



Oregon

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TO: Land Conservation and Development Commission

FROM: Matt Spangler, Senior Coastal Policy Analyst
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SUBJECT: **Agenda Item 7, March 13-14, 2014, LCDC Meeting**

ESTUARY PLANNING PROJECTS

I. SUMMARY

Beginning in 2012, the department began work on a series of projects intended to help support and facilitate the modernization of locally adopted estuary management plans. Three of those projects are nearing completion: the Estuary and Shoreland Trends Assessment, the Estuary and Shoreland Regulatory Assessment, and the Estuary and Shoreland Habitat Atlas mapping project. These projects are designed to provide key inventory and background documentation to support local plan updates as well as identify potential system improvements that could be the subject of additional future work.

For additional information about the estuary and shoreland habitat atlas, please contact Andy Lanier at 503-934-0072 or by email at andy.lanier@state.or.us.

For additional information about the estuary trends assessment or estuary regulatory assessment, please contact Matt Spangler at 541-574-1095 or by email at matt.spangler@state.or.us.

II. BACKGROUND

Oregon's specific planning directives for estuary and shoreland resources are contained in Statewide Planning Goal 16, Estuarine Resources, and Goal 17, Coastal Shorelands. In most cases, planning for estuaries has taken the form of detailed special area management plans which have been incorporated into the overall comprehensive plans of the affected cities and/or counties. This special area planning approach is 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 the estuary plans were originally developed with the close cooperation of multiple units of government, which included, in addition to cities and counties, port districts, and various state and federal agencies with interests in estuarine resource management and development. 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.

Overall, most estuary plans are little changed since they were originally completed in the early to mid-1980s. Despite the general success and durability of local estuary management plans, a number of current and anticipated developments indicate the need for modernization. Recognizing these needs, the Ocean and Coastal Services Division has incorporated into its work program over the past three years several task areas focused on building capacity for estuary plan updates. The three projects that are the subject of this briefing are foremost among those work tasks.

III. THE PROJECTS

A. ESTUARY AND SHORELAND HABITAT ATLAS

The primary task of the estuary and shoreland habitat atlas project is to update the resource inventory information maps of estuary and shoreland habitats by organizing, compiling, and synthesizing recently collected or generated digital information products. The resource inventory information originally produced as the foundation for the estuary management plans was generated through interpretation of mid-1970s aerial photographs and verified through on the ground field work. At that time however, the spatial extent of estuarine wetlands (particularly tidally-influenced freshwater wetlands) was not fully understood nor accurately mapped in the full extent of its range. The products generated from that effort were also solely print based, meaning that those inventories (for the most part) have not been updated since the adoption of the original plan maps.

In recent years the Oregon Coastal Management Program has invested in acquiring a number of coastwide digital geospatial datasets covering estuary and shoreland areas including:

- 2011-2013 ShoreZone: high resolution, geo-located aerial still photos and mapped information;
- 2007-2009 LiDAR (Light Detection and Ranging) data acquired for the entire Oregon coast;
- 2009 high-resolution color orthophoto coverage was acquired for all estuaries;
- 2004-2006 color-infrared orthophotos acquired for many estuaries, and;
- 2009-2011 estuary diked lands and levees inventory (location and ownership).

That information has been organized, compiled, and used in conjunction with other existing digital information products (like the National Wetland Inventory data) to generate a new set of habitat maps (currently in draft form) for Oregon's estuary systems, with the exception of the Columbia River. The new habitat maps have been generated using the new federally adopted (2012) Coastal and Marine Ecological Classification Standard, and includes information on the water column, geoform, substrate, and biotic components in our estuarine ecosystems. The generation of our newly produced map products has been guided through expert knowledge of estuarine habitats in the form of consultation with a technical advisory committee and through the review of our project work by the Green Point Consulting organization, a contracting team specifically hired to provide scientific guidance to our project staff.

The information resources produced by the project will be available (May, 2014) to the public through an on-line atlas of data and data products, specifically designed to support local governments, state agencies, and others in revising local estuary and shoreland management plans required under Oregon's statewide planning program.

B. ESTUARY AND SHORELAND TRENDS ASSESSMENT

This investigation of trends that will affect the use of estuaries and shorelands over the next 20-30 years is intended to identify changes in the social and economic drivers for future estuary and shoreland uses and activities. It is designed to provide information to coastal communities to help develop a better understanding of the likely forces and actions affecting estuaries and shorelands that communities may need to plan for. While the project scope looks to understand coastwide trends, its primary focus is on estuaries classified as development and trends that may affect them along different parts of the coast.

Key findings of the assessment include:

- Timber and wood products continue to be important to the coastal economy, but overall employment will decline.
- Though overall employment has declined, commercial fisheries value is rising and is especially important to communities that support substantial portions of the fleet.
- Employment in tourism and recreation will continue to grow.
- The coastal environment supports an increasingly important marine research, education and resource restoration economy.
- Transfer payments continue to be the largest source of total income on the coast.
- In general, there is an adequate supply of suitable land to support marine related development.
- Lack of funding for infrastructure (e.g. dredging; jetty maintenance) is a major concern for the future of marine related industries.
- Climate change related effects may adversely impact important resource dependent industries (e.g. fisheries, aquaculture).

C. ESTUARY AND SHORELANDS REGULATORY ASSESSMENT

This project is intended to produce a qualitative assessment of the current state regulatory framework for managing estuaries. The assessment focuses on the provisions of Statewide Planning Goal 16, Estuarine Resources, Statewide Planning Goal 17, Coastal Shorelands, related administrative rules, and other state program authorities, for the purpose of determining suitability to meet future needs for the management of Oregon's estuaries.

Key findings of the assessment include:

- 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.
- 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.
- 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.
- 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.
- 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.