, along with statewide planning goals for Beaches and Dunes (Goal 18) and Ocean Resources (Goal 19) (known collectively as the coastal goals), were adopted by LCDC in 1976. The

Statewide Planning Goals, and in particular the coastal goals, as implemented through local comprehensive plans, represent the central component of Oregon's federally approved Coastal Management Program.

After the adoption of the Statewide Planning goals by LCDC, most coastal local governments began work on their comprehensive plans in the late 1970s. In most cases, planning for estuaries took the form of detailed special area management plans which were intended to be incorporated into the overall comprehensive plans of the affected cities and/or counties. This special area planning approach was driven in large part by the detailed and explicit spatial planning requirements of Goal 16, which are based primarily on the identification of different estuarine habitat types. Most of these estuary plans were developed with the close cooperation of multiple units of government, which generally included, in addition to cities and counties, port districts, and various state and federal agencies with interests in estuarine resource management and development. Typically these various interests were organized as an interagency task force charged with overseeing the development of the plan. As a result of this coordinated process, the completed plans largely reflected a consensus between local, state and federal interests in how estuaries were to be managed into the future.

This planning process turned out to be substantially more complex and involved than originally anticipated and, in many cases, consensus on major issues proved elusive. As a result, many of the estuary plans took nearly a decade to complete. The finished plans represented major resource and political investments on the part of all of the interests involved; this was especially so for the local governments tasked with leading the planning effort and adopting the final plans.

Overall, these plans are little changed since they were originally completed in the early to mid-1980s. A number of factors have contributed to this relatively static nature of the estuary plans over the past three decades; these include the perception that the plans have been generally effective in accomplishing both conservation and development objectives, the relatively limited demand for major waterfront and aquatic area development on Oregon's coast, and the lack of state and local resources to undertake comprehensive review and update.

Despite the general success and durability of local estuary management plans, a number of current and anticipated developments indicate the need for modernization. Informed by history, it is now clear that many of the economic development assumptions and projections incorporated into the original plans need to be updated. Likewise, current drivers for various conservation and restoration initiatives (e.g. salmonid recovery) are largely unanticipated by current plans. And, available technology will now allow for significantly more refined application of updated data sets to both planning and implementation decisions, thus improving the quality and certainty of management decisions.

It is recognized that a number of funding, capacity, and resource allocation factors will have to align to allow the process of updating local plans to proceed. As a preface to any such effort,

this assessment of the current state regulatory framework for estuary management will evaluate the suitability of the current system to accommodate overall plan modernization. The desired outcome is an identification of both challenges and opportunities within the current framework, and recommendations for addressing these in a manner that best facilitates the future management needs of Oregon's estuaries.

3. Architecture of the Current Management Framework

The following described authorities comprise Oregon's management framework for estuary and shoreland resources. All of these components are incorporated into the Oregon Coastal Management Program and will be the principal focus of this assessment of the state regulatory framework for estuaries.

3.1 Estuary Classification Rule (OAR 660, Division 17)

Statewide Planning Goal 16 directed LCDC to classify Oregon estuaries to specify the most intense level of development allowable within each estuary for the purpose of maintaining diversity among estuaries.

As a precursor to the local estuary planning efforts directed by the adoption of the coastal goals, LCDC adopted the estuary classification system by rule in 1977. As specified by Goal 16, the classification rule defines the overall level of development permitted in each of twenty-two major estuaries. In general, estuaries were classified based on existing and historic levels of development and alteration, both within the estuary and on adjacent shorelands. The intent of this approach was to direct development to estuaries that have been altered and have infrastructure to support more development, while reserving less altered systems for high levels of resource protection.

The classification system adopted by LCDC mirrors the management unit structure of Goal 16, designating individual estuaries as Natural, Conservation, or Development. Development estuaries are further defined as either shallow draft or deep draft, based on the depth of their authorized channels. This overall classification in turn directs the kinds of management units allowable in each estuary: In estuaries classified as natural, only natural management units are allowed; in conservation estuaries, both natural and conservation management units are allowed; in development estuaries, natural, conservation and development units are to be designated. The net effect of this limitation on allowable management unit types is a graduated cap on the level development or alteration allowed in each estuary, based on the management unit requirements of Goal 16.

3.2 Goal 16—Estuarine Resources

Statewide Planning Goal 16 provides the principal guidance for the planning and management of Oregon's estuaries. The goal is one of 19 Statewide Planning Goals which set standards that

guide local comprehensive land use planning and the conduct of state agency programs that affect land use. These goals are adopted as administrative rules by the Land Conservation and Development Commission.

The overall objective of Goal 16 is to “to recognize and protect the unique environmental, economic and social values of each estuary and associated wetlands; and to protect, maintain, where appropriate develop, and where appropriate restore the long term environmental, economic and social values, diversity and benefits of Oregon’s estuaries”. To accomplish this, the goal establishes detailed requirements for the preparation of plans and for the review of individual development projects and calls for coordinated management by local, state and federal agencies that regulate or have an interest in activities in Oregon’s estuaries.

The goal requires individual estuary plans to designate appropriate uses for different areas within each estuary based on biological and physical characteristics and features, and to provide for review of proposed estuarine alterations to assure that they are consistent with overall management objectives and that adverse impacts are minimized. Most Goal 16 requirements are implemented through locally adopted estuary plans, but some are applied by state agencies through their review of various permit applications.

3.3 Goal 17—Coastal Shorelands

Statewide Planning Goal 17 sets out planning and management requirements for lands bordering estuaries (as well lands bordering the ocean shore and coastal lakes). In general, the requirements of Goal 17 apply in combination with other planning goals to direct the appropriate use of shoreland areas. The provisions of Goal 17 are specifically focused on the protection and management of resources unique to shoreland areas; examples of such resources include areas of significant shoreland habitat, lands especially suited for water dependent uses, lands providing public access to coastal waters, and potential restoration or mitigation sites. The goal emphasizes the management of shoreland areas and resources in a manner that is compatible with the characteristics of the adjacent coastal waters. Goal 17 requirements are implemented primarily through local comprehensive plans and zoning.

3.3.1 Water Dependent Shorelands Rule

Goal 17 use requirements direct that shorelands “especially suited for water dependent uses” be protected for such uses, and that local zoning regulations preclude the establishment of uses which would preempt the availability of such lands for water dependent development. Although the goal provides a list of factors for evaluating special suitability for water dependent use, and gives general guidance on permissible, non- preemptory uses, the overall lack of detail in this requirement proved problematic for local implementation. In response to this issue, in 1999 LCDC adopted an administrative rule to provide additional guidance for implementing this Goal 17 requirement. Known as the water dependent shorelands rule, OAR 660, Division 37 establishes a methodology for calculating the minimum amount of shorelands to be protected for water dependent uses (such a quantitative standard is lacking in Goal 17) and also provides more

detailed guidance on the qualifications of shorelands suitable for water dependent uses, as well as suggested land use regulations and standards appropriate for the protection of these shoreland sites.

3.4 Local Comprehensive Plans

Local government (city and county) comprehensive plans and corresponding land use regulations represent the principal planning and regulatory mechanisms which implement the Statewide Planning Goals. Typically, several elements of local plans and ordinances combine to address the management of estuaries and adjacent shoreland areas.

3.4.1 Estuary Management Plans

Most local governments have implemented the requirements of Goal 16 through the adoption of detailed special area management plans specific to estuarine aquatic areas. These estuary management plans implement Goal 16 requirements for the spatial designation and classification of discrete estuarine management units, establish permissible uses for different portions of estuaries based on management unit classification, and contain the regulatory standards for the review of aquatic area development proposals. The plans are intended to fully integrate all planning and regulatory requirements of Goal 16 into a single, cohesive document, and are typically adopted as an independent component of the overall comprehensive plan. Some of these estuary plans also integrate some Goal 17 components for adjacent shorelands, in particular requirements related to the identification and protection of shorelands especially suited for water dependent development, identification and protection of dredged material disposal sites, and identification of potential estuarine restoration and mitigation sites. In most cases, the plans for major estuaries involve multiple local jurisdictions (e.g. a county and one or more cities); these multi-jurisdictional planning efforts were usually led by the county serving in its role as the coordinating entity for local comprehensive planning. (A notable exception to this is the Columbia River Estuary Regional Management Plan, which was developed by CREST, the bi-state council of local governments originally formed for this purpose.)

3.4.2 Coastal Shoreland Elements

As noted above, a number of local estuary management plans integrate at least some planning provisions for adjacent estuarine shorelands. In other cases, Goal 17 requirements for coastal shoreland planning and management are implemented through specific shoreland elements of local comprehensive plans. These plan elements typically have a spatial component (i.e. a map depicting the area subject to shoreland planning requirements) along with a policy component which directs and controls the establishment of implementing zoning and other land use regulations necessary to comply with Goal 17.

3.4.3 Zoning and Land Use Regulations

Local plans for estuaries and shorelands are implemented through the adoption of corresponding zoning and other land use regulations. In the case of estuary management plans, zoning has been used to apply the spatial designation of management units in the estuary and to establish lists of

permitted and conditionally permitted uses within these management units. Typically, this has been accomplished through the adoption of zoning that connects directly to the overall estuary management plan, often by incorporating the plan by reference.

In the case of coastal shorelands, a variety of approaches have been employed to implement the range of management and resource protection requirements of Goal 17. All local land use regulations establish “base” zones which are spatially applied through a zoning map, and are usually Euclidean in form, establishing lists of permitted and conditionally permitted uses. In shoreland areas, these base zones must be applied in a manner that is consistent with the general use priorities of Goal 17. Although most jurisdictions employ standardized base zones that are also applied throughout the community in non-shoreland areas, in shoreland areas these zones are usually further limited or refined by the application of special standards which specifically address shoreland resources and management. Often, this is accomplished by the application of one or more “overlay” zones, which are used in combination with various base zones to achieve compliance with the requirements of Goal 17. In some cases, jurisdictions have developed specialized base zones to implement some Goal 17 requirements; one common example is the use by many jurisdictions of a specific base zone to reserve especially suited shoreland areas for water dependent use.

3.5 Other State Authorities

3.5.1 Removal/Fill Law

Enacted in 1967, the Oregon Removal/Fill law (ORS 196.795-990) regulates the placement of fill in and the removal of material from “waters of the state”, including estuaries and adjoining wetlands. The law establishes a requirement to obtain a permit prior to removal or placement of fill in waterways or wetlands; the permit program is administered by the Oregon Department of State Lands (DSL).

The stated policy of the removal/fill law is to provide for the protection, conservation and best use of the state's water resources through state regulation of removal and fill activities in a manner that protects public navigation, fishery and recreation uses of the state's waterways. To accomplish this, the law sets forth criteria and considerations that are to be applied in the review of a permit application. In general, the issuance of a removal/fill permit requires a determination by the department that the activity “...will not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation.” This general finding requirement is further refined by a number of “considerations” that are to be addressed in arriving at this required determination.

4. System Application/Operation

Goals 16 and 17 direct local governments (and, in some cases, state agencies) to develop management programs in conformance with the goals' prescribed use and development

standards. In general, these management programs consist of both spatial plan elements and implementing regulatory programs. To facilitate the assessment of these individual components, the main operational characteristics are summarized below.

4.1 Planning

4.1.1 Inventory Requirements

To provide a factual base for required planning decisions, Goal 16 directs the assembly of estuary resource inventories. These inventories are to “... provide information on the nature, location and extent of physical, biological, social, and economic resources in sufficient detail to establish a sound basis for estuarine management ...”. Goal 16 further directs the Department of Land Conservation and Development to establish common inventory standards and techniques so that inventory data from different sources, or data between estuaries, will be comparable.

In response to the “common inventory standard” directive of Goal 16, in 1978 DLCD contracted with the Oregon Department of Fish and Wildlife to conduct an estuary inventory project intended to assist local governments in completing the resource inventory requirements of Goal 16. The project was focused on assembling biological and physical data for Oregon's major estuaries, and classifying and mapping estuarine habitats. This project produced an overall estuarine habitat classification system, a set of guidelines for conducting estuarine resource inventories, and a series of recommendations for research needs in Oregon estuaries. In addition, it produced a series of resource reports for individual estuaries which summarized existing resource inventory data, provided a habitat classification map for each estuary, and included general management recommendations for each identified estuarine subsystem. These reports became, and largely remain, the principal natural resource inventory source for local estuary management plans.

The ODFW reports focus on physical and biological characteristics; however, no similar, standardized effort was conducted for the social and economic resource inventories called for in Goal 16. Most local plans contain some form of inventory/analysis for these characteristics, but the scope and level of detail vary widely. For example, for economic resources, most plans relied upon county-wide economic analyses prepared as a part of the Goal 9 element of county and city comprehensive plans (which were themselves based largely on national and statewide economic forecasts). As a result of the much more generalized and varying social and economic inventories conducted for estuary planning, most planning decisions have been driven fundamentally by the more concrete assessments of physical and biological characteristics in relation to the management unit designation requirements of Goal 16.

4.1.2 Management Unit Designation

Goal 16 requires estuary plans to divide each estuary into discrete geographic areas called management units. Management unit boundaries are defined principally by biological and physical characteristics and features, and the type and extent of existing development and

alteration. For each management unit, plans set forth the overall management purpose and objectives and also prescribe specific uses which are or can be allowed in conformance with Goal 16.

Goal 16 defines three categories of management units, which correspond to the three estuary types identified in the overall estuary classification rule: natural, conservation and development. As previously described, the types of management units required to be designated in each estuary—and, therefore, the types and intensity of uses and alterations allowed—depend on the estuary's overall classification. In estuaries classified as natural, only natural management units are allowed; in conservation estuaries, both natural and conservation management units are allowed; in development estuaries, natural, conservation and development units are to be designated.

Natural management units include “... all major tracts of salt marsh, tideflats, and seagrass and algae beds.” Management emphasis in natural units is on preserving natural resources and processes; permissible uses are limited accordingly to low intensity uses, location-dependent uses that involve no or minimal alteration, and maintenance of most existing uses.

Conservation management units include tracts of significant habitat smaller or of less biological importance, recreational and commercial shellfish beds (not included in the natural designation) and partially altered areas adjacent to existing development of moderate intensity. The management of conservation units emphasizes conservation of natural resources, providing for long term use of renewable resources, and accommodating recreational development activities that do not require major alterations. Permissible uses include those included in the natural designation, as well as facilities for higher intensity water dependent recreation such as boat ramps and marinas.

Development management units include areas of deep water adjacent to the shoreline, navigation channels, and other areas “... of minimal biological significance needed for uses requiring alteration of the estuary”. The management emphasis is on accommodating navigation and public, commercial and industrial water dependent uses, including those uses which may require significant dredging, fill or other major alterations.

The net result of the application of the Goal 16 management unit requirements is that the large majority of estuarine area statewide is designated by local estuary management plans as either natural or conservation. Similarly, on an individual estuary basis, the development classification estuaries typically have a relatively small amount of area designated in development management units.

However, it should be noted that the factors for differentiating between management unit types proved, in practice, to not always be mutually exclusive. Decisions about what constitutes a “major tract”, “less biological significance” or “minimal biological significance” were judgments made by local jurisdictions based on a number of factors. For planning purposes, disagreements

regarding these judgments were ultimately adjudicated by LCDC at the time of plan acknowledgement; however, this overlap of resource characteristics between management unit types has, in some cases, compromised plan implementation. For example, some areas which qualified for and were designated as development management units also include areas of important resource value; in some cases this fact has significantly complicated the siting of development permitted by the plan due to other regulatory barriers.

4.1.3 Coastal Shoreland Boundary Identification

An initial and fundamental step in the planning for coastal shorelands is the identification of the shorelands boundary. Lands within the boundary are subject to the use and management requirements of Goal 17, as implemented through the local plan. Goal 17 prescribes a list of criteria for lands and resources which must be included within the shorelands boundary. For estuary shorelands, the Goal 17 factors direct the inclusion in the boundary of areas of adjacent geologic instability, significant shoreland and wetland habitats, riparian vegetation and resources, and areas necessary for water dependent and water related uses, including port and navigation facilities, aquaculture, public and private recreational use and development, dredged material disposal sites, and mitigation sites. The application of these factors in the planning process results in a boundary that varies widely in extent; in some cases, it may be as little as fifty feet landward from the shoreline, in others, it may extend well inland in order to capture extensive wetland or other habitat resources.

4.1.4 Coordination

Oregon's statutory framework for land use planning and Statewide Planning Goal 2 require that local comprehensive plans be coordinated. In general, this coordination directive requires that local comprehensive plans acknowledge and accommodate the interests and authorities of other units of government that relate to land use and/or resource management. This is typically accomplished by providing opportunities for affected agencies and units of government to express needs and interests during the development, implementation and amendment of the comprehensive plan.

Coordination is viewed as especially important for estuary planning given the numerous agency authorities and interests associated with estuarine resource management. These interests involve a number of state and federal agencies along with multiple units of local government (e.g. counties, cities, port districts). Most of Oregon's estuary plans were developed with extensive participation from affected jurisdictions and agencies; usually this participation took the form of an interagency task force convened for the purpose overseeing the initial formulation of the plan.

Largely as a result of this process, the coordinated estuary management plans generally reflected a consensus among the participating units of government on how the framework of Goal 16 and Goal 17 should be applied to guide the future management of Oregon estuaries. However, in the ensuing three decades, there have been no similar comprehensive estuary planning efforts replicating the extensive agency involvement that characterized the original planning process. At

the same time, changes in personnel, agency priorities, reduced capacity and a host of other factors have combined to diminish the broader knowledge and understanding among state and federal resource agencies of the role of local estuary plans in the overall management system. The result has been a significant decline in the engagement with local estuary plans on the part of many of the original participants and a consequent loss of institutional familiarity with the overall structure and purpose of the plans.

4.1.5 Exceptions

Oregon's system of statewide comprehensive planning provides for "exceptions" to certain requirements of the Statewide Planning Goals. A goal exception is required to be justified in order for the local comprehensive plan to designate a site or an area for a use that is not permitted by the applicable Statewide Planning requirements. As previously noted, the effect of the Goal 16 management unit designation requirements is that most estuarine areas are designated as either natural or conservation, which significantly limits new development in these areas. In general, areas that qualify for development management unit designation are mostly limited to existing developed areas. In cases where local governments believed that needed and desirable new water dependent development could not be accommodated within the areas qualifying for development management unit designation, exceptions to Goal 16 were incorporated into the local plans. In most cases, the effect of these exceptions was to designate areas for new development (that usually involved dredging, fill and/or other major aquatic area alterations) that would otherwise be required by Goal 16 to be designated as natural or conservation.

All of the major development estuary plans incorporate one or more Goal 16 exceptions authorizing major estuarine alterations not otherwise permitted by Goal 16. During the planning process, a number of these exceptions proved controversial, and some were strongly opposed by various resource agencies. Nonetheless, a number of these exceptions were acknowledged by LCDC and are incorporated into currently effective plans.

However, in most cases, the development allowed by the various Goal 16 exceptions has not occurred. The substantive requirements for justifying Goal 16 exceptions require that the type, extent, intensity and expected impacts of authorized uses be identified with a fairly high degree of specificity. As a result, Goal 16 exceptions typically authorize only very specific, narrowly defined uses or development. Due in part to this requirement to precisely identify uses which can occur, the ultimate utility of these exceptions is highly dependent on the predictive accuracy of the economic projections and market analyses upon which they are based. In most cases, these analyses were necessarily very context specific and their shelf life was therefore limited. As a result, in practice, many of the exceptions that were acknowledged as a part of local estuary plans have had little efficacy. Authorized development has failed to materialize for a variety of reasons, including a lack of market viability, changing local and regional economies, evolving regulatory requirements, or other factors.

4.2 Implementation

4.2.1 Zoning

The spatial aspect of estuary plans has been implemented by incorporation into the local comprehensive plan and zoning map, i.e. the various management units designated within the estuary are depicted as different zoning districts on the local zoning map. In general, two different approaches were employed for this task: most local zoning codes have general zoning districts that correspond to Natural, Conservation and Development units and these are in turn applied to the corresponding mapped units; in other cases, a few plans designated each individual management unit (not just each classification) as a separate, discrete zone with unique policies and standards. The former approach usually results in estuary zones that provide for the entire range of uses permissible within the particular classification. This approach increases flexibility, but leaves more decisions to the project review process, thus reducing certainty. The latter approach strives for maximum predictability for implementation, but at the cost of limiting the ability to adapt to accommodate unanticipated uses.

In both approaches, the resultant zoning districts are primarily Euclidean in nature, i.e. they have as their basis a prescribed list of permitted and conditionally permitted uses, although they also typically incorporate (or cross reference to) performance based standards for uses subject to review. In this respect, these zoning districts closely parallel the management unit structure of Goal 16.

Applying traditional zoning provisions to aquatic resource was unusual at the time of original plan development, and is still not a commonly seen approach to management of these resources. A major strength of this approach is the resultant integration of estuarine management considerations into the broader structure of community based land use planning. This integration has been fundamental in achieving widespread awareness at the local level of the range of estuary conservation and development opportunities, and their relationship to overall community development goals.

Local shoreland zoning reflects the diversity of uses that occur on lands bordering estuaries. In rural areas, most county zoning is for either exclusive farm use or forest use, depending on land suitability. These zones are intended to reserve lands for resource management uses and most forms of development are strictly limited. In urban areas, a wide range of zones may apply to estuarine shorelands which reflect community desires for the appropriate use and development of waterfront areas. Of particular importance and focus are lands identified as especially suited for water dependent use; such lands are zoned to limit development to water dependent uses only.

Other shoreland resources which are addressed through local zoning include significant shoreland habitat areas, upland dredged material disposal sites, and potential shoreland restoration sites. In most cases these resources are addressed through the use of one or more “overlay” zones that apply in addition to the “base” zones described above. These overlay zones

incorporate special standards to protect identified resources irrespective of the underlying zoning district in which they are located.

While the overall zoning mosaic for shorelands may appear to be a disparate array of uncoordinated designations, in actuality the sound management of shoreland resources is based foundationally in Oregon's basic policy scheme for land use planning: directing urban intensity development into urban areas, and strictly limiting the type and intensity of development in rural areas. This fundamental approach to land use planning, paired with specific overlay standards addressing unique shoreland resources, forms the basis of the implementing zoning applied to Oregon's estuary shorelands.

4.2.2 Local Permit Review

The implementation requirements of Goal 16 set forth several requirements that are to be applied to the review of specific estuarine development proposals. These include the "resource capabilities" test, the "dredge, fill or other alteration" test, and the requirement for impact assessment. Although it is permissible to address these requirements as a part of plan development, this has been accomplished in only a few cases where sufficient detail was available to undertake the required analysis for specific development projects during the planning process. In most cases, these required findings have been deferred to the permit review process.

4.2.2.1 Resource Capabilities Test

For each management unit classification, Goal 16 sets forth lists of permissible uses, some of which are to be permitted only "where consistent with the resource capabilities of the area" The goal defines this standard as a use that either (a) has impacts that are not significant; or (b) has impacts that can be assimilated while still allowing resources of the area to "... function in a manner to protect significant wildlife habitats, natural biological productivity and values for scientific research and education." Although in some cases resource capability findings were made in the local plan for specific projects, in general, this standard has been implemented by being codified into local zoning codes or ordinances, and then applied through a conditional use or similar review process.

As noted, most estuarine alterations subject to the resource capabilities test are, in addition to required local review, subject to a DSL removal/fill permit. The evaluation and approval criteria for removal/fill permits do not explicitly provide for a determination regarding "resource capabilities"; however, the general determination and consideration provisions of ORS 196.825 direct a resource impact evaluation which provides a close parallel to the resource capabilities analysis.

4.2.2.2 Dredge, Fill and Other Alteration Tests

Implementation Requirement 2 of Goal 16 sets forth a four part test for dredging and/or filling in estuarine aquatic areas; three of the tests also apply to "other uses or activities that could alter the estuary". These tests are (1) Water dependency (dredge and fill only); (2) demonstrated need

(defined as substantial public benefit) and non-interference with public trust rights; (3) no feasible upland alternatives; and (4) minimization of adverse impacts. As with the resource capabilities test, the Goal provides that these tests may be applied at the time of plan development for actions identified in the plan; however, in practice, there was limited ability at the time of plan development to identify the majority prospective alterations with sufficient specificity to allow the full application of these tests. As a result, except for a few well documented future alterations (e.g. jetty construction and maintenance; authorized channel dredging) where findings on these tests have been incorporated into the plan, most proposals for aquatic area development trigger the application of these tests through a local permit process.

As with activities subject to the resource capabilities test, nearly all alterations subject to Implementation Requirement 2 also require a DSL removal/fill permit. The general determination and consideration provisions for evaluating removal/fill permits (ORS 196.825) include criteria which provide a close analog to the dredge, fill and other alteration tests; in particular the requirements to demonstrate need, evaluate alternatives and avoid or minimize adverse impacts.

4.2.2.3 Impact Assessment

Implementation Requirement 1 of Goal 16 requires the assessment of impacts associated with actions that "...would potentially alter the estuarine ecosystem...". The impact assessment requirement does not establish an "acceptable impact" threshold and therefore does not act as an approval criterion, but is instead intended to be informational in nature. It is designed primarily to inform the resource capability test for uses subject to this requirement, but it is ostensibly required for any estuarine alteration for which an impact assessment is not set forth as a part of the plan, not just resource capability uses. To meet Goal 16, the requirement to perform impact assessment on a case-by-case basis is incorporated into acknowledged estuary plans and is thus a responsibility of local government, generally performed as a component of project/permit review.

4.3 Removal/Fill Permit Process

As previously described, proposed estuarine alterations that involve the placement of fill or the removal of material (e.g. dredging) require the issuance of a permit from the Department of State Lands. ORS 196.825 sets forth criteria to be applied by the DSL director in reaching decisions on the issuance or denial of removal/fill permits; the review process is further defined in the department's administrative rules, OAR Chapter 141, Division 85. In general, the statute and accompanying administrative rules require the department to perform a broad evaluation of the resource effects and impacts of any proposed removal and/or fill in estuarine aquatic areas in order to determine whether the activity "is consistent with the protection, conservation and best use of the water resources of the state" and "will not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation." Typically, permit applications which propose significant estuarine alterations require applicants to provide detailed technical analyses of resource impacts, evaluation of alternatives and

methods of avoiding or minimizing adverse effects. Permit applications are also subject to public review and comment prior to issuance or denial; typically, agencies and other interested parties provide input and recommendations to the department through this process. In particular, input from resource agencies such as the Oregon Department of Fish and Wildlife is important in assisting DSL in evaluating potential resource impacts.

Coordination between the removal/fill permit process and local administration of estuary management plans occurs in accordance with the department's state agency coordination program approved in accordance with OAR Chapter 660, Division 30. This includes a requirement for applicants to obtain a land use compatibility statement (LUCS) from the local government with land use jurisdiction over the subject project site. In general, removal/fill permits may be issued by DSL only for uses or activities authorized by the local estuary management plan. In cases where local approval requires a discretionary review process, DSL may condition the issuance of a removal/fill permit on a future local approval.

The removal/fill permit process also provides the mechanism for fulfilling the requirements of Implementation Requirement 5 of Goal 16, which sets forth an explicit requirement for compensatory mitigation for dredge and fill activities in intertidal or tidal marsh areas. This requirement has been codified in the removal/fill law at ORS 196.830, placing implementation responsibility for this requirement with DSL.

5. Qualitative Assessment

The following analyses and observations are based on an overall assessment of the architecture and operation of Oregon's estuary management system. These analyses have been developed through a detailed evaluation of current estuary management plans and processes, and through consultation with a variety of individuals involved in the estuary management system, both as practitioners and as system users. It should be emphasized that this assessment is qualitative in nature. In the initial design of this assessment, it was determined that the lack of sufficient, comparable data related to administration of local estuary plans and related state authorities would render the establishment and use of quantitative performance measures impractical. However, access to the collective experience of individuals involved in the system, in some cases since its inception, allowed the identification of a number of common themes and issues related to the overall operation of the system. The following summarizes the issues which the department believes will be most useful in framing a series of recommendations to support and strengthen the system going forward. For purposes of organization, these issue descriptions have been associated with the overall system, planning, or implementation.

5.1 Overall System

5.1.1 Basic Framework

As previously described, Oregon's framework for the management of coastal resources is based primarily on its statewide program for coordinated land use planning. Designed as a partnership between local governments and state and federal agencies, the statewide planning program is intended to balance often competing interests in land and resource management through locally developed comprehensive land use plans and implementing measures.

Prior to the creation of the statewide planning program, the management of Oregon's estuaries was accomplished largely through the case by case review of permits for individual development projects. Many resource and development conflicts resulted from this piecemeal approach to managing estuarine development. In part to address this problem, Goal 16 established an integrated, comprehensive planning based approach to managing the use, development and conservation of estuaries. Although many of Oregon's estuaries were subject historically to significant loss of habitat and other resource values from development activity, the management approach established through the statewide planning program has, since its implementation, been largely successful at protecting remaining critical resources while accommodating estuarine dependent development. This establishment and codification of a planning based approach to management of Oregon's estuaries, through Goal 16 and implementing local plans, is widely recognized as a key system strength.

5.1.2 Agency Support

The original development of local estuary plans involved extensive participation by state and federal agencies with authorities over and interests in estuarine resource management and development. As a result of their direct participation in an intensive, hands-on planning process, contributing agencies gained in-depth knowledge of the substantive elements of the estuary plans, and developed commitments to the management regimes embodied in these plans. The relationships that were established between local, state and federal interests and the shared institutional knowledge of the plans developed through this process were crucial to the success of these early planning efforts. This process of agency buy-in provided considerable impetus for the completion and adoption of these plans by local governments despite an often challenging political environment.

Owing to a variety of reasons, much of this engagement from the original participating agencies has been lost over the ensuing three decades. Changes in personnel, agency priorities, reduced capacity and a host of other factors have combined to diminish the broader knowledge and understanding among state and federal resource agencies of the role of local estuary plans in the overall management system. As a result, there is at least the perception that the overall efficacy of the plans has been weakened, in particular in relation to their role in providing some measure of predictability for permitted aquatic area development. Re-engagement of key agency partners, while unlikely to occur at the levels seen during original plan development, offers significant

opportunities to improve awareness of the essential role of local estuary plans in the overall management system.

5.1.3 Public Engagement

In the same way that original development of local estuary plans involved extensive participation by state and federal agencies, strong community involvement in the planning process led to a broad local understanding of the intent, purpose and substance of these plans. As with other elements of Oregon's land use planning system, ongoing efforts to foster and maintain this locally based understanding and ownership of estuary plans have been limited. As a result, for many of the same reasons cited for the loss of agency engagement, in particular the loss of local capacity, the knowledge and understanding of the structure and function of local estuary plans among local citizens and decision makers have significantly diminished over time.

While not a substantive component of the management system, public engagement was critical to the successful completion of the original estuary plans. Though it is highly unlikely that planning efforts comparable to the scale of the original plan development process will be undertaken in the foreseeable future, additional efforts to improve the broader public understanding of estuary planning and management can play a role in improving the effectiveness of the overall system.

5.1.4 Local Government Capacity

This pervades many of the other issues. For several years during and immediately following plan development, local governments were the recipients of substantial planning assistance grants which supported considerable staff capacity, both in terms of numbers and technical capability. This capacity has gradually but steadily diminished over time. For a number of reasons, including current economic conditions, it is presently at low ebb. Given this situation, the resources of local governments are not sufficient to adequately support their obligations to administer and maintain estuary plans. The OCMP and other agency partners need to explore options for building, supporting and augmenting local capacity for estuary planning, including both funding and direct technical assistance.

5.2 Planning

5.2.1 Spatial Planning

The management unit framework of Goal 16 sets forth a land use planning approach to the management of estuarine resources. The directive to divide the estuary into discrete management units via the local comprehensive plan map establishes a management approach based on a spatial allocation of uses and resources for each estuary. This codification of spatially explicit management units based on resource characteristics and corresponding management objectives is perhaps the most significant accomplishment of the estuary planning process, and represents the heart of the estuary management system envisioned by Goal 16.

In establishing these management unit designations as a part of the comprehensive plan map, local communities engaged in a highly public process that culminated in clear decisions regarding the future conservation and development of estuarine resources. The result has been a fairly high degree of certainty regarding how Oregon estuaries will be managed, particularly regarding the conservation of key resources and habitats. This element of Oregon's estuary management system has proven both effective and durable.

5.2.2 Integration of Aquatic Resource Management with Land Use Planning

The integration of estuary management into the traditional local government function of community development planning is a core strength of the current management system. Estuaries represent key assets around which many coastal communities have developed. The economic, environmental, social and cultural linkages between communities and their estuaries are fundamental drivers of community character. Effective planning for these communities necessarily entails a full understanding of the range of development and conservation opportunities associated with the estuary. The incorporation of estuary planning as an integral part of the local comprehensive planning process has largely achieved this objective.

5.2.3 Resource Inventory Mapping

As previously described, the designation and classification of individual management units in each estuary is directed by Goal 16 based largely on habitat types and features. To assist local governments in completing the resource inventory requirements of Goal 16, in 1978 DLCD contracted with the Oregon Department of Fish and Wildlife to conduct an estuary inventory project. This project produced an overall estuarine habitat classification system, a habitat classification map for each estuary, and included general management recommendations for each identified estuarine subsystem. The maps generated by these reports became, and largely remain, the principal natural resource inventory source for local estuary management plans.

The deployment of current digital technology along with available resource data sets represents a clear opportunity to upgrade the current state of estuary plan inventories. Significant improvements in the accuracy and usability of plans could be realized through this incorporation of updated resource inventory information and GIS based digital habitat classification maps.

5.2.4 Balancing Certainty and Adaptability

In an effort to provide a high degree of predictability, some plans attempted to anticipate and prescribe with great specificity permissible uses and activities in individual management units. However, working experience suggests that some estuary plans incorporated a level of detail that has proven ineffectual in practice. In many cases, this level of detail resulted in a failure to provide for unanticipated uses or activities otherwise consistent with overall management objectives. In other cases, this high level of specificity has resulted in management units being reserved for uses that are unlikely to ever occur due to changes in economic and market forces, technology and other factors. In part, this is a direct result of the essentially Euclidean method of prescribing permissible uses employed in Goal 16, which limits the ability to incorporate a more

adaptive management approach into local plans. Despite this inherent limitation, some plans could likely benefit from a more uniform approach to prescribing uses in individual management units. While there would be some trade-off in certainty from this more general approach, the resultant flexibility would allow plans to be more adaptive over time.

5.2.5 Efficacy of Goal 16 Exceptions

All of the deep draft development estuary plans and several of the shallow draft development estuary plans incorporate one or more Goal 16 exceptions authorizing major estuarine alterations not otherwise permitted by Goal 16. During the planning process, a number of these exceptions proved controversial, and some were strongly opposed by various resource agencies. Nonetheless, a number of these exceptions were acknowledged by LCDC and are incorporated into currently effective plans.

However, in virtually all cases, the development allowed by the various Goal 16 exceptions has not occurred. The substantive requirements for justifying Goal 16 “reasons” exceptions require that the type, extent, intensity and expected impacts of authorized uses be identified with a high degree of specificity. As a result, Goal 16 exceptions typically authorize only very specific, narrowly defined uses or development. Due in part to this requirement to precisely identify uses which can occur, the ultimate utility of these exceptions is highly dependent on the predictive accuracy of the economic projections and market analyses upon which they are based. In most cases, these analyses were necessarily very context specific and their shelf life was therefore limited.

As a result, in practice, most of the exceptions that were acknowledged as a part of local estuary plans have had little efficacy. Authorized development has failed to materialize for a variety of reasons, including a lack of market viability, changing local and regional economies, evolving regulatory requirements, or other factors. The net effect of this is that significant development anticipated by the plans has not occurred, and absent significant changes to local plans, areas designated for such development have been rendered largely unavailable for other uses. Any efforts to modernize individual local plans should examine site-specific Goal 16 exceptions to determine whether the sites in question could be designated for alternative uses or purposes.

5.2.6 City/County Coordination

Though most estuary plans were developed with the close cooperation of multiple units of government (which generally included, in addition to cities and counties, port districts, and various state and federal agencies with interests in estuarine resource management and development), counties typically served as the lead planning agency. Many estuaries span multiple local (city and county) planning jurisdictional boundaries, and the coordination requirements of Statewide Planning Goal 2 dictated that each of these entities’ plans provide for consistent, integrated management. In addition, the management unit framework of Goal 16 directs a cohesive spatial plan for each estuary that is based on natural and physical features rather than political or jurisdictional boundaries. Oregon Revised Statute 195.025 (formerly ORS

197.190) charges county government with the responsibility for coordinating all planning activities affecting land use within the county; based largely on this general coordination authority, nearly all estuary plans were developed with the respective county acting as the primary planning agency. The result was a single estuary plan covering multiple jurisdictions. Upon plan adoption, each jurisdiction (city, county) became responsible for the implementation of the plan as applied to the geographic area within their respective jurisdictional boundaries.

For a variety of reasons, including the gradual erosion of planning capacity at the local level, the unified coordination between city and county elements of estuary plans has weakened over time. Originally it was anticipated that jurisdictions would accomplish a coordinated review of all comprehensive plans on a periodic basis, but this periodic review process eventually evolved to focus only on the comprehensive plans of a few larger cities, and then only on certain selected topic/goal areas. As a result, most of the amendments and revisions to the original estuary plans have been narrowly focused and accomplished on an individual jurisdiction basis. While cities and counties have generally coordinated these mostly site-specific amendments by providing for participation of affected jurisdictions, there has been no systematic process for maintaining overall plan integration. Formalizing coordination roles and responsibilities for multi-jurisdictional plans would be appropriate as a part of any future plan updates.

5.3 Implementation/Permit Review

5.3.1 Local Government Project Review Responsibilities

The implementation requirements of Goal 16 task local governments with specific responsibilities for the review of proposed estuarine development. These include the “resource capability” test, the “dredge, fill or other alteration” test, and the requirement for impact assessment. Although it is permissible to address these requirements as a part of plan development, in most cases these required findings have been deferred to the project review process. Often, accomplishing this required development review necessitates a level of technical capability that is beyond the norm for most local government planning staffs. As otherwise noted, this situation is currently even more acute due to the overall lack of planning capacity present in many coastal communities.

This local review function, particularly the technical assessments related to natural resource impacts, findings of need, analysis of alternatives, and impact avoidance/minimization, is widely viewed as duplicative of the analyses performed through the Corps/DSL JPA process. In addition, the state/federal permit processes operate largely independent from either the plan or any local permit review process. As a result, local governments tasked with plan implementation can be frustrated by the lack of process coordination, as well as the seeming inefficacy of local decisions. Streamlining this process could perhaps be accomplished through some combination of plan simplification and better integration of plan implementation requirements with the processes of other regulatory authorities.

5.3.2 Coordination Between Local Plans and State/Federal Permit Processes

Closely related to the challenges local governments face in addressing the Goal 16 project review requirements is the relationship of the local estuary plans to state and federal waterway permitting processes. In particular, the Department of State Lands Removal/Fill permit is a key state regulatory authority in defining this relationship. While most local plans acknowledge DSL's regulatory role in estuary development, the integration of this key state authority into local planning and project review processes has been generally weak. As noted above, the local project review process serving as the implementation mechanism for various Goal 16 requirements is generally seen as (and frequently is in fact) duplicative of DSL's R/F permit process. While DSL has in place one of the more thorough and robust State Agency Coordination Programs, it is structured (as are other state agency programs) primarily as a mechanism to ensure that decisions to issue R/F permits do not violate local plans, rather than as means to integrate state and local processes to implement Goal 16 requirements.

A more thorough integration of the R/F permit process with the implementation requirements of Goal 16 could improve efficiency, increase certainty, and relieve local governments of technical burdens they currently lack the capacity to carry. Implementation Requirement 9 of Goal 16 provides a foundational framework for further evaluation and work on this issue.

6. Summary and Conclusions

Oregon's planning based approach to estuary management has provided a strong foundation for estuarine resource conservation and development decisions. In particular, the management framework's strong emphasis on advance decision making based on spatial planning concepts has proven effective in providing a system-wide approach to management. Likewise, the locally focused nature of the estuary planning process has produced plans with broad based support and has increased awareness of the relationships between traditional community development planning and aquatic resource management.

6.1 Opportunities for Improvement

To build upon the basic system there are clearly elements of the system which present opportunities for improvement. During the course of this assessment, several themes regarding opportunities for system improvement emerged:

- Estuary plans have not benefitted from incorporating updated resource inventory data and digital mapping technology.
- In the nearly three decades since most of Oregon's estuary management plans were developed, the widespread public and agency engagement that characterized the original process has waned. The resultant decline in overall awareness and understanding of the role of the plans has reduced their effectiveness as foundational decision making tools.
- In some instances, the incorporation of highly detailed development decisions into plans has proven problematic. Changing market and other forces have resulted in the need to

update these highly detailed plans at a scale and frequency beyond the capacity of local governments.

- The integration of estuary management plans with state and federal regulatory processes has not been fully realized. This results in duplication of effort in the plan implementation process and places technical demands on local governments that few have the capacity to fulfill.
- Finally, the overall design of the system presumes an ongoing local government capacity, in terms of staff and other resources, that is not currently present. As a result, local governments are challenged to administer and maintain estuary plans.

6.2 Recommendations

Based on the issues identified in the qualitative assessment of Oregon's current estuary regulatory and management system, the following recommendations for system improvements have been developed. The focus of these recommendations is on addressing identified issues in ways that will facilitate and support local efforts to modernize and otherwise improve estuary management plans.

It is recognized that a number of factors will influence the timing and priority of work proposed by these recommendations. In some cases, the work directed by these recommendations will require the commitment of a number of different local, state and other partners with interests in estuary management. A number of recommendations propose initiatives that will require technical, financial and other resources that will need to be identified, an effort that has not been undertaken as a part of this analysis. Finally, some of these recommendations identify potential system improvements that could ultimately require statute, rule or other programmatic changes that cannot be assured.

6.2.1 Recommendation 1:

Assist local governments in incorporating up to date digital habitat classification maps into local estuary management plans.

Issues Addressed:

- Resource Inventory Mapping
- Local Government Capacity

6.2.2 Recommendation 2:

Develop guidance for and provide direct technical assistance to local governments for evaluating/auditing local estuary management plans to identify priority areas for plan updates.

Issues Addressed:

- Efficacy of Exceptions

- Certainty vs. Adaptability
- Local Government Project Review Responsibilities
- Coordination Between Local Plans and State/Federal Permit Processes
- Local Government Capacity

6.2.3 Recommendation 3:

Develop and implement estuary planning related outreach, education and training efforts directed to stakeholders and decision makers involved in estuary management. In particular, efforts should focus on local government planning staff and state and federal resource agency staff.

Issues Addressed:

- Agency Support
- Public Engagement
- Local Government Capacity

6.2.4 Recommendation 4:

The department should convene a technical work group to evaluate in detail the coordination between estuary management plan implementation and the Joint DSL/Corps permit process. This work should focus on opportunities for improved integration of local plans with other regulatory processes.

Issues Addressed:

- Local Government Project Review Responsibilities
- Coordination Between Local Plans and State/Federal Permit Processes

6.2.5 Recommendation 5:

Develop guidance and provide direct technical assistance to local governments for updating city/county planning coordination agreements to specifically address estuary management plan implementation, maintenance, and update responsibilities.

Issues Addressed:

- City/County Coordination

6.3 Final Thoughts:

It is important to emphasize that the recommendations of this assessment are conceptual in nature. Additional work involving stakeholders will be required to identify priorities among

these concepts, and to refine specific approaches toward the identified work tasks. In addition, technical, financial and other resources necessary to support this work will need to be identified. The department's focus for identifying and prioritizing work associated with each of these recommendations will be on outcomes that support local estuary planning efforts. In particular, outcomes which help to improve the efficiency of local planning and implementation processes and serve to better align system obligations with local resources will be emphasized.