



Oregon

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Department of Land Conservation and Development

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September 23, 2011

TO: Land Conservation and Development Commission
FROM: Jim Rue, Acting Director
SUBJECT: **Agenda Item 11, October 6-7, 2011, LCDC Meeting**

DIRECTOR'S REPORT

I. INFORMATION UPDATES

A. PARTICIPATION IN APPEALS, AND RECENT LUBA AND APPELLATE COURT OPINIONS

ORS 197.090(2) requires the Director of the Department of Land Conservation and Development (DLCD) to report to the Land Conservation and Development Commission (the commission or LCDC) on each appellate case in which the department participates, and on the position taken in each such case.

ORS 197.040(1)(c)(C) requires LCDC to review recent Land Use Board of Appeals (LUBA) and appellate court decisions to determine whether goal or rule amendments are needed.

1. Department participation in appeals

Between July 27, 2011 and August 26, 2011, the department received notice of 15 appeals filed with LUBA. The department filed none of these.

Banks UGB

At the invitation of Washington County property owners at the Quail Valley golf course, Darren Nichols, Anne Debbaut, and DOJ Counsel Erin Donald met with representatives of the City of Banks and the Quail Valley Golf Course August 31, 2011, to discuss the possibility of settlement. City and property owners agreed to submit additional information and a revised proposal for the department's consideration. The department's appeal of Banks' recent urban growth boundary (UGB) amendment to the Land Use Board of Appeals is stayed, pending the submittal of those additional materials. Either party may reinstate the appeal if necessary to resolve the issue.

2. LUBA opinions

Between July 27, 2011 and August 26, 2011, the department received copies of 9 recently-issued LUBA opinions. Of these, LUBA dismissed 3, remanded 5, reversed 0, affirmed 1, invalidated no local decisions, and transferred no petition(s) to circuit court.

There were no decisions concerning the application or interpretation of a statewide planning goal or LCDC administrative rule.

3. Appellate court opinions

Between July 27, 2011 and August 26, 2011, the department received 0 copies of recently issued opinions from the Court of Appeals.

4. Decisions of interest

None

5. Appeal notices of interest

Measure 37/49: None

Others

- Wind Power Generation Facility: Rural Residential Setbacks: *Robert Cosner and Cheryl Cosner v Umatilla County Board of Commissioners*. LUBA No. 2011-070, issued July 20, 2011. This appeal is on an ordinance amending the development code conditional use permit for wind power generation facilities by establishing rural residential setbacks of 2 miles from a turbine tower to a rural residence.
- Wind Power Generation Facility: Goal 5 Resources: *Robert Cosner and Cheryl Cosner v Umatilla County Board of Commissioners*. LUBA No. 2011-071, issued July 20, 2011. This appeal is on an ordinance amending the development code establishing conditional use permits for the Walla Walla Watershed based on Goal 5 resources for the siting of wind power generation facilities.
- Siskiyou Rest Area: exceptions to Goals 3, 11 and 14: *Paul E. Foland and Constance J. Foland v Jackson County*. LUBA No 2001-075, issued July 28, 2011. This appeal is on an ordinance amending the Jackson County Comprehensive Plan by taking “reasons” goal exceptions to Goals 3, 11, and 14 for the Siskiyou safety rest area/welcome center and connection to an existing sanitary sewer line. On remand the current proposal is to take a “reasons” goal exception to Goal 11 to allow urban level water service to be extended and connected to the welcome center.
- South/North light rail project in Metro: *Northeast Coalition of Neighborhoods and Coalition For a Livable Future, Weber Coastal Bells Limited Partners, Plaid Pantries, INC., Jantzen/Angel LLC., and Ronald A Buel v METRO*. LUBA Nos 2011-080 - 2011-084 issued on August 25, 2011. These appeals are on a land use final order (LUFO)

amending the 1998 order for the South/North light rail project and adopting a final order for the Expo Center/Hayden Island segment of the project including the I-5 Columbia River Crossing Bridge and associated highway improvements.

Petitioners raise several errors

- That decision does not rely on substantial evidence because the analysis did not take into account the 2008 economic downturn.
- Metro has exceeded its statutory authority by using the LUFO process for a project outside of the UGB.
- The LUFO relies on documents that are not publicly available therefore it is impossible for the public to properly participate.
- The text, context, and history of LCDC's adoption of the LUGO light rail approval criteria do not support Metro's interpretation of the criteria as allowing approval of the LUFO amendment in this case.
- Respondent construed the LCDC criteria but not identifying economic, social, and traffic impacts or mitigation on affected residential, commercial, and industrial centers.
- The LCDC criteria that were established under HB 3478 have expired.

B. GRANTS, INTERGOVERNMENTAL AGREEMENTS AND CONTRACTS

September 1 marked the deadline for local government applications for 2011-2013 General Fund grants. Applications will be reviewed and recommended for awards by October 1, 2011. Darren Nichols will provide a detailed status update of the grants program and grant awards under agenda item 9.

Coastal Grants:

FY11 Federal CZM Grant Approved: The department was notified by NOAA that the FY11 federal Coastal Zone Management Grant has been officially approved. The grant year began July 1, 2011, but because of procedural requirements imposed by the Congress on NOAA's budget in the April 2011 budget deal, NOAA was not able to process state grant applications in a timely way. The grant provides retroactive spending authorization to DLCDC.

Coastal Planning Assistance Grants: Diana Evans, Coastal Grants Administrator, continued to process coastal planning assistance grant applications from coastal jurisdictions and to close out grant agreements from FY10. Grants range between \$3,000 for small jurisdictions and \$35,000 for a county and help support the costs of maintaining planning and ministerial capacity at the local level. For FY11, the DLCDC Coastal Program awarded a total of \$340,000 in planning assistance grants pursuant to the work program in the approved federal grant from NOAA.

Coastal Technical Assistance Grants: The Coastal Program also reviewed thirteen proposals from twelve coastal jurisdictions for small Technical Assistance grants. Staff in the Newport office (Spangler, Perry, Woolley) reviewed the proposals and recommended that a total of \$83,750 be awarded for eleven projects of which \$33,000 would be awarded with unobligated funds from the FY09 NOAA grant. These three staff will act as program officer for the various

projects to ensure that they are completed on time. In addition, Randy Dana, Coastal GIS Specialist, will provide direct technical assistance to several jurisdictions that have GIS-related projects, thus cutting costs and improving the integration of final products with the Coastal Program's GIS databases. A list of awards is attached.

Coastal Mini-Grants: The Coastal Program received nine proposals for "mini-grants" for up to \$1,000 to help support community-based coastal stewardship activities. Eight awards were made for a total of \$6,000. The Program Manager reviewed the proposals and determined the amount to be awarded based on need, budget, community support, and demonstrable outcome. This is the second year of allocating a small amount of the department's federal CZM grant funds for community-based coastal stewardship activities. A list of the mini-grant awards is attached.

C. PERIODIC REVIEW WORK TASKS/PROGRAMS

The department received and approved a request from the City of Portland to extend that city's approved period review work program by twelve months. The department expects similar requests from other communities who are now approaching the three-year deadline for completion of work tasks. Darren Nichols will present a detailed update on the status of periodic review and the efforts of communities currently working on periodic review work programs (agenda item 10).

II. DEPARTMENT PROGRAM ACTIVITIES AND INITIATIVES

A. COASTAL MANAGEMENT PROGRAM

Jeff Weber, Coastal Conservation Coordinator, and Paul Klarin, Marine Affairs Coordinator, participated in a two-day workshop September 6 and 7 in Silver Spring, Maryland, co-sponsored by the Coastal States Organization and the NOAA Office of Ocean and Coastal Resource Management. Entitled *Aligning State & NOAA Capacities Workshop*, the workshop brought together program staff from many of the 36 coastal states and representatives of a number of NOAA agencies to meet two objectives:

- Build stronger relationships and mutual awareness between NOAA and National Coastal Management Program partners about the relevant capabilities and needs for state ocean management planning and coastal climate adaptation.
- Identify points of leverage and actions for state and federal parties to take to better align funding and investments at the national, regional, or state levels.

Tanya Haddad, Coastal On-Line Services Administrator (aka Coastal Atlas Administrator), traveled in early September to Oostende, Belgium, to participate in the fifth meeting of the International Coastal Atlas Network (ICAN) and to participate in a three-day coastal workshop on Coastal GIS. Tanya is one of the founding members of the ICAN and a leading global expert in coastal information systems. Her participation in these meetings was partially funded by a National Science Foundation grant to the Geosciences Program at Oregon State University.

Tanya is in the final stages of loading the Coastal Access database and photos onto the Coastal Atlas website.

Andy Lanier, Coastal Natural Resources Specialist, attended the American Fisheries Society annual meeting in Seattle, Washington, where he was a principal presenter on a panel on marine spatial planning. Andy also presented on the department's development and use of OregonMarineMap to support planning for ocean energy development. Andy has been working closely with staff at the Oregon Department of Fish and Wildlife and The Nature Conservancy to incorporate ecological datasets into the MarineMap database.

Bob Bailey, Coastal Division Manager, made presentations on Oregon's marine spatial planning effort (amending the *Territorial Sea Plan* for ocean energy development) to the Oregon Wave Energy Trust annual conference in late August and to the Pacific States Marine Fisheries Commission annual meeting in early September. At the latter meeting, Bob organized a roundtable discussion with Michael Weiss, the Associate Director of the Council on Environmental Quality, to meet with local Congressional staff, NGOs, legislators, and other interested parties to discuss the (relatively) new National Ocean Policy and marine spatial planning. Bob also devoted time to chairing a work group on Coastal Zone Management Policy for the Coastal States Organization.

Laren Woolley, Coastal Shores Specialist, and Matt Spangler, North Coast Field Representative, participated in meetings of the Neskowin Community group convened by the Tillamook County Board of Commissioners to address erosion hazards along the oceanfront. Laren continued his work with Lincoln County and with residents of Bayshore on Alsea Spit to address dune management issues and sand inundation. Matt has been closely advising staff at Tillamook County as they rebuild from staff resignations and retirements.

Dave Perry, South Coast Field Representative, worked with Curry County to develop a grant task and work program to enable the county to create and adopt an up-to-date accurate delineation of the ocean shorelands boundary as required under Goal 18. The need for this line was underscored by the recent LUBA appeal of a county decision to approve a destination resort that included a portion of the development on steep slopes overlooking the ocean. The department will provide funds and GIS technical support in helping the county delineate the required shorelands boundary.

The Coastal Program, led by a team of Dale Blanton, Andy Lanier, Jeff Weber, Diana Evans, and Bob Bailey, prepared and submitted a proposal to NOAA for a §309 Project of Special Merit that, if approved, would supplement the department's FY12 Coastal Zone Management Grant. Need for the project was identified in the department's approved 2011-2015 §309 Program Strategy. The project will result in an on-line catalogue of current digital data sets for each estuary and new delineation of estuarine and shoreline habitats upon which local estuary plans and decisions are based. Existing estuary management plans, most adopted in the early 1980s, are based on estuary habitat delineations created in the late 1970s and have no required shoreland habitat data because they were not (and are still not) available. This project will provide the basis

for coastal local governments to modernize and update their estuary management plans. A copy of the proposal is attached.

The Coastal Program's new NOAA Coastal Fellow, Cinamon Moffett, began her Fellowship in early August. Her project is aimed at building technical and data capacity of coastal local governments to improve their estuary management plans and decision-making. Cinamon is currently working in the Portland office during her GIS and program training, but will be moving to the Newport office for the balance of her Fellowship, which runs through July, 2013. Cinamon will soon be meeting with local planners to assess technical skill levels and capacity to use GIS as well as to ascertain the status of information currently used as well as needed for estuary planning and management. A copy of her Fellowship proposal to NOAA is attached.

Laura Mattison, the Coastal Program's outgoing NOAA Coastal Fellow, is nearing completion of her Fellowship during which she has created digital GIS maps of the location, length, ownership, and other attributes of all dikes, levees, and tidegates on the Oregon coast. Tanya Haddad, Jeff Weber, and Randy Dana have mentored her and provided technical assistance throughout her project. Tanya is helping her to host these data on the Oregon Coastal Atlas website.

B. COMMUNITY SERVICES

The department looks forward to introducing its newest addition to the statewide staff of regional representatives at the commission's October meeting. Josh LeBombard will attend the commission's local government roundtable and will be introduced to the commission and local partners during that discussion.

On August 31, Darren Nichols and Anne Debbaut met with DOJ counsel Erin Donald and representatives of the City of Banks and private property owners to discuss options to avoid appeal of the city's recent UGB expansion.

Also in August, Grant Young met with the Governor's Regional Solutions Coordinator Scott Fairley and Arlington Mayor Jeff Bufton to discuss next steps and best practices for Arlington's newly established industrial lands.

Karen Swirsky continues to work with the City of Bend on the city's UGB remand tasks and with the City of La Pine on that city's acknowledgement.

Jennifer Donnelly and Anne Debbaut invested significant time working with Planning Services staff and Metro area staff on the completion of Metro's Urban and Rural Reserves. Jennifer also continues to work closely with the City of Damascus on its acknowledgement.

Jon Jinings continues to work with the commission's solar rulemaking committee.

Several DLCD regional representatives are now co-located with governor's office staff in Regional Solutions Centers in La Grande, Eugene, Tillamook, and Portland. Additional representatives are scheduled to co-locate in centers in Bend and Monmouth later this year.

While the physical office moves interrupted some productivity this summer, co-locating in the Regional Solutions Centers offers DLCD a greater opportunity to coordinate efforts with the Department of Environmental Quality, Department of Transportation, Department of Housing and Community Services, and Business Oregon. Once DLCD staff are settled into their new spaces and roles, DLCD expects to utilize the “new” partnerships to support Oregon’s statewide planning program and the communities it serves.

Community Services division staff attended the Oregon Planning Institute conference in Eugene September 14–16. DLCD co-sponsored the event which also offered scholarship opportunities for Oregon’s rural communities. OPI provides an opportunity for elected officials and staff from across the state to learn from one another and from skilled technical professionals. DLCD staff and their local government counterparts engaged in a series of presentations and discussions about best planning practices, cutting edge projects, and emerging trends in planning and development.

C. DIRECTOR’S OFFICE

In addition to the various policy matters addressed in other sections of this report, activities in the director’s office during August and September included:

Week of August 1 – Toured Portland Regional Solutions Center; met with directors of the Department of Environmental Quality and Department of Agriculture regarding the Environmental Quality Commission; participated in the State Agency Director’s Forum at the Oregon Mayor’s Association summer conference in Madras.

Week of August 8 – Economy and Jobs Work Group; OSTI project status and check-in with all four agencies; meeting with Claire Turpel regarding Regional Environmental Forum, Service Loss Inventory Project; Governor’s Natural Resources Cabinet; met with Jill Arens, Columbia River Gorge Commission; DLCD Policy Team; MPAC meeting; FEMA ESA update; Livable Communities Work Group.

Week of August 15 – Healthy Environment Work Group; Economy and Jobs Work Group; LCDC meeting; met with City of Damascus.

Week of August 22 – Livable Communities Work Group; DCLD Management Team; Economic Recovery Review Council; Governor’s Natural Resources Cabinet; Marine Cabinet; Ash Institute site visit with Armando Carbonell.

Week of August 29 – Meeting regarding solar facilities rulemaking; Transportation Planning Rule Rulemaking Advisory Committee; DLCD Policy Team; SB 766 Implementation meeting.

Week of September 5 – Vacation

Week of September 12 – Meeting regarding natural hazards interagency coordination; Transportation Planning Rule Rulemaking Advisory Committee; Enterprise Leadership Team –

Healthy Environment Work Group presentation; MPAC meeting; TPR-OHP Joint Subcommittee; SB 766 Implementation meeting; Urban Forum Population Forecasting core planning group.

Week of September 19 – Senate Interim Committee on Business, Transportation & Economic Development; DLCD all staff meeting; SB 766 Implementation meeting.

D. OPERATIONS SERVICES

The Operations Services fiscal team has completed its calendar and biennium year-end activities which roll into the state's Comprehensive Annual Financial Report (CAFR) and the Schedule of Expenditures of Federal Awards (SEFA) report. GASB 54 implementation is also finished.

The budget officer is working with the director's office and the operations services manager in continuing to ensure financial reporting accountability. Division managers continue their critical roles in analyzing and ensuring timely expenditure projections for 2011-13. The department has received approval for its 2011-13 Legislatively Adopted Budget totaling approximately \$18.2 million across three fund types General, Other and Federal Funds. The department will issue and post its final budget narrative on its website in the coming months.

The information technology unit continues working with department management in evaluating and determining current and future technological needs for the department. The management team with assistance from IT staff continues implementing its teleconferencing capacity for department staff. Its September 22, 2011 all staff meeting used iLinc. Office 2010 implementation and roll out will begin in the next few months.

The operations manager and key staff of the department continue its long term efforts toward better department-wide information management. According to earlier timelines and proposals, the department has initiated a workgroup to begin implementation of standard SharePoint. The workgroup has identified creation of an intranet site as its preliminary pilot project for SharePoint implementation. The workgroup will continue to seek internal and external expertise from other state agencies as it continues its efforts. The department is also preparing to finalize its information management recruitment. Upon hire, the position will continue to work with the operations manager and key staff in implementing better department-wide information management. Key efforts for this position will include implementation of requirements under House Bill 2129 (2011).

E. PLANNING SERVICES

See Section IV.C of this report regarding the Portland Metropolitan Area Scenario Planning rulemaking. This effort will be completed by DLCD's Oregon Sustainable Transportation Initiative program staff.

See Section IV.A.1 of this report regarding amendments to the Transportation Planning Rule. The advisory committee considering these rule amendments is supported by DLCD's Transportation and Growth Management program and Planning Services Division staff.

See Section IV.A.3 of this report regarding soils assessment rulemaking. The advisory committee developing the draft of this rule is supported by Planning Services Division staff.

Urban planning and economic development specialists are engaged in review of materials submitted by Metro relating to the adequacy of the land supply within the Metro urban growth boundary and materials being developed by the city of Bend in response to the commission's remand of its growth boundary last year.

Measures 37/49 Program Update

The department issued its last "regular" Measure 49 Final Order on March 3, 2011. Since that date, the department has issued seven "Amended Final Orders" initiated by litigation (four) or discovery of missing or dropped information (three). Pending litigation may result in more. The department issued a total of 4,724 final orders, including multiple final orders issued for reconsidered and remanded claims.

M37 Vested Rights Cases. There are 218 vesting cases currently known to the department. Most of these were approved.

- a. Vested Rights Determinations approved: approximately 160 known to the department.
- b. Vested Rights Determinations denied: approximately 34 known to the department (not certain of negative outcome on six).
- c. Pending in court or on remand to counties: 22
- d. Status unknown: three were filed with counties but we have no information on their status.

HB 3620 "Strawman" Implementation. HB 3620 becomes effective January 1, 2012. On January 3, 2012, the department will send letters to all claimants found to have conveyed and reacquired their Measure 37 property within a 10-day period. Claimants will have 60 days to request reconsideration under HB 3620.

Preliminary search turned up 18 claims that meet the "strawman" definition. Of these, only seven appear to qualify for additional home sites. This is because either claimants already received the maximum number of home site authorizations under Measure 49 or the earlier acquisition date would not qualify them for home site authorizations. An additional four claims could potentially result in a benefit by allowing the claimants to place their previously authorized home sites on denied portions of their claim property. *The search for additional qualified claimants is ongoing.*

Post-authorization development notices/monitoring. Completion of several database modules for tracking county-level post-authorization decisions and amount of approved development is near. These modules will allow the department to track:

- a. County notices, comment/appeal deadlines, and department actions;
- b. Transfer of ownership/10-year clock trigger;
- c. Total home sites approved per owner and 20-home site trigger (cross-county tracking);
- d. Vested claims (with DOJ's help, the department began comprehensive tracking of vested claims to prevent misuse of M49 authorizations);
- e. Development, in terms of partitions and dwellings approved (may incorporate building permits in future).

III. DEPARTMENT ORGANIZATIONAL AND MANAGEMENT INFORMATION

A. NEW STAFF AND PROMOTIONS

None

B. DEPARTING EMPLOYEES

Dale Blanton, Senior Coastal Policy Analyst in the Ocean and Coastal Services Division has submitted his notice of retirement effective December 1, 2011. Dale has worked for the department for 32 years. We wish him the best in his retirement.

C. RECRUITMENTS

The recruitment for the Ocean & Coastal Services Division Manager position has closed. Interviews will be held on September 29th. We are in the process of checking references and hope to make a selection soon in order to provide some overlap before Bob Bailey's departure on October 31, 2011.

The Planner 4 (Urban Specialist) position recruitment closed on July 28, 2011. Interviews were held on September 19.

The Operations & Policy Analyst recruitment closed on July 31, 2011. Interviews will be held on October 3, 2011 and references are currently being checked. We hope to make a selection very soon.

IV. LCDC POLICY AND RULEMAKING UPDATES

A. CURRENT RULEMAKING

The department is currently engaged in four rulemaking projects:

1. **Transportation Planning Rule (TPR):** The rules advisory committee (RAC), chaired by Commissioner Macpherson, is nearing completion of draft amendments to TPR 0060. The draft rule amendments will come to LCDC at the December meeting.
2. **Irrigation Reservoirs on Farmland:** See agenda item 6. The proposed rule amendments would clarify the siting of irrigation reservoirs on farmland. Public testimony was taken at the commission's June 22 meeting.
3. **Soils:** See agenda item 5. The advisory committee's recommendations will be presented at the October 2011 public hearing, at which time the department will recommend adopting these rules. Information is on the DLCD website at http://www.oregon.gov/LCD/Rulemaking_Soils_Assessment.shtml.
4. **Solar Rulemaking:** See agenda item 7. LCDC will consider this rulemaking at its October 2011 meeting.
5. **Federal Consistency:** Amended rules in OAR 660, division 35 have been drafted and are waiting for DOJ and NOAA review. The draft rules address "consistency requirements" of the Federal Coastal Zone Management Act. After review is complete the department will begin rulemaking.

B. OTHER POLICY ACTIVITIES

Urban Forum on Population Forecasts: The steering committee met on September 16 to receive input from the PSU Population Forecasting Center.

C. INITIATION OF RULEMAKING

Portland Metropolitan Area Scenario Planning Rulemaking

HB 2001, adopted in 2009, requires that the commission adopt rules providing guidance to Metro and local governments in the Portland area for the cooperative selection and implementation of a land use and transportation scenario that meets adopted greenhouse gas emission targets. The targets were adopted by the commission in May. The commission is required to adopt the metro area scenario planning rules by January 1, 2013.

Key provisions of HB 2001 that direct the rulemaking are provided below.

(8) On or before January 1, 2013, the Land Conservation and Development Commission, in consultation with the Oregon Transportation Commission, shall adopt rules that establish a process for cooperatively selecting a land use and transportation scenario for each metropolitan service district to achieve the greenhouse gas emissions reductions identified in the rules adopted pursuant to subsection (6) of this section and a process for the adoption of regional or local plans to implement the scenario. The rules shall:

- (a) Identify minimum planning standards for achieving reductions in greenhouse gas emissions through comprehensive plans and transportation system plans;
- (b) Identify planning assumptions and approaches to meet minimum planning standards identified in paragraph (a) of this subsection that ensure the Department of Land Conservation and Development can approve the changes to the regional framework plan, comprehensive plans, and land use regulations implementing the comprehensive plans;
- (c) Establish a cycle for initial adoption and updating of the transportation and land use scenario required by this section, including planning periods beyond 2035, relating the cycle to periodic review under ORS 197.628 to 197.650 and to urban growth boundary planning under ORS 197.296 or 197.298;
- (d) Ensure that local standards and criteria for land uses and for land development and transportation plans that implement the scenarios selected under subsection (2)(b) of this section:
 - (A) Are contained in the amendments to regional framework plans, functional plans, comprehensive plans, and land use regulations required by subsections (3) of this section; and
 - (B) Do not have the effect of preventing, discouraging, or delaying the implementation of the scenarios, except as necessary to protect the public health and safety.

(HB 2001, 2009 Oregon Legislature, Section 37(8))

At the December meeting, the department will recommend that the commission appoint a rulemaking advisory committee (RAC) to assist in developing a recommended rule. Since the rulemaking applies only to the Portland metropolitan area, the department expects that RAC membership will emphasize representatives of local governments and stakeholders in the Portland metropolitan area. The department will also be asking that the commission appoint a commissioner to chair the RAC process.

DLCD will also propose in December to review rulemaking requirements and review Metro's progress in conducting scenario planning, which is currently underway.

V. ATTACHMENTS

- A. Coastal Grant Awards**
- B. Coastal Program: NOAA and Fellowship Proposals**

Summary of Recommended Coastal TA Grants for 2011-12:

North Coast

<u>City of Astoria:</u> GIS data layer development	7,500
<u>City of Garibaldi:</u> Evaluation of Water Dependent Lands Supply	4,000
<u>City of Newport:</u> EOA update and implementation	15,000
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Subtotal	26,500

South Coast

<u>Coquille:</u> Goal 9 EOA/planning and zoning for GP Opportunity Site	15,000
<u>Curry County:</u> GIS mapping of existing G17 Shoreland boundary	5,000
<u>City of Florence:</u> Wetland and riparian areas Goal 5 protection	10,000
<u>City of Lakeside:</u> Comprehensive Plan update	6,000
<u>City of Myrtle Pt.:</u> GIS development	10,000
<u>City of North Bend:</u> Software to deploy GIS capability to all city staff	2,500
<u>City of Port Orford:</u> Completion of Comprehensive Plan update	4,500
<u>City of Port Orford:</u> Public outreach, monitoring and regulation of septic Systems in Garrison Lake watershed	2,000
<u>City of Reedsport:</u> Implementation Plan to construct plaza on waterfront	2,250
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Subtotal	57,250

PRELIMINARY TOTAL OF RECOMMENDED REQUESTS	83,750
TOTAL AVAILABLE FUNDS (FY09 \$33,000; FY11 \$75,000)	108,000
BALANCE REMAINING FOR PROSPECTIVE PROJECTS	24,250*

**The Coastal Shores Specialist will request and is hopeful to potentially add \$2,000 to the Tillamook County Coastal engineering Analysis project and potentially \$2,250 to the Bayshore DMP effort as these projects look to be underfunded. This would leave \$20,000 for other worthwhile projects which come up in the next few months.*

Oregon Coastal Management Program FY11 Mini-Grants

Organization	Contact	Date Received	Synopsis	Amount Requested	Support Letters	Partners/Leverage	501(c)(3)	Community Involvement	Outcomes	Amount Awarded
Central Coast Land Conservancy	Carla Perry, Coordinator; Caroline Bauman, President	8/31/2011	Restore & enhance the riparian area along an important floodplain along the Big Nestucca River.	1000	Letters of support from Neskowin & Sand Lake Watersheds Council and Northwest Oregon Native Plant Cooperative	\$3000 in-kind; \$3,000 Tillamook Bays Estuary Partnership	yes	Yes	Stabilized riverbank, improved relations with adjacent property owners	1000
North Coast Watershed Assoc	Jessica Jones, Coordinator	9/1/2011	Invasive weed removal event along four miles of the Astoria Riverwalk on 9/25/2011. Pilot test two modules of the Oregon Sea Grant Extension <i>Master Watershed Steward</i> program adapted for high school students.	900	No letters of support	SOLV, Columbia Riverkeeper, Clatsop Co Master Gardener	not clear	Yes	Removal of invasive plants and debris.	700
Coos Watershed Association	Jon Souder, Executive Director	9/1/2011	Pilot test two modules of the Oregon Sea Grant Extension <i>Master Watershed Steward</i> program adapted for high school students.	1000	Letters of support from OSU Sea Grant and Boys & Girls Club SW Oregon	Oregon Sea Grant, B & G Club Coos Bay; Marshfield High School; Oregon Community Fdn	not clear	yes	outdoor/estuary awareness among high school and community	900
North Coast Land Conservancy	Katie Voelke, Executive Director	7/15/2011	Invasive species removal across 700 acres of Coastal Prairie & Riparian Forest habitat ("Saturday Morning Stewardship" work party)	1000	No letters of support	Land Trust Alliance \$5,000; Oregon Parks Foundation \$3,000; NPS, Lewis & Clark Nat'l Historical Park; U.S. FWS; Camp Kiwanilong; Necanicum Watershed Council	yes	yes	Removal of invasive plants and debris.	900
POORT	Briana Goodwin, Outreach Coordinator; Leesa Cobb, Executive Director	8/22/2011	Port Orford Water Festival support	1000	Letters of support from City of Port Orford and Surfrider.	Surfrider Fdn \$3,500), So Coast Watershed Council, OPRD, ODFW, PO Arts Council, others	yes	yes	Public outreach, awareness, celebration of coast	1000
Salmon Drift Creek Watershed Council	Catherine Pruett, Executive Director	8/31/2011	Comprehensive tour of the watershed on 6/8/2012 (Mileage, printing and staff project management)	1000	Letter of support from US Fish and Wildlife Service	Total \$9,464 from others; City Lincoln City, USFWS, USFS, ODFW, American Rivers	yes	Yes	landowner & community awareness of watershed health	
Shoreline Education for Awareness, Inc	Bill Binnewies, President	8/27/2011	Purchase a digital projector for educational and other programs	1000	No letters of support	OPRD, USFWS	yes	Yes	increase public awareness	500
Sea Turtles Forever	Marc M Ward	8/30/2011	Clean up of Marine Plastic Debris Fragments at the north end of Cannon Beach	1000	No letters of support	not clear	Not clear	maybe	remove plastic micro debris	0
Friends of Sough Slough	Nicole Jackson, Vice President	9/9/2011	Hosting Educational and Interpretive programming in honor of Nat'l Estuaries Day, 2011	1000	OIMB and Charleston Community Enhancement Corp	OIMB, Bay Boat Building Center	yes	Yes	Public Awareness, debris removal, NED celebration	1000

\$6,000

Oregon Coastal Management Program (OCMP) 2011 CZMA §309 Project of Special Merit Grant Application



Yaquina River Estuary and Adjacent Shoreland Habitats

1. Project Title: Oregon Estuary and Shoreland Habitat Atlas

Applicant Contact Information:

Robert Bailey, Program Manager; Oregon Coastal Management Program, 635 Capitol Street NE, Salem, Oregon, 97301; (503) 373-0050 ext. 281; Bob.Bailey@state.or.us

Principal Project Manager: Andy Lanier, Coastal Natural Resource Specialist; Oregon Coastal Management Program, 635 Capitol Street NE, Salem, Oregon, 97301; (503) 373-0050 ext. 246; Andy.Lanier@state.or.us

Project Collaborators: The OCMP has a strong working relationship with the following programs with whom it will collaborate throughout this project, if funded.

Oregon Department of Fish and Wildlife Marine Region;
Oregon Department of State Lands;
South Slough National Estuarine Research Reserve, Charleston, Oregon;
Tillamook Estuaries Partnership, Tillamook, Oregon;
US Fish and Wildlife Service Oregon Coastal Refuges Office, Newport, Oregon;
US EPA Coastal Ecology Branch Lab, Newport, Oregon.

2. Project Overview:

2.1 Description:

The Oregon Coastal Management Program (OCMP) in the Department of Land Conservation and Development (DLCD) proposes a Project of Special Merit (PSM) to develop an on-line Estuary and Shoreland Habitat Atlas that will utilize numerous recently acquired digital datasets to rebuild the scientific and technical foundation for estuary and shoreland planning and management in Oregon. The PSM will take advantage of the recent [Shorezone](#) imagery, LiDAR, and other digital data for all of Oregon's estuarine shorelands (other than the Columbia River), the recently published draft [Coastal and Marine Ecological Classification Standard \(CMECS\)](#), and the state's estuarine habitat classification system. The PSM will result in new maps of estuarine and shoreland habitats served through an on-line atlas of data and data products to support local governments, state agencies, and others in revising local estuary and shoreland management plans required under Oregon's statewide planning program. This PSM directly supports tasks in Oregon's approved 2011-2015 [§309 Assessment and Strategy for Estuary and Ocean Shore Planning](#).

2.2 Geographic Area Affected:

The project will cover the tidally influenced areas and adjacent shorelands of more than 20 estuaries on the Oregon coast, covering a linear distance of almost 900 miles.

2.3 Background:

During the initial push to meet legislative deadlines to complete comprehensive estuary management plans in the early 1980s, Oregon state agencies developed maps of estuarine habitats derived from interpretations of mid-1970s aerial photographs. The spatial extent of estuarine wetlands, particularly tidally-influenced freshwater wetlands, was not fully understood or accurately mapped. These habitat maps were provided to local governments to implement Statewide Planning Goals 16 ([Estuarine Resources](#)) and 17 ([Coastal Shorelands](#)) through locally adopted estuary plans and thus became...and remain...the foundation for the enforceable policies of these local estuary management plans and implementing ordinances.

However, two problems lingered: first, local plans did not include data or maps for habitats and features in the estuary-upland interface area, identified in the Oregon Coastal Management Program as *coastal shorelands*, because there were no data or maps. Second, the maps of estuarine habitats and areas that were adopted in local plans were in paper, not digital, format and have not, for the most part, been updated. Remedies to these problems have been precluded due to lack of new data and insufficient funding.

However the OCMP in recent years has invested in acquiring a number of coastwide digital geospatial datasets covering estuary and shoreland areas including:

- 2011 ShoreZone: high resolution, geo-located aerial still photos of all coastal shorelands (with associated data on geomorphology and habitat type);
- 2007-2009 LiDAR (Light Detection and Ranging) data acquired for all estuaries on the Oregon coast;

- 2009 high-resolution color orthophoto coverage was acquired for all estuaries;
- 2004-2006 color-infrared orthophotos acquired for many estuaries;
- 2009-2011 data of location and ownership of estuary levees and dikes in all estuaries.
- 2004 GIS maps of estuarine restoration areas by Scranton (OR State Univ Masters Thesis);
- Complete estuarine wetland assessments and resource prioritizations (with associated GIS shapefiles) for 6 of Oregon's 10 major estuaries south of the Columbia.

These datasets provide a foundation for modernizing the scientific and technical foundation for local estuary and shoreland management plans and the state's estuary and shoreland management policy framework. This PSM will enable the OCMP to accomplish this modernization.

3. Priority Enhancement Areas

As identified in Oregon's approved 2011-2015 §309 Strategy, this proposed project addresses elements of the following Priority Enhancement Areas:

- Wetlands;
- Cumulative and Secondary Impacts;
- Coastal Hazards; and
- Special Area Management Planning.

Application of the project results to all four Priority Enhancement Areas is discussed in Section 5.3.

4. Associated Program Change:

The primary program change resulting from the proposed project will be a modernized scientific and technical basis for the enforceable policies of local estuary management plans and ordinances and for decisions made based on these plans and ordinances. The need for updated scientific and technical basis for estuary planning and management of Oregon's estuaries was identified in Oregon's 2011-2015 §309 Assessment and is widely acknowledged by local governments and state agencies. Updates could not be accomplished because of lack of current credible scientific and technical information to support management plans.

5. Project Description

5.1 Goal and Objectives

Goal:

to use current geospatial data and cutting edge information technologies to modernize the informational foundation for Oregon's estuary management program under the [Statewide Land Use Planning Program](#).

Objectives:

- a. to provide recently acquired GIS data of estuarine and shoreland areas and conditions to local governments.

- b. to create a geospatial database of each estuary that delineates the distribution of estuarine and shoreland habitats.
- c. to use the [Oregon Coastal Atlas](#) as a portal for accessing data from this project.
- d. to test decision-support tools such as [MarineMap](#) for using estuarine and shorelands data in a local government decision-making and planning processes.

5.2 Outcomes

This project will

- a. enable coastal local governments to make better planning and management decisions pertaining to estuarine and shoreland areas and resources, particularly with regard to anticipated effects of increased tidal elevations from climate change
- b. provide a long term benefit to local governments, state agencies, and federal agencies that have estuary and shoreland planning and management responsibilities.
- c. enable the State of Oregon to periodically review and assess the status and trends of habitat distribution in all coastal estuaries.
- d. provide the public and stakeholders with direct on-line access to data and data products about Oregon's estuaries and shorelands.

5.3 Addressing Priority Enhancement Areas

On one level, this project is not innovative at all. Rather, it is foundational and straightforward: ensuring that end users, those charged with making planning and management decisions about Oregon's valuable estuarine resources, have easy access to and skills to use the best available data to support their increasingly important decisions. On another level, however, the entire project is innovative: providing modern digital geospatial data acquired through remote sensing for every estuary on the Oregon coast to end users via Web-based technologies and decision-support tools.

As identified in Oregon's approved 2011-2015 §309 Strategy, this proposed project will address elements of four Priority Enhancement Areas:

- a. **Wetlands:** Conserving, protecting, and restoring the tidal and freshwater wetlands of estuarine systems are the principal policy reasons behind Oregon's Coastal Management Program as expressed in Statewide Planning Goals 16, Estuarine Resources, and 17, Coastal Shorelands. This project will result in publically-accessible geospatial data and data products about these wetlands via a Coastal Atlas website.
- b. **Cumulative and Secondary Impacts:** Estuarine shorelands comprise a critical interface between estuarine, terrestrial, and freshwater ecosystems and are especially subject cumulative and secondary effects of upland and in-water uses and development. Upwards of 90 percent of tidal wetlands have been lost in some estuaries due to development. The data and data products resulting from this project will enable measurable assessments and monitoring of cumulative and secondary impacts to each estuary and, cumulatively, coastwide.

- c. **Coastal Hazards:** Estuaries and their shorelands are at sea-level and are thus highly vulnerable to coastal hazards presented by winter riverine flooding, storms surge and ocean wave incursion, tsunamis, and increasing tidal elevations due to sea level rise. The results of this project will enable local planners, state and federal agencies, land owners, and others to better plan for avoiding, mitigating, or adapting to these hazards.
- d. **Special Area Management Planning:** Each estuary in Oregon is subject to an Estuary Management Plan adopted as part of the relevant county comprehensive plan required under state law. In many cases, portions of an estuary lie within a city boundaries and so the elements of the Estuary Management Plan pertaining to that city are adopted as part of that city's comprehensive plan. Both county and city implementing ordinances for the estuary must be consistent with the plan. Thus, each estuary in Oregon is subject to a Special Area Management Plan. The results of this project will enable coastal cities and counties to update the technical and scientific data in their plans and to review and amend policies and regulations to reflect the improved data.

5.4 Activities:

The OCMP will either contract for professional services or a hire a limited duration staff to lead the project. This professional will work with other OCMP Coastal staff and experts from other agencies and entities to

- a. consult with the NOAA Coastal Fellow (2011-2013) who will have surveyed local governments about the current status of the information and technical support for all local estuary plans and the availability of modern digital data sets for those estuaries.
- b. form a technical advisory committee (TAC) of experts from state and federal agencies, local watershed councils, academic institutions, and estuarine programs.
- c. hold a technical workshop to share project information, agree on the habitat classification methodology to be used, and obtain stakeholder input and advice; experts from Oregon State University will facilitate the workshop.
- d. with the OCMP Coastal GIS specialist, compile and catalogue available data into a geospatial database for each estuary, including shorelands.
- e. apply a shoreline classification methodology to the data for each estuary based on such classification systems as Version 3 of the Coastal and Marine Ecological Classification Standard (CMECS) and Oregon's Cowardin-based system recently revised by the OCMP and a team of experts
- f. consult with the TAC to identify and conduct field work necessary to validate accuracy of data and the application of habitat classification methodologies to delineate habitat areas.
- g. create data products depicting the location and distribution of estuary and shoreland habitats for each estuary; test the application of these products in MarineMap, an on-line decision-support tool.

- h. with the OCMP On-Line Services Administrator, create an Estuary and Shorelands Atlas module on the Oregon Coastal Atlas website and MarineMap applications.
- i. in partnership with South Slough National Estuarine Research Reserve, develop training opportunities in data acquisition and application for local government staff and other interested parties.

5.5 Likelihood of Success:

This project will succeed because many factors have lined up within the OCMP Coastal Program and partner programs to support this project, including:

- a. acquisition of a range of recent, relevant digital datasets for all coastal estuaries;
- b. OCMP staff who will provide expertise to the project;
- c. strong program relationships with technical and scientific experts in other state and federal agencies, universities, and non-governmental organizations;
- d. creation and administration of a very successful Coastal Atlas that now serves more than 3,500 datasets on-line and is the “go-to” website for information and data about the Oregon coast;
- e. experience in developing and using on-line decision-support tools, including MarineMap, during planning for ocean-based hydrokinetic energy facilities; and
- f. a NOAA Coastal Fellow whose project (2011-2013) paves the way for working with local governments to provide data and information needed to update local estuary plans and decision-making.

5.6 Project Evaluation Components and Activities:

Formative evaluation of project progress and products will be built into the project in three places:

One: the workshop of technical and scientific experts will evaluate the proposed methods for applying habitat classification systems to data to identify habitat distribution.

Two: field verification will evaluate the accuracy of data and application methodologies.

Three: local government staff in selected jurisdictions will be asked to evaluate the accuracy and utility of data and data products developed for their jurisdictions.

The OCMP On-line Services Administrator will be able to track website visits and downloads of data products through the Coastal Atlas website and so will be able to analyze and evaluate the utility of the Oregon Estuary and Shorelands Atlas as a data portal.

6. Benefits to Coastal Management

6.1 Benefits to the Oregon Coastal Management Program

It is hard to overstate the benefits of this project to Oregon’s Coastal Management Program. Having a geospatial database of estuarine and shoreland habitats for all Oregon estuaries will revolutionize the way that local governments and state agencies, in particular, access and use information to support estuary planning and management.

Instead of paper maps of varying scales and widely ranging accuracy, federal agencies, watershed councils, port districts, conservation organizations, and landowners, too, will have the ability to access and use these same data to support their interests and needs in estuary and shoreland conservation and development. This will increase transparency and accountability in decision-making.

Oregon's Coastal Management Program will benefit in four specific ways:

First, the new geospatial information will be used by local governments to support updates and modernization of 30 year-old estuary management plans. The OCMP will begin this process with a pilot project for a single estuary described for formula-based funding in Year Two of the approved 2011-2013 §309 strategy. The results of the project will be available to local governments beginning in mid- to late-2013 and will serve as a guide for other local governments to update estuary plan policies and ordinances over the following five years or so.

Second, the new information will be used by local governments, state and federal agencies, and others as the basis for near-term management decisions as soon as data are made available in mid- to late-2013.

Third, the new information will be available to support planning for the effects of climate change such as increased tidal elevations on estuarine and shoreland habitats and community. This work can begin even as the proposed project is underway.

Fourth, the professional capacity of local governments will be enhanced through training of local staff to access and use these data. This will occur late in the project, in mid- late-2013.

Over the long term, the new geospatial data will be invaluable for conducting coast-wide assessments of the status and trends of estuarine conditions and function, which simply cannot be done today with available data. The data will serve as a geospatial baseline for monitoring estuarine and shoreland ecosystem changes as tidal elevations increase and estuarine habitats respond to sea level rise and other effects of climate change. The new data will also enable retrospective analysis of changes in estuarine habitat and ecosystem functions over the past 30 years.

6.2 Transferability:

Several aspects of this project are highly transferrable, including:

- the concept of a digital data catalogue for each estuary that includes all relevant geospatial data for a defined area encompassing the estuary;
- the concept of defining a shoreland area that is directly linked with the ecological and physical functions of the estuary, within which land use and other management decisions should consider impacts on estuarine habitats and functions;
- the methods of delineating estuarine and shoreland habitats using remotely-sensed digital geospatial data, field verification, and agreed-upon habitat classification systems;
- the practice of creating a web-based tools to support the data catalogues; and

- the practice of training local planning staff to use digital data relevant to their jurisdiction.

7. Documentation of Fiscal and Technical Needs and Past Performance

The OCMP does not have the personnel or funding to complete this project without the CZMA§309 grant funding. Although the agency is prepared to move ahead with the more limited §309 work with formula-based funding, the products from this project will greatly enhance the outcomes of the demonstration pilot project(s) proposed under the weighted formula task and to provide relatively consistent levels of data and information to additional communities with outdated estuary plans.

The OCMP has a positive record of using §309 fund to enhance the Oregon Coastal Management Program. Some of the progress and enhancements are described in the 2011-2015 §309 assessment and strategy approved by NOAA/OCRM (See pp. 10-13). The OCMP has a solid record of completing its §309 work tasks as reflected in semi-annual grant performance reports.

8. Project Work Plan

While the work plan tasks are laid out in sequential order, it is possible that the project lead will choose to overlap task work as needed. For example, the conduct of field work to ground truth the draft habitat maps may occur in conjunction with other work, in order to access the habitats during the low-tide work windows throughout the year.

8.1 Project Timetable: July 1, 2012-December 31, 2013

This work will take place over 16-18 months and the results will be integrated into the estuary planning update work identified to take place during years 3-5 of Oregon's approved 2011-2015 §309 Strategy.

8.2 Description of Activities

Task 1: Setting the Stage (July – October, 2012)

Subtask A: compile, catalogue and organize available data into a geospatial database for each estuary.

Subtask B: form a technical advisory team to advise on project implementation and assist in creating a standard method for classifying estuarine and shoreland habitats using available data.

Subtask C: hold a workshop of technical and scientific experts and stakeholders to share project information and agree on classification and field verification methodologies. .

Task 2: Generating Habitat Classification Products (November – July 2013)

Subtask A: create draft estuary and shoreland habitat maps by using digital data and applying the habitat classification methods.

Subtask B: conduct field work as needed to verify the accuracy of the classification methodology; work with local resource managers to ensure quality control.

Subtask C: hold workshop with technical advisory committee and other stakeholders to review all results.

Task 3: Data Availability and Applications (August – December 2013)

Subtask A: create an online Oregon Estuary and Shoreland Habitat Atlas, a data portal on the Oregon Coastal Atlas, containing the products from the effort. This portal will enable resource managers, planners and the public to download and review GIS data and data products produced by the project.

Subtask B: test applications of the data in MarineMap, an on-line decision-support tool currently being used by the OCMP for ocean spatial planning.

Subtask C: provide training opportunities for local government planners and others for acquiring the data via the Atlas and using the data, either directly or via MarineMap, to support estuary planning and decision-making.

8.3 Activities/Milestones/Date of Completion:

- Geodatabase compilation (July – September 2012)
- Agree on classification/mapping methods (hold workshop) (September - October 2012);
- Apply methods and generate draft habitat maps (November 2012-July 2013);
- Hold an information sharing and stakeholder input workshop (April-May, 2013);
- Groundtruthing field verification (May – August, 2013);
- Generate Oregon Estuary and Shoreland Habitat Atlas, test MarineMap (August-December 2013).

8.4 Outcomes and Date of Completion:

The project will be completed by December 31, 2013.

For Outcomes see Section 5.2

8.5 List of Final Products:

A comprehensive set of estuarine geospatial databases for each estuary, including

- A catalogue of remotely sensed digital data (e.g. LiDAR, orthophotos, ShoreZone) in GIS format for each estuary (except the Columbia River);
- Interpreted GIS data layers of estuarine and shoreland habitats for most estuaries (not including the Columbia River estuary);
- A portal on the Oregon Coastal Atlas website, the Oregon Estuary and Shoreland Habitat Atlas, specifically devoted to serving these data to the public.

- Test applications of MarineMap to provide a decision-support tool for management entities.

9. Project Budget:

9.1 Total requested

\$160,000

9.2 Budget Narrative

The project work program will be carried out through professional services to be contracted through an intergovernmental agreement with another state agency or acquired through a Limited Duration position at the DLCD. The OCMP will retain a small portion of the §309 funds to manage the overall project to ensure the project meets the timelines in the grant award and that the products are satisfactory.

Subcontracts will be awarded for the workshop scheduled during Task 2, and for technical services in Task 3 to assist in creating a new portal and integrating data within the Oregon Coastal Atlas and testing data applications in MarineMap. Other professional services will be provided to the project through existing OCMP staff supported by other funds, including the state’s federal Coastal Zone Management Grant.

Supplies and travel cost estimates are based on project of similar scope undertaken with a NOAA Fellow over the past two years. The supplies line item includes the cost for a dedicated computer and necessary special software required to complete the work tasks.

9.3 Budget Table:

<u>Budget Category</u>	<u>Task 1</u>	<u>Task 2</u>	<u>Task 3</u>	<u>Total</u>
Personnel	16,997	47,479	30,482	94,958
Fringe	6,142	15,344	9,200	30,686
Travel	0	3,250	0	3,250
Subcontract	0	15,000	10,000	25,000
Indirect	0	0	0	0
Supplies	4,250	1,070	786	6,106
Equipment	0	0	0	0
Other	0	0	0	0
Total	27,389	82,143	50,468	160,000

Digital Estuaries

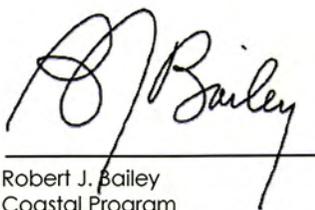
Climate Change, Restoration, and Sustainability
on the Oregon Coast

A Proposal for a NOAA Coastal Fellowship
2011 – 2013
NOAA Coastal Services Center



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Proposed 2011-2013 NOAA Coastal Management Fellowship Oregon Coastal Management Program

Digital Estuaries Climate Change, Restoration, and Sustainability

Introduction

Time, sweeping advances in information technology, a changing climate, and fundamental economic shifts have created both needs and opportunities to modernize the data and information that support Oregon's historically successful Estuary Management Program. Oregon proposes a NOAA Coastal Fellowship to meet these needs and realize opportunities to transform the foundation for Oregon's Estuary Management Program into a technically sophisticated digital decision support framework. As a result of this project, Oregon state agencies and local governments will be well-positioned to meet the challenges of planning for climate change, ecosystem restoration, and sustainable coastal communities.

Background

For more than 30 years, the Oregon Coastal Management Program (OCMP) has successfully balanced the protection, use and development of Oregon's estuarine habitats and adjacent shorelands in and around 22 estuaries, big and small. Each estuary has a management plan adopted by a local government that meets state-level standards for estuary and shoreland management; and is based on information about estuarine habitats, physical conditions; existing land and water uses, and projections of need for future land and water uses. Local plans based on state standards in Goals 16, Estuarine Resources, and 17, Coastal Shorelands, provide the basis for management decisions by local, state, and federal governments.

The principal effects of Oregon's Estuary Management Program have been to confine development in estuaries to areas previously developed, and to prevent further loss of estuarine wetlands by dredging, fills or other alterations. Local estuary and shoreland management plans have enabled local governments, state agencies, and federal agencies to make coordinated decisions to avoid or minimize adverse impacts from development, to protect water-dependent and water-related sites for those uses, and to restore estuarine functions to altered sites. However, the information upon which the plans are based has not been updated since the early- to mid-1980s, and thus may no longer reflect current conditions within and around the estuaries.

Coastal local governments need to plan for the likely effects of climate change, especially in estuaries and shoreland areas. Oregon's estuaries and the shoreland areas surrounding them are vulnerable to several effects of climate change: higher tidal elevations driven by sea level rise, landward migration of tidal wetlands, changes in habitats due to changes in salinity, and increasing incidence of severe winter flood events. Oregon's Estuary Management Program provides a framework to plan for these effects, but doing so will require substantially updated data and information. The OCMP has worked with a number of partners in recent years, including a NOAA Fellowship in 2009-2011, to acquire data of potential value to local governments in planning for the effects of future climate conditions on Oregon's estuaries and shorelands. The OCMP proposes this Fellowship to compile data from various sources, create information products, and assemble them into a coherent framework that can be used by local governments and others to plan for the effects of climate change on Oregon's estuaries and shorelands.

Project Description

The Fellowship project will enable an energetic and talented Fellow to make an important contribution to a cornerstone of Oregon's Coastal Management Program. The Fellow will update the inventory of estuarine and shorelands information used for local estuary and shoreland management plans and modernize the delivery of digital data to a range of users. The fellow will create at least one new data product, a map of the "Estuary Shorelands" for each major estuary. This product will include lands around Oregon's outer coast estuaries that are likely to be affected by changing climate conditions in the next several decades. This layer will be specifically developed for use in planning for climate change, and will help determine the spatial extent of other data that will be packaged and served to users.

Needs and Opportunities

Needs: The OCMP has a need to modernize the data and analytical context used for local estuary and shoreland planning and management decisions, particularly in planning for the likely effects of climate change on estuaries and shorelands.

Opportunities: Modern technology provides opportunities to integrate digital geospatial data and decision-support tools into an on-line environment for system-wide mapping and analysis to support local estuary and shoreland planning and management decisions on the Oregon coast.

Four themes underlie the needs and opportunities to upgrade the information base for estuary and shoreland planning and management on the Oregon coast:

1. New Challenges: Climate Change and Adaptation

Conditions in Oregon's estuaries have changed in the past 30 years, and the effects of climate change are likely to drive even more fundamental changes. Coastal communities will need to determine the likely effects of future climate conditions on public and private infrastructure and development and make decisions about how to adapt to these changed conditions. Natural resource agencies, conservation organizations, and property owners will need to make decisions about where to restore tidally-influenced habitats and where to allow for the landward migration of wetlands and other habitats. Changes to flood regimes near estuaries will require greater attention to planning for the use and management of floodplains, in particular in areas affected by both the National Flood Insurance Program and the Endangered Species Act.

Coastal local governments, state agencies, landowners, and the public will want to use accurate and up-to-date data, data products, and information to support assessments of estuary and shoreland management plans, policies, and practices and to prepare for future climate conditions. They will require better delineation of the extent of estuaries and tidal wetlands. In this project, available data on estuarine and shoreland conditions will be integrated into a modern geospatial analytical environment with a variety of other data that can be easily modified, replaced, or supplemented with newer information.

2. Newly Available Data

Most local estuary management decisions continue to be based on inventory information that was generated in the late 1970s and early 1980s. Maps and other information used to support decisions still reflect conditions at the time the plan was adopted, although many changes to land uses and adjacent shorelands have occurred since then. The original estuary habitat maps were based primarily on physical characteristics that have since changed. Shorelines were based on USGS topographic sheets from the 1970s. The spatial extent of tidally-influenced freshwater wetlands was not fully understood or accurately mapped.

Recently produced digital data on Oregon's estuaries that are ready to be assembled into a single decision support framework include:

- 2007-2009 LiDAR elevation data acquired for the entire Oregon coast;
- 2009 high-resolution color orthophoto coverage acquired for all estuaries;
- 2004-2006 color-infrared orthophotos acquired for many estuaries;
- 2009-2010 geo-spatially accurate data on the location and ownership of estuary levees, dikes, and tidegates acquired through a NOAA Coastal Fellowship in the OCMP;
- 2004 mapping of tidal wetlands and potential estuarine restoration areas
- Updated National Wetland Inventory (NWI) maps
- 2010 work to delineate a Mean High Water line using LiDAR data and NOAA's V-Datum Tool;
- 2009-2011 digital Flood Hazard and All-Hazard maps from FEMA, DLCD and DOGAMI;
- Digital data on ownership and location of property parcels are available from county assessors.

This project will compile and assemble these data into a single coherent information system to update the foundation for local planning to adapt to future climate conditions.

3. Advances in Information Technology

In the early 1980s, estuary planning relied on paper maps and drawings on mylar overlays. The base maps of habitats and estuary boundaries provided by state agencies in the 1980s have rarely been updated. Over the years, maps and other data used for specific decisions have generally not been integrated into the local information base for the plan, or communicated to state and federal agencies. New data acquired by state and federal agencies and estuarine scientists have not been made easily accessible to local governments. The disparity in the source, quality, extent, and vintage of readily-available information means there is no longer a consistent framework or information base for updating estuary and shoreland plans.

The information technology available to support estuary planning has changed dramatically in the past 30 years. Today, LiDAR data, color orthophotos and other remotely sensed data, in-situ monitoring stations, and especially GPS technology provide a wealth of spatially accurate digital data about estuaries and shorelands that can be combined and analyzed to answer questions and create needed information products. Moreover, these technologies provide the capability to rapidly acquire and use new data from several sources.

To the extent possible with recently-acquired data, this project will develop a consistent informational foundation for estuary and shoreland planning. Further, the project will develop an on-line portal for estuary and shoreland data to enable local governments, state agencies, conservation organizations, citizens and property owners to all use common data and to derive the different information products needed for decision-making. The [Oregon Coastal Atlas](#), an on-line service of the OCMP is one portal for digital data and other information and is ideal for serving estuarine data to local governments and other users.

4. Changing Coastal Communities

Over the past 30 years the economy, demography, community aspirations, and forces affecting estuarine development have changed substantially. The wood products industry, once a dominant user of estuaries and principal driver of estuarine alteration, is significantly reduced, even in the major estuaries. The coastal dairy industry, once the main reason for diking and draining estuarine wetlands to create pasture, now struggles in difficult economic times and a tougher regulatory environment.

Although there are still concerns about water quality from land use practices, particularly urban development and rural residential development, and legacy conditions in coastal watersheds, water quality in estuaries has improved as a result of improved management practices in the timber and dairy industries, closing of antiquated pulp mills, lumber mills, and other industrial uses, and restoration by landowners of watershed habitat for salmon. In response to improved water quality, the commercial oyster industry, once relegated to small tributary sloughs, has expanded into the main bays in several estuaries. Recreational fishing in estuaries has expanded.

The changes in economic and social needs and aspirations of coastal communities and the effects of climate change make this an opportune time to harness current data and information technologies to the need to identify and protect ecosystem services that benefit communities. Information compiled under this project will support efforts to continue to improve water quality and protect habitats in Oregon's estuaries. The project will provide the capability to use current data and information to identify areas where wetland habitats and estuarine function can be restored or allowed to migrate inland; to identify wetlands in need of local protection; and to identify specific land uses that may be generating excessive pollution loads for an estuary.

Goals and Objectives

Goal:

To create an integrated data repository and framework for each of Oregon's estuaries that local governments, state agencies, landowners, and others can use to plan for climate change impacts, conservation and restoration opportunities, economic development, and other purposes.

Objectives are to:

- Inventory the status and geographic extent of data and information about habitats, physical conditions, and human uses in and around Oregon's estuaries;
- Compile data and information about habitats, features, shorelands and human uses for each estuary;
- Create a new digital information foundation to support planning for the effects of climate change on habitats and human uses;
- Develop an estuary portal on the Oregon Coastal Atlas to serve the data products; and
- Provide training in the use of GIS for decision support

Strategic Focus Areas

The Fellowship project will address both the Competing Uses and the Changing Climate Strategic Focus Area. Results of this Fellowship project will be used in a public land use planning context to address the likely effects of climate change on the estuarine and shoreland environments. The project will have consequences in the real world by helping local governments and state and federal agencies to:

- Help communities plan for and adapt to the effects of increased tidal elevations on public and private infrastructure and to changes in estuarine ecosystems caused by climate change;
- Protect and restore estuarine habitats, ecosystem functions and services, and other green infrastructure to restore healthy populations of threatened and endangered salmonids and maintain viable shorebird habitats; and
- Plan for sustainable development and redevelopment in shoreland communities, especially as they transition to new economies through environmentally-appropriate economic development.

Milestones and Outcomes

Task 1: Estuary Plan Status Review (Sept –Oct, 2011)

This task will introduce the Fellow to the coastwide Estuary Management Program, local estuary and shoreland management plans, and the information and data that local governments use to support estuary and shoreland planning and management decisions. The Fellow will work with the OCMP mentor and coastal field staff to create a work program and timeline for visiting local estuaries, reviewing existing plans, and meeting key local contacts. Because counties are the primary estuary coordination entity, the Fellow will meet with appropriate staff in each of the coastal counties to discuss the project, identify data needs and availability, assess local technical capacity, and seek continuing engagement throughout the project.

- **Outcomes:** Inventory of background data for existing estuary plans; network of local government contacts; familiarity with Oregon Estuary Management Program; detailed work program.

Task 2: Data and Information Acquisition (Oct. 2011 – March 2012)

a. (Oct. – Dec. 2011) The Fellow, with assistance from the OCMP mentor and other OCMP staff, will convene an Estuary Data Working Group to assist in identifying current data sets and information that are available to support local estuary and shoreland planning, and to assist in the work of creating data sets and new data products. Working Group members will be drawn from local government, the ODFW, DSL, South Slough National Estuarine Research Reserve, Tillamook Estuaries Partnership, Columbia River Estuary Study Taskforce, Oregon State University, U.S. EPA Coastal Ecology Branch, U.S. Fish and Wildlife Service, The Wetlands Conservancy, and The Nature Conservancy.

- **b. (Jan – March 2012)** The Fellow will acquire relevant digital data sets (with metadata about the source, acquisition date, format, spatial coverage, etc.)

- **Outcomes:** Inventory and copies of current data sets to support estuary planning; Estuary Working Group coordination and facilitation.

★ **Summer 2012 Milestone:** Poster presentation at the 23rd Coastal Society Conference.

Task 3: Data Creation and Packaging (March 2012 – March 2013)

a. (March –November 2012) The Fellow will consult with the Estuary Data Working Group and OCMP staff on the parameters for determining the functional extent of estuaries as an early step in establishing the geographic scope of information products to be developed. The Fellow will then create an Estuary Shoreland data set via analysis of digital data sets previously acquired and supplemented as needed (ground-truthed) with local knowledge and field surveys.

c. (December 2011- March 2012) For each estuary, the Fellow will create a suite of digital data themes that will be reviewed with local government planners and the Working Group. Final data packages will be hosted on the Oregon Coastal Atlas.

- **Outcomes:** New data layer depicting Estuary Shorelands for each estuary; a suite of geo-referenced digital data for each estuary; estuary data portal on Oregon Coastal Atlas.

Task 4: Outreach and Training (March – Aug 2013)

The Fellow will work with appropriate staff at South Slough National Estuarine Research Reserve to provide training for local governments in use of these decision support products.

- **Outcomes:** Training for local staff and officials.

★ **Summer 2013 Milestone:** Oral Presentation at CZ13 Coastal Zone Conference.

Fellow Mentoring

Where: The Fellowship project will be housed in the Portland office of the Oregon Coastal Management Program (OCMP), a division of the Oregon Department of Land Conservation and Development.

Who: The Fellow will be mentored by two senior Coastal Program experts: Tanya Haddad, Coastal Web Services Administrator (and former NOAA Coastal Fellow) will provide oversight on development of a technical work plan, project schedule, and technical aspects of product development; Jeff Weber, Coastal Conservation Coordinator, will provide guidance on estuarine planning and management needs and climate change planning initiatives. Tanya and Jeff work in the Portland office along with Coastal GIS Specialist Randy Dana who will assist on technical aspects of data development and GIS analysis. The Fellow will consult with Dave Perry and Matt Spangler in the Newport office who are south and north coast field services representatives, respectively. The Fellow will confer periodically with the Coastal Program Manager, participate in monthly Coastal staff meetings, typically held in the main DLCD office in Salem, and participate in semi-annual coastal network meetings with local planners.

Value to Fellow: The Fellowship project will provide a broad experience in many factors that make up estuarine and coastal management. The Fellow will gain hands-on experience with information technologies such as GIS, decision support tools, and Web-based data delivery. The Fellow will also meet and work with estuarine practitioners at the community level such as city and county planners, watershed council staff, and others with local knowledge, and work with professionals in the field of estuary management, restoration, and research in local, state, and federal agencies, non-governmental organizations, and academia.

Project Partners

Estuary management is central to Oregon's Coastal Management Program. A wide number of partner agencies have interests in the planning and management of estuaries and thus will have a strong interest in the outcomes of the Fellowship project. Key partners include

[Oregon Department of State Lands](#) (DSL) has jurisdiction over submerged and submersible lands, including estuaries, and as such has a keen interest in the information base used by local governments to support estuary plans and management decisions.

[South Slough National Estuarine Research Reserve](#) (SSNERR) is a program within the DSL, above, and conducts research, education, and training programs aimed at improving restoration and protection of estuarine habitats. SSNER provides technical assistance and training for local officials and will assist the Fellow in the training aspects of this project.

[Tillamook Estuaries Partnership](#), one of 28 National Estuary Projects, supports conservation activities within the shorelands and watersheds of Nehalem Bay, Netarts Bay, Tillamook Bay, Sand Lake, and Nestucca Bay.

[CREST \(Columbia River Estuary Study Taskforce\)](#) provides technical and land use planning assistance to its member local governments around the Columbia River estuary, carries out estuarine habitat restoration projects, and conducts monitoring of estuarine conditions.

Other interested partners that will be involved include:

[Oregon Watershed Enhancement Board](#) (OWEB): provides state funds to local watershed councils and watershed restoration projects, including in estuarine areas.

[US Fish and Wildlife Service](#): The USFWS Oregon Coastal Refuges Office manages a National Wildlife Refuge in three Oregon estuaries, Nestucca Bay, Siletz Bay, and Coquille River and has a strong interest in restoring estuarine habitats and ecosystems.

[Environmental Protection Agency Pacific Coastal Ecology Branch](#): The EPA lab in Newport conducts a wide range of research into estuarine ecology on the Oregon coast and is a leader in developing data and information on change in estuarine ecosystems and anticipating the likely effects of climate change.

[Pacific Coast Joint Venture](#): This non-profit organization is one of 14 created under the North American Waterfowl Management Plan and has a strong interest and expertise in the conservation and restoration of estuarine wetlands and habitats.

[The Wetlands Conservancy](#) is a non-profit foundation headquartered in Portland with a strong interest and program activities related to estuarine wetland conservation and restoration.

Cost Share Description

The State of Oregon will contribute both in-kind services and a \$15,000 non-federal cash match from the Department of Land Conservation and Development's general fund. The Department will provide in-kind match in the form of work space, equipment, materials and supplies, and support services at the Portland State Office Building location.

A furnished computer work station and appropriate software will be provided, along with all necessary office supplies and materials for performing the work. Standard software employed by the OCMP includes Microsoft Office (Word, Excel, Access, and Powerpoint), ESRI products, and ER Mapper. The agency is PC-based with each staff member having a desktop computer, as well as access to an equipment pool that includes laptops, printers, scanners, a projector, a digital camera, and a handheld GPS unit. Travel costs to in-state destinations in performance of the work program will be reimbursed by the Department in accordance with the state travel rules. The work space, supplies and services, and travel support will be provided for the entire two-year period of the Fellowship. Because the CSC Fellow will be part of the DLCD staff he or she will have equal access to all training offered to permanent staff as well as special training identified as needed.