

SOUTH SLOUGH RESERVE MANAGEMENT COMMISSION

AGENDA

South Slough National Estuarine Research Reserve
South Slough Interpretive Center
61907 Seven Devils Road - Charleston, Oregon

18 November, 2010

129th REGULAR MEETING 1:00-4:00 P.M.

- I. Call-to-Order
- II. Introductions
- III. Approval of the 128th regular meeting minutes
- IV. Public Input*
- V. Old Business
 - A. Unauthorized activities Progress Report (H. Klausner)
 - B. Relocation of Administrative offices to Charleston (R. Elledge, M Graybill)
 - C. Frederickson House Progress Report. (H. Klausner)
 - D. Barview Property donation Progress Report (T. Gaskill)
 - E. Other
- VI. New Business
 - A. FY 2011 NOAA Construction and Acquisition Requests (R. Elledge, M. Graybill)
 - B. 2011 Commission meeting schedule (Chair, L Solliday)
 - C. Other
- VII. Informational presentation: Overview of energy investments at the SSNERR interpretive center (P. Wilson)
- VIII. Informational Items
 - A. Administration updates including: FY 2011-2013 budget; Agreement with Port of Coos Bay; NERRS sustainability initiative
 - B. Education programs update including NOAA Bay Watershed Education and Training (BWET) grant.
 - C. Science programs updates including: Forest Management Proposal; NOAA FY 2010 Coastal and Estuarine Land Protection Program; Marine Reserve Evaluation Committee; and Partnership for Coastal Watersheds
 - D. Other.
- IX. Adjourn

* This meeting is being held in a facility that is accessible for persons with disabilities. If you need some form of assistance to participate in this meeting due to a disability, please notify Robin Elledge at 541-888-5558 ext. 23 at least two working days prior to the meeting.

*Limited to 5 minutes each unless arranged in advance of the meeting.

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**SOUTH SLOUGH NATIONAL ESTUARINE
RESEARCH RESERVE
MANAGEMENT COMMISSION**

South Slough Reserve Interpretive Center
Charleston, Oregon

DRAFT MINUTES OF THE 128TH REGULAR MEETING

July 29, 2010

COMMISSION MEMBERS PRESENT:

Richard Hamel	Louise Solliday, Chair
Craig Young	James Fereday
George Boehlert (via telephone)	Ron Stuntzner

COMMISSION MEMBERS NOT PRESENT:

Robert Emmett	Kevin Stufflebean
Mark Ingersoll	

SOUTH SLOUGH NERR STAFF PRESENT:

Mike Graybill	Pam Wilson
Robin Elledge	Tom Elledge
Ali Helms	John Bragg
Steve Rumrill	Tom Gaskill
Hans Klausner	Don Smith
Nate Damewood	Deborah Rudd

OTHERS PRESENT:

Joann Hamel, public	Nicole Jackson, FOSS
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The meeting was called to order at 1:01 p.m. by the Chair of the Commission, Louise Solliday.

INTRODUCTIONS:

Chair Solliday asked everyone present at the meeting to introduce themselves.

APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING:

Chair Solliday asked if there was a motion to approve the minutes of the previous meeting. **Commissioner Young moved to approve the minutes of the previous meeting Commissioner Fereday seconded the motion. The minutes were approved.**

PUBLIC INPUT:

There was no public input.

OLD BUSINESS

Report on Unauthorized Activities

1. Mike Graybill gave details of the maps provided as he described that there have been livestock in the Winchester Creek drainage. The property adjacent to the Reserve was purchased by Coos County some years ago. The property is presently used by the life estate tenant who sold the property to the county. The fence between the Reserve and the County property has not been maintained and livestock are straying onto the Reserve. The staff proposed to build a wildlife friendly fence along the property line using Reserve funds. The fence is designed to contain cows but permit elk to jump the fence and deer and smaller animals to go under the fence. (BLM uses this type of fence.)
2. An adjacent landowner to the NE of the Reserve, Jim Oxford, has had a previous trespass on the Reserve and appears to be trespassing again. The initial trespass resulted in a boundary change and trade for other lands. More recently, a horse paddock has been built and appears to be partially on Reserve land. There also appears to be non-compliant structures near if not over the property line. Staff recommended that a fence be built on the Reserve bordering the southern perimeter of the Oxford property.

Commissioner Boehlert recommended action to have the structures moved or removed from the location if not in compliance and recover the cost of restoration. Chair Solliday indicated that the legislature has given DSL the authority to enforce civil penalties up to \$1000 per day. There was discussion also about the surveys that have been completed yet appear to be inconsistent. After the previous trespass, it was at Oxford's

expense to complete a survey, however, that appears to be inconsistent also.

Commissioner Fereday agreed with Commissioner Boehlert. Commissioner Fereday made a motion that after completing an adequate survey, Oxford would need to remove the structures and restore the property if in violation, at Oxford's expense. Commissioner Boehlert seconded the motion.

Discussion continued and the motion was amended to include "restored to the satisfaction of the Commission". Commissioner Young recommended a kinder and gentler way to approach the subject and Chair Solliday indicated that the process includes four letters are sent before being forwarded to the DOJ for action. Commissioner Young said okay. Chair Solliday called for a vote and it passed with no opposed.

It was noted that Jim Oxford has acknowledged the current trespass to staff.

Update Relocation to Charleston

Mike Graybill gave a brief verbal update on the relocation of the administrative staff to Charleston. Commissioner Young informed the board that the sales and purchase agreement was being signed today by both the U of O and the seller of the property adjacent to the OIMB campus. The sale was expected to close on or before 31 August 2010.

The legislative visit proposed for September 2010 by Senator Verger & Representative Roblan has been postponed. Commissioner Boehlert suggested getting the support of the Chair of Coastal Caucus for the Charleston, Oregon Solutions Project.

NEW BUSINESS

Recognition of Commissioner Rich Hamel

Mike Graybill acknowledged Rich Hamel as the recipient of the 2010 Walter B. Jones and NOAA Excellence Award for Volunteer of the Year. Commissioner Hamel, accompanied by his wife, made a trip to Washington, D.C. to accept the award.

SSNERR Energy Plan

Mike Graybill discussed the draft energy plan. As a draft, the plan still needs to balance the introductory discussion of the links between energy and climate and specific actions to be taken by the Reserve.

Chair Solliday indicated that the plan needs additional work. The elements are there, but need an executive summary. The presentation of elements of the plan could be reorganized to improve readability and utility to the Commission and staff using the plan. Commissioner Young agreed and suggested the audience should be primarily the staff of the Reserve.

The current draft is structured as an article written for an audience that may not be familiar with the links between climate and energy use. Commissioners recommended that staff shift the style of the document to emphasize a synoptic list of tasks and actions to be undertaken by the reserve. . Chair Solliday indicated that the Oregon Climate Research Institute is due to deliver their report to the legislature December 1, 2010. Agencies are putting together an adaptation framework to the top 10 actions that are doable with least cost in the next biennium. Chair Solliday suggested the Reserve may want to wait for that report to complete this plan.

Commissioner Fereday asked if we have had a Department of Energy Audit which is a recommendation of things that need to be done. He described a facility type plan which may have energy credits available.

Commissioner Stuntzner recommended using measurable parameters for energy audits.

Frederickson House

Mike Graybill discussed the condition of the Frederickson House including concerns about the safety of the structure interest in the structure expressed by members of the public and by the Friends of South Slough, as well as staff recommendations. Renovations would cost more than demolishing or building new.

Commissioner Hamel commented on the positive impact of historic houses at public facilities. The structures identify a place. He referred to First Nations – Indian structures of thousands of years ago. They are unique locations and reflections of the history of human interaction with the local landscapes.

Commissioner Hamel provided a handout with a written motion (see next paragraph). Commissioner Stuntzner seconded the motion.

I make a motion to delay any decision on the dismantling of the Fredrickson House at this time and that the staff be directed to prepare a definitive plan for the house, it's immediate surrounds and the out building or barn that is currently standing. The plan shall include the following:

1. An accurate estimate (within 25%) of all costs associated with the proposed dismantling including all related staff labor.
2. A detailed description of a replacement structure of consequence on the footprint of the house which will provide a permanent identity for the site for the future and also has a useful purpose for the present such as the Observation Shelter at the William L. Finley National Wildlife Refuge.
3. A detailed description for the landscaping and prescribed care for the land immediately surrounding the replacement structure and the barn if it is left standing.
4. A specific description of the disposition of the barn.
5. A realistic estimate of the salvage value of reusable materials from the dismantled house if it is dismantled.

Commissioner Young likes Commissioner Hamel's motion and proposal. He doesn't want to get rid of the Frederickson House or "the structure" and suggested trying interpretive panels.

Commissioner Fereday commented on being careful of the bats that reside there. Commissioner Stuntzner made comment of asking an architect for an opinion. Commissioner Hamel spoke of attending a conference in Medford. He suggested writing a proposal to the Kinsman Foundation.

Chair Solliday spoke of repairing the exterior, not restoring it. There would be no work done to the interior of the structure. Chair Solliday also suggested the U of O School of Architecture in which a student team could come here to review and evaluate the structure.

Chair Solliday called for a vote on the motion, it carried with no opposition.

Update of Commercial Seafood Harvest

Hans Klausner updated the Commission on harvesting of seafood on the reserve. ODFW & State police are asking what commercial activities were allowed on the Reserve prior to the formation of the Reserve. This will allow them to enforce the rules.

Chair Solliday commented on the intent of grandfathering in the use by individual/businesses that were operating at the time of designation of the Reserve. No new or increase harvest will be allowed.

At the time, law enforcement is discouraging commercial harvest on the Reserve.

INFORMATIONAL PRESENTATIONS

Holly Keammerer 2010 NERRS Graduate Research Fellow

Holly Keammerer, 2010 NERRS Graduate Research Fellow, gave an overview of her research in evaluating interactions between the seedlings of five salt marsh species and existing emergent vegetation while showing a power point presentation.

Regional Research Initiatives

Steve Rumrill delivered a presentation to describe the status of his ongoing Marine Spatial Planning work in the Cape Arago region and in the Northern California region (extending from Point Arena to the CA/OR border). The local planning group has developed a series of six proposals for potential marine protected areas in the vicinity of Cape Arago, and they range from a small tightly-focused Marine Reserve site near Simpson Reef to a larger broadly-focused Marine Reserve/Marine Protected Area located between Cape Arago and Bandon. The marine spatial planning work in the Northern California region has progressed through round two of the evaluation phase, and the Science Advisory Team is currently providing input to the Regional Stakeholder Group to help make improvements to the proposed series of Marine Reserves and Marine Protected Areas. Steve also provided an update on the status of planning and estuarine habitat mitigation work associated with re-

location of the NOAA Marine Operations Center – Pacific from Lake Union (Seattle, WA) to Yaquina Bay (Newport, OR).

Wireless Presentation with Invitation to Tour the Wireless Shelter located at Joe Ney Landfill

Tom Elledge, SSNERR Chief Technologist, gave an update on the wireless network at SSNERR. At the end of his presentation, Tom offered to take those interested on a tour of the wireless shelter located at Joe Ney Landfill. Ali Helms volunteered to shuttle individuals from a specified parking location, to avoid flat tires due to construction debris at the landfill area.

Adjourn: 3:40 PM

Subject:

Unauthorized activities on Reserve managed lands

Issue:

Staff update and findings report on trespass of livestock at south end of Reserve; and construction, vehicle and livestock trespass in northeastern portion of Reserve.

Background:Trespass on northeastern portion of the Reserve

In response to reports of suspected trespass by an adjacent property owner on the northeastern boundary of the Reserve near Day Creek, staff and a very skilled volunteer completed a thorough, unofficial survey of the property line separating the Reserve and private land in the subject area. Results of this work have verified the following:

- No dwellings have been constructed in trespass.
- No trees have been cut illegally on Reserve land.
- Unauthorized excavation and construction work consisting of a livestock corral and a water supply tank has taken place on South Slough property. The excavated area involved in the trespass encroaches on a small stream. The unfenced area is being used by livestock owned by the adjacent land owner.
- A key boundary survey corner marker is missing or has been removed, making land ownership in the subject area difficult to locate.
- There is evidence of active use of motorized vehicles on Reserve land in the vicinity of the property.
- A gate on the boundary in the northeast corner of the private parcel is routinely used as a point of access for unauthorized motor vehicle use.
- If continued, active excavation and landfill practices on the adjacent property holds potential to encroach on Reserve land.

During the 128th Management Commission meeting in July 2010, the Commission discussed options to address verified trespass issues. Commission Chair, Louise Solliday, described the standard practice and rules used by Oregon Department of State Lands to address trespasses on state lands and noted that the Reserve would be required to follow these procedures. The Commission agreed.

Livestock trespass at the Southern boundary of Reserve

At the direction of the SSNERR Management Commission in July 2010, a work team consisting of SSNERR staff, the 2010 OYCC crew, and volunteers from the Oregon Department of Fish and Wildlife constructed a wildlife-friendly barbed wire fence across the floodplain of Winchester Creek along a portion of the southern boundary of the Reserve. The fence should help to address impacts linked to an adjacent property owner's cattle straying onto Reserve property. The greatest impacts associated with the livestock trespass are the Anderson Creek Wetland restoration sites. The newly installed fence stretches from the edge of Winchester Creek, across the bottomlands of the floodplain and into the uplands on the west side of the valley. Initially, elk damaged the newly installed fence. We installed some retrofits to make the fence more visible and to encourage elk to jump over it. To date, no further damage has occurred. Additional creek crossing and fencing on the eastern portion of the floodplain will be installed to provide full protection of the Winchester Creek bottomlands.

Staff recommendation:

In accordance with DSL practice, Staff is preparing a letter to the trespassing landowner identifying the nature of the trespass and outlining steps required to address the damage associated with the trespassing activities. Staff is working with the Chair to draft this letter. We will provide a draft of the letter at the meeting for commission comment and approval. It will cite the trespass issues noted above, provide a restoration plan for Reserve lands that have been impacted, and identify additional protections to address the vehicle use and potential fill encroachment.

Subject: Relocation of Administrative Offices to Charleston

Issue: Update on Office Relocation

Background: The same circumstances exist for this report as existed at July's Management Commission report - due to evolving and changing action on this subject, a verbal report will be provided to update the Commission at the meeting.

In the interim, the University of Oregon OIMB, with financial assistance from the Reserve (\$275,000), purchased the property adjacent to OIMB referenced in the last report.

Dr. Craig Young and Mike Graybill are working to identify a site on the OIMB campus to temporarily (3-5 years) house SSNERR's administrative personnel. Reserve staff have met to discuss opportunities and challenges associated with the move, and to identify strategies to help implement the plan. Staff have contracted an architect to help with space allocation renovation work tied to the move.

Staff Recommendation: This is an informational item and no Commission action is requested at this time.

Subject:

An unoccupied residence and storage barn structure at the south end of the Reserve known as the Fredrickson homestead.

Issue:

At the 128th meeting in July 2010, the Commission discussed the current status and future of the Fredrickson House including concerns about the safety of the structure, interest in the structure expressed by members of the public and by the Friends of South Slough. This is a progress report on the motion passed by the Commission at the 128th meeting.

Background

At the 128th meeting, Commissioner Hamel introduced and Commissioner Stuntzner seconded the following motion:

I make a motion to delay any decision on the dismantling of the Fredrickson House at this time and that the staff be directed to prepare a definitive plan for the house, it's immediate surrounds and the out building or barn that is currently standing. The plan shall include the following:

1. An accurate estimate (within 25%) of all costs associated with the proposed dismantling including all related staff labor.
2. A detailed description of a replacement structure of consequence on the footprint of the house which will provide a permanent identity for the site for the future and also has a useful purpose for the present such as the Observation Shelter at the William L. Finley National Wildlife Refuge.
3. A detailed description for the landscaping and prescribed care for the land immediately surrounding the replacement structure and the barn if it is left standing.
4. A specific description of the disposition of the barn.
5. A realistic estimate of the salvage value of reusable materials from the dismantled house if it is dismantled.

Discussion of the motion included the following comments from members of the Commission:

Commissioner Young supported the motion. He prefers retaining the Fredrickson House and suggested adding interpretive panels.

Commissioner Fereday commented that the structure serves as habitat for bats and wildlife that should be considered as part of any action plan.

Commissioner Stuntzner recommended asking an architect for an opinion.

Commissioner Hamel spoke of attending a conference in Medford. He suggested writing a proposal to the Kinsman Foundation.

Chair Solliday spoke of repairing the exterior, not restoring it. There would be no work done to the interior of the structure. Chair Solliday also suggested the U of O School of Architecture in which a student team could come here to review and evaluate the structure.

Chair Solliday called for a vote on the motion, it carried with no opposition.

The following is a report of staff action to date regarding the motion:

The staff contracted architects Aron Faegre and Jon Decherd to inspect the house and report on its condition, comment on the feasibility of stabilizing the structure and to develop a prioritized list of actions to stabilize the structure and restore the weather resistant integrity of the exterior. They visited the site on the afternoon of Friday, Oct 22nd. The preliminary inspection confirmed the foundation and exterior of the house structure can be stabilized as suggested by Chair Solliday. Although their initial inspection did not include an inspection of the interior of the structure, the preliminary opinion of architects is that the building can be stabilized without a large-scale renovation effort. They are preparing a plan to stabilize the house. The first priority identified is to replace the roof. As a result of this determination, staff are currently developing a plan to retain the structure. We have postponed taking action on the elements 1, 2, and 5 of the motion as these relate to calculating salvage value and costs for a replacement structure.

Regarding motion Item #3:

We recommend that the Commission continue the current maintenance of the landscape in the vicinity of the house. This includes routine road, trail, and lawn maintenance, retention of “heritage” landscape plants such as fruit trees and non-invasive ornamental shrubs, and selective control of Himalayan Black Berry, English Ivy, Cotoneaster, and other invasive species.

Regarding motion item #4:

Staff visited the storage barn structure in mid October. We have created an image file documenting the condition of the structure and details of its

construction. The images include details of the framing, roofing, siding, and location of the storage shed. Additional work to document the dimensions and other construction details is forthcoming.

Staff met in October with the administrative personnel at Southwestern Oregon Community College responsible for internship programs and service learning. The college offers a construction technology program. We are pursuing the option of engaging the construction technology program at the College to assist with the work to stabilize the structure.

Staff have also communicated with biologists, including a bat specialist at the Bureau of Land Management. We are pursuing BLM's participation and advice to adapt the use of the structure as a place to test methods aimed at adapting residential style structures to attract wildlife. A Cooperative Agreement recently signed between the two organizations guides SSNERR's work with BLM.

Staff Recommendation:

As a first step toward the stabilization of the structure, the Commission should direct staff to replace the roof of the house.

Subject: the Charleston Sanitary district has proposed to donate a small shoreline parcel in the Barview district of the Coos Estuary to the Oregon State Land Board to support SSNERR's education program mission.

Issue: The staff is undertaking due-diligence research on the Barview parcel and has identified several issues regarding the use, ownership and potential of the property. Prior to providing a recommendation to the State land Board, we seek additional input from the SSNERR Commission on matters related to the parcel that have come to light since the Commission first discussed the land donation proposal.

Background:

At the direction of the SSNERR Management Commission, staff is evaluating a proposal from the Charleston Sanitary District (CSD) to transfer a .06 acre bay-shore parcel to the Department of State Lands for the benefit of the Reserve. The CSD parcel sits at a low point along Cape Arago Highway in the Barview district and is currently the site of a sewer pump station. The property adjoins and is surrounded on two sides by a much larger shoreline and tideland parcel owned by the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians (Tribes). Our research indicates that the Tribes are also considering a similar proposal from CSD. The tribes are scheduled to take formal action on the proposed land donation at their regular meeting scheduled for 3 November.

The Reserve and the Tribes have a standing cooperative agreement in place. Correspondence with staff at the Tribes suggests an interest in partnering with the Reserve on stewardship and educational programming at the site regardless of who receives title to the donated property. Should the Tribes assume ownership of the parcel, the Reserve would be welcomed as a partner in future restoration and development of the site by the Tribes.

Current setting and uses

The site is located along the shore of very rich intertidal areas in the lower Coos Bay estuary. Dense beds of eelgrass attract large flocks of waterfowl and a rich diversity of invertebrates. Rocky shoreline converges with mudflats and views

across the bay offer outstanding opportunities for bird observation and shoreline access. A small stream enters the bay immediately north of the property after passing through a culvert under Cape Arago Highway.

Physical and visual access to the adjoining tidal flats in this location attracts many types of users including wildlife enthusiasts, shell fish harvesting, and classes of K-12 and college students and instructors. The cove formed by the Fossil Point formation on the south and Pigeon Point on the north traps rafts of algae, eelgrass, and large wood at the wrack line. Willows along the shoreline to the south of the parking area provide an example of a natural vegetation buffer and transition to the tidal flats in stark contrast to the armored shorelines nearby where rip rap has been used.

Highly restricted parking, road noise, and proximity to fast moving traffic along Cape Arago Highway, all present significant challenges to development of extensive interpretive opportunities at the site. However, a limited and carefully planned suite of improvements would help to address some of these challenges while enhancing current uses and protecting an important public access point.

Future possibilities

As a public access location, the current uses are likely to continue unless restricted through the actions of the property owners. While an increased level of use would likely not be feasible due to the parking and traffic constraints previously mentioned, it may be possible to make simple improvements to address parking and vehicle access that currently constrain use of the site. The site alone is too small to accommodate more than one or two passenger vehicles at a time.

Shortcomings of vehicle access to and from Cape Arago Highway will need to be addressed before public access could be encouraged. Any parking improvements and road access would need to meet Department of Transportation standards and might actually reduce the number of vehicles allowed to park at the location. The site may be so constrained as to negate parking on the site altogether. The Charleston Sanitary District currently, excludes parking in a 50 foot perimeter around building but this restriction is likely to end when the pump station is decommissioned and the property is transferred to a new owner. Only a portion of the site currently used by vehicles is located on CSD managed property. The remainder of the wayside

turnout is property owned by the Confederated Tribes of Coos Lower Umpqua and Siuslaw Indians.

In partnership with the Tribes, the site could be developed to include a marked pull off for unloading passengers with a very limited number of vehicle spaces (perhaps 2-3). The loading and unloading of buses that currently occurs there stops traffic along Cape Arago Highway and while this is still feasible, an improved pull off would enhance traffic flow and safety.

Incorporating paved improvements at the site offers an opportunity to construct a demonstration storm water treatment facility to address runoff from the parking area. In urban areas, storm water treatment “facilities” are being engineered to incorporate native plantings as a means of reducing flow and improving infiltration.

A small masonry pump-house structure on the site has secure water and electrical utilities inside the structure. These amenities could be useful for classes who access the adjacent tide flats as a location for cleaning boots and gear. Additionally, an opportunity to set up a webcam would serve to enhance the use of the site for wildlife monitoring and observation. This would require a secure location with electricity that could be provided by the structure. Depending on the views afforded by the camera, this might also be used as a means of providing security for any other investments made at the location such as interpretive signs.

The structure is currently bounded on the west by an uneven surface of rip-rap. This makes the placement of spotting scopes and footing for wildlife viewing difficult. A platform with a rail constructed on this bay side of the building would afford opportunities for interpretive panels and could also be used to enhance access to the Tribe’s adjoining tide flats if a stairway was included in the design. The roof of the structure could potentially be used as a base for a viewing platform; however, access would likely need to occur with a stairway, since sufficient space for a ramp to the roof is lacking.

Staff recommendation: If the Tribes acquire the site, the Reserve should work in partnership with them to develop a full interpretive plan for the location. If the Tribes do not express interest in the site, the Reserve should

pursue ownership through the state and seek to develop a full interpretive plan in cooperation with the Tribes and other adjacent landowners. The location of this parcel and the potential to enhance public access and interpretation while serving the educational mission of South Slough make pursuit of this acquisition a worthwhile pursuit.



View to the north with Cape Arago Highway on the right.



View to the bay looking to the northwest.



Looking southwest towards Fossil Point. Note shellfish harvest regulations sign on left.



Students investigating tide flats as part of the Brant monitoring project.

Subject:

NOAA FY 2011 Construction and Acquisition Program

Issue:

NOAA's Estuarine Reserves Division will accept proposals for construction and acquisition related activities at NERR sites until November 30. Should the South Slough Reserve seek support for one or more projects through this funding opportunity?

Background:

SSNERR staff have prepared preliminary proposal concepts for two construction projects intended for funding through the NOAA FY 2011 Construction and Acquisition Program. The construction project concept requests NOAA funds to develop sustainable facility upgrades. NOAA funds are also requested to construct wildlife habitat and monitoring facilities along with increasing security and safety at public access points at the south end of the Reserve. Details regarding each of the project concepts are as follows:

Sustainable Facility Upgrades is a three-task construction project which will allow the Reserve to install an ultra-high efficiency wood-fired thermal mass heater at the Interpretive Center, as well as to reconfigure and make energy efficiency oriented upgrades at the Estuarine and Coastal Science Laboratory. Additionally, the Reserve will modify the existing amphitheater area located on the Ten-Minute Trail to showcase a native planting area, with interpretive opportunities. The existing fireplace at the Interpretive Center is a central feature and structural core of the facility. It visually welcomes visitors, particularly in the cold, wet months of winter; however, it actually drains energy from the building. Renovation of the wet and dry laboratory spaces will expand the capacity for staff and interns, and replace outdated single glazed windows, incandescent lighting and inefficient heating systems. Reserve staff are currently working with organizational partners to design a native plant nursery; the amphitheater site is ideal for a native plant "exhibit". The proposal requests \$102,000 in federal funds.

Wildlife Habitat and Monitoring; Access and Security Improvements is a two-task construction project, for which the Reserve is requesting \$180,000 in federal funds from NOAA. Task one will stabilize and re-purpose an existing iconic 1890's structure known as the Frederickson pioneer homestead. The exterior of the clapboard sided Euro-American structure will be made weather tight, installing a new roof, repairing, and repainting siding and exterior trim work representative of the period and style of the building. Wildlife currently uses the structure as habitat, particularly bats, birds and small mammals. We intend to use the structure as an experimental laboratory to attract and monitor wildlife. We will incorporate additional nesting and roosting structures designed for that purpose. Quantitative wildlife use information will be collected and added to the Reserve's biomonitoring database thus enabling the reserve to test wildlife structures optimized for the species that frequent the bioregion represented by the Reserve. Educational interpretation will be conducted at the site. Task two will enable the Reserve to secure management responsibility for an existing road right-of-way within the Reserve's boundary that provides access to the homestead site and other core areas in the Reserve. The access roadway will be graded and re-graveled using contemporary methods to address polluted runoff from gravel road surfaces. Security gates will be installed, a new trailhead parking area constructed, and an existing bridge located at a paddle craft launch site will be repaved and weatherproofed.

Staff Recommendation:

Staff recommends the Commission direct us to develop full proposals for competition in NOAA's FY 2011 proposal cycle.

Subject: Management Commission Meeting Schedule for 2011

Background: The South Slough Management Commission meets three times yearly for its regular business meetings. The meetings are scheduled on the third Thursday of March, July, and November. Occasionally, an extra meeting or workshop is held and scheduled separately. The dates for the regular business meetings in 2011 are:

March 17

July 21

November 17

Staff Recommendation: The Commission should adopt the proposed 2011 meeting schedule. Adequate notice will be made throughout the year to note upcoming meetings or to inform of any changes to the schedule.

Informational Report: Administration

Intergovernmental Agreement with the Port of Coos Bay

A new, first ever, intergovernmental agreement between SSNERR and the Port of Coos Bay has been finalized and is now in effect. A task order to support paddle craft access improvements on Port property in Charleston is nearly completed. We anticipate that funding will be transferred to undertake the paddle craft access improvements before the end of 2010.

Facilities

Interpretive Center roof replaced

We replaced the 1986 vintage cedar shake roof at the Interpretive Center with a standing seam metallic roof to match the roof on the portion of the structure that was built in 2002.

Interpretive center water supply system

We completed the construction and have revamped the water supply system at the Interpretive Center. We expanded the existing pump house to incorporate two, 1,000 gallon storage tanks to address peak demand issues. The storage system enabled us to replace the AC powered submersible pump system with a solar powered pumping system.

Interpretive Center Lighting

We have converted all the lighting at the Interpretive Center to high efficiency lighting. In addition we have added new, high efficiency lighting to address the sub-standard lighting in the exhibit gallery, retail area, and auditorium. We will offer a tour of these energy oriented investments at the meeting on November 18th.

Charleston facilities

Staff are working with an architect to plan space and outline renovation tasks linked to moving administrative staff to the OIMB campus in Charleston. We are working to identify zoning and building code issues that relate to this project to assure that our plans meet these requirements.

Personnel

Training

- Deborah Rudd enrolled in a multi-day NOAA sponsored training program entitled “Designing Education projects”

- Deborah Rudd and Joy Tally participated in a workshop entitled Citizen Science through the Oregon Coast Master Naturalist Program.
- Kathy Andreasen and John Bragg learned about issues faced by working waterfronts at the Heceta Head Coastal Conference in Florence.
- John Bragg, Ali Helms, Adam DeMarzo, Hans Klausner, Craig Cornu have received training on Geographic Information System operation. The trainings have been hosted at the Reserve. The training sessions have been sponsored by the NERRS Coastal Training Program and the Coastal Services Center.
- Tom Gaskill learned about climate change education tools during a half day workshop hosted by NOAA's Estuarine Reserves Division at the National Conservation Training Center in West Virginia.
- Mike Graybill learned about the past four decades of marine management in Oregon and about the Surimi and seafood products industries at the November meeting of the Coastal Oregon Marine Experiment station in Astoria.
- Mike Graybill, Steve Rumrill, and John Bragg participated in a training workshop entitled "Negotiating for Coastal Resources" hosted at the Reserve by NOAA's Coastal Training Center personnel.

SSNERR Education Program update

July 6th through October 29, 2010

The late summer and early fall season is a particularly busy time for South Slough education staff with an emphasis on the delivery of a wide variety of programs. Public festivals, interpretive programs, and summer camps are all popular with audiences of children and adults. In addition, training activities for teachers, coastal decision makers, and volunteers help to disseminate the Reserve's research results and infuse stewardship activities and concepts into the educational content provided for these audiences.

Notably, during this period, South Slough provided two multi-day professional development workshops for educators through funding from the NOAA Bay Watershed Education and Training (B-WET) program. These trainings are part of the Oregon Coast Education Program, a multi-institution partnership led by South Slough to facilitate improved coastal and marine education in Oregon schools.

Presentations and discussions at regional and national meetings and workshops help to advance the educational goals of South Slough's mission. Staff members participated in the National Estuarine Research Reserve System's annual meeting in West Virginia, the Northwest Aquatic and Marine Educator's annual meeting in Florence, Oregon, project development training in Chicago, Illinois and the meetings of the Oregon Environmental Literacy Taskforce in Salem.

Education Program Totals

A total of 95 educational activities involving 3,142 participants were conducted during this period. 347 contact hours and 281 hours of preparation were recorded. These totals include a diverse range of education, interpretation, training, and outreach activities. A more detailed explanation of each sub-category is included in subsequent sections of this report. Including visitors to the South Slough Interpretive Center, a combined total of 5,250 people learned about estuaries and coastal watersheds through South Slough educational programs during this period.

Visitation and Visitor Services

During this period, 2108 visitors to the interpretive center were recorded for an average of 26 visitors per day. The South Slough Interpretive Center remains

open to the public 10am – 4:30pm, Tuesday through Saturday throughout the year.

Two state-wide furlough day closures occurred on Fridays during this period. The interpretive center was closed to the public on these days. In the future, the building will also be closed on the Saturday immediately following furlough days when they occur on a Friday. Tuesday – Saturday staff will shift their schedule to a Monday – Friday schedule to fulfill their work requirement. This change will better accommodate education program delivery and avoid public confusion over hours of operation.

The interpretive center was also closed on October 9th at the recommendation of the education staff to concentrate staffing and volunteer resources on participation at the Octoberfish festival in Charleston. Elective closures of the interpretive center will only be recommended when limited staffing resources and the benefits of participation in the event seem more favorable to advancing the mission of the Reserve than opening the building.

Formal Education & Training

During the period from July 3rd to October 29th, 21 formal education programs were offered for 611 participants. A total of 84.5 contact hours and 111 hours of preparation time were recorded. 8 of these activities were specifically designed for educators including presentations and workshops.

No group trainings were conducted for volunteers during this period, however, individual training on interpretive center operations, visitor services, and various specific tasks were provided.

Staff members participated in the planning and field trip coordination for activities offered during the Northwest Aquatic and Marine Educators conference in Florence. Presentations for educators at the meetings highlighted South Slough's efforts in early childhood development and outdoor education and the Oregon Coast Education Program. South Slough staff also delivered presentations and an exhibit booth at the Oregon Science Teachers Association annual meeting in Colton, Oregon.

No Oregon Child Left Inside – The Oregon Environmental Literacy Plan

The South Slough education coordinator participated as a designee of the Oregon Department of State Lands on the governor appointed taskforce which has recently completed the Oregon Environmental Literacy Plan. This is a landmark document required by House Bill 2544 in the 2009 Oregon

Legislature which established the “No Oregon Child Left Inside Act.” Implementation of this plan will provide schools with a framework to incorporate outdoor education, support healthy lifestyles, and enhance understanding of the connections between community, economy, and the environment. An executive summary of the plan will be provided at the Commission meeting. The full plan is available on the South Slough website www.southsloughestuary.org

NERRS K-12 Estuary Education Program

On November 5th, the South Slough convened an Education Advisory Group comprised of classroom and informal science educators to guide future directions for the Reserve’s education program. At the core of this initial meeting was a discussion of the proposed approach to collection information and data through a market analysis and needs assessment study.

The \$30,000 study is supported by NOAA with additional funding from the Coos Bay Bureau of Land Management office. The research conducted through the study seeks to improve South Slough’s understanding of the various providers of coastal education for K-12 audiences in Oregon and the needs of schools in southwestern Oregon related to the delivery of educational programs and content. The results of this study will be provided to the advisory group and another meeting will be held in the fall of 2011 to review the findings and discuss program direction. Ultimately, the outcomes of this research and subsequent planning effort will be used to inform the continued development of South Slough education programs and support the efforts of other local and regional coastal education institutions and activities.

The convening of the South Slough Education Advisory Group and conduct of the market analysis and needs assessment study are required for the Reserve to be eligible to receive funding under the NERRS K-12 Estuary Education Program. This system-wide initiative will support delivery of educational experiences and training for students and teachers using researched methods of professional teacher development and best practices in education.

New NOAA performance measures are currently being developed relative to the formal, informal, and outreach education activities at Reserves. Audra Livergood, a NOAA Estuarine Reserves Division staff member, is conducting interviews with Reserve educators during November to characterize the evaluation and outcome measurement practices currently in use by NERRS education programs. The study will help inform the selection of additional performance indicators and measures.

Oregon Coast Education Program

South Slough is continuing to lead work to develop the concept of the Oregon Coast Education Program. Partners in this effort include the Oregon Institute of Marine Biology, Oregon Sea Grant, the Oregon Coast Aquarium, and the Northwest Aquatic and Marine Educators. New collaborators include the High Desert Museum and the Oregon Watershed Education Consortium.

The Oregon Coast Education Program seeks to establish a network of resources and teacher training opportunities to support coastal education efforts at Oregon schools. Education modules comprised of exemplary education activities, selected to support coastal and ocean literacy, have been developed, piloted, and are being implemented with students in 22 classrooms in western Oregon.

During the summer of 2010, multi-day professional development workshops were held in Newport and Charleston for elementary, middle, and high school teachers. Participants received instruction in the development of meaningful watershed education experiences for their students. Presentations highlighting research on the value of field-based education and professional practice related to the use of chaperones was augmented with demonstrations of pedagogical approaches to enhance student achievement.

Additional training opportunities are planned for the spring of 2011, and program coordinators are working with teachers to develop and implement coastal education plans with their classes during the school year. \$100,000 of funding to support this work has been provided through NOAA's Pacific Northwest Bay Watershed Education and Training grant program. An additional \$60,000 was recently awarded to continue and expand this work to communities and teachers in the Bend and Portland area. Two new modules will be developed to explore coastal watershed stewardship and pollution and habitat degradation. This work will also be supported through an \$11,000 grant from the Oregon Community Foundation.

South Slough and the Oregon Coast Education Program partners recently submitted another proposal to NOAA seeking continued funding for the 2011-2012 fiscal year. If awarded, this grant will provide \$60,000 to complete a fifth module focused on using remote sensing and ocean observing systems to explore climate change. Notification is anticipated after June 2011.

Community Education, Interpretive & Outreach Activities

Interpretive programs continue to be offered for a diverse public audience of children, adults, and families. A total of 62 interpretive programs were offered and 1173 people attended activities ranging from guided walks and paddle trips to summer camps. 180.5 hours of contact and 122 hours of preparation were recorded.

A variety of outreach activities were also conducted with various community partners at off-site locations. 10 outreach events were held for 1231 participants. 72 hours of contact time and 31 hours of prep time were recorded for these activities.

A community education event, a National Estuaries Day celebration, was held for 115 participants. This included 15 hours of prep time and 6 hours of contact time.

Highlights of the summer interpretive programs include three very successful and popular summer science camps for school aged children. These programs incorporate a variety of field-based, hands-on activities for “campers” and culminate in a barbeque and sleep over at the interpretive center that features an evening “bat walk”.

Volunteers contributed a greatly to the Reserve’s outreach efforts this summer and fall at events such as the Farmer’s Market, Charleston Seafood Festival, Clamboree, the Salmon Festival, and Octoberfish. Booths at these events provide an excellent means of sharing South Slough’s mission and ways to visit and become involved in the programs and activities of the reserve. South Slough staff also provided two very well received paddle excursions as a part of the Oregon Shorebird Festival and a third as a part of the National Estuaries Day celebration.

Public Involvement

Friends of South Slough, Inc. (FOSS)

Since April, the Friends of South Slough, Inc. (FOSS) have held three art openings, developed and tested an Artist in Residence Program, renewed their membership to the National Estuarine Research Reserve Association (NERRA), formed a support committee to assist with the SSNERR Aquaria project, archived electronic files and records, supported National Estuaries Day, researched float house possibilities and most recently, agreed to purchase and donate (\$7,500) an eight-passenger canoe to support SSNERR education and outreach efforts.

Volunteers

From July 2010-September 2010 SSNERR volunteers logged in 1,385 hours valued at \$28,000. The breakdown included, 256 education 404 research/stewardship 310 administration and 415 Oregon Youth Conservation Corp. hours.

In addition to the regular cadre of SSNERR and FOSS volunteers there were also two volunteers from Galway, Ireland, a SOCC Intern who continued on as volunteer, and two ODFW part time staff who donated their time at the South Slough NERR on various research education and stewardship projects such as, summer science camps, marsh plant sampling, native oyster research and upland forest inventory.

Another volunteer provided many hours of skilled help to assist the Stewardship staff's effort to survey a portion of SSNERR's administrative boundary in the Day Creek drainage in Northeastern portion of the Reserve.

Outreach

SSNERR staff member Deborah Rudd chairs the Bay Area Chamber of Commerce Tourism committee. The committee continues to explore tourism opportunities in the Bay area. Goals for 2010 include, promoting diversity of tourism opportunities, integrating efforts on tourism marketing of the area, and collecting data on destination marketing organizations for use in promoting tourism as an industry.

The Charleston Community Enhancement Corporation had a summer meeting hiatus and returned to business as usual on September 15th. The Charleston Merchants Association continues to meet on the third Tuesday of each month at 6:00pm at the Charleston Fire Department.

From June-October 2010 SSNERR staff, FOSS & volunteers hosted informational booths at the following venues; Farmer's Market in Coos Bay, Clamboree in Empire, Charleston Seafood Festival, Mill Salmon Festival and Octoberfish. SSNERR also hosted a National Estuaries Day festival on Saturday, September 25th with a sustainability theme. A guided paddle-hike trip led by SSNERR staff and volunteers began in Charleston and ended at the Interpretive Center. The Paddlers left their boats at the Sloughside pilings near the end of the Estuary Study Trail. More staff and volunteers helped to secure boats while participants hiked up to the Interpretive Center to hear the live web cast with Grand Bay NERR and to take part in the festival activities. Among the highlights of the day was a 21 foot long watershed model manned by SSNERR Education staff. Over 115 visitors were recorded at the event. 20 vendors and non-profit information booths, several staff and volunteers participated to create a festive atmosphere of learning about estuaries. The

event raised over \$700 that was donated to the Grand Bay NERR in Mississippi to assist the Reserve's oil spill recovery efforts. SSNERR staff hopes to make National Estuaries Day recognition an annual event and to collaborate with more community partners in future years.

Training

During the months of August and September, the Public Involvement Coordinator participated in a NOAA sponsored online and in-person workshop entitled "Designing Education Projects" (DEP)-using the "Targeting Outcomes of Programs" (TOPS) method of planning, implementing and analyzing projects. Each participant worked through the module using a real program they were in process of developing at their worksite. Online instructors assisted participants through the process with feedback and online exercises which took participants through the steps with their projects.

Each participant eventually created a formal logic model for their project which they needed to bring to the in-person portion of the invitational workshop at the Shedd Aquarium in Chicago, IL. Participants spent 2 ½ days re-working their logic models with the support of the instructors and their classmates. Each student created a TOP model plan to establish a detailed formal analysis of their program. Evaluation tools and scientific data collection methods were reviewed by the instructors. Some tools were practiced at the workshop among the students.

At South Slough, Public Involvement has developed a logic model and has begun collecting data for a needs assessment to implement a, formal volunteer training program that would be conducted on an annual basis. The target date for this outcome is October of 2011.

Coastal Training Program

The Coastal Training Program hosted two workshops at the interpretive center in September, including *Negotiating for Coastal Resources* (Sept. 8) and *Project Design and Evaluation* (Sept. 9-10). Both courses were developed by the NOAA Coastal Services Center and presented by center staff. Approximately 30 coastal management professionals participated. The workshops were scheduled back-to-back to provide the maximum benefit and least expense for participants traveling from outside of the local area. Out of area participants came from Roseburg, Port Orford, Salem and Portland and included representatives of Oregon watershed councils, conservation organizations, local and state planning agencies, and federal natural resource management agencies.

In the *Negotiating for Coastal Resources* course, participants learned negotiating skills and strategies to make them more effective natural resource managers. Such skills include building collaborative relationships based on trust; overcoming barriers to negotiating; assessing others' personal negotiating styles, and how to prepare for negotiating.

Project Design and Evaluation is a two-day course that provides knowledge, skills, and tools to design and implement projects that will have measurable impacts on a targeted audience. Participants learn to design projects that will have the right impact; how to measure the performance of their projects; how to understand the needs of their audiences, and how to reach the right audience.

The CTP provided two days of geographic information systems (GIS) training Oct. 5-6. Twelve participants representing Oregon watershed councils, natural resource management agencies and conservation groups participated. The training was delivered by Juniper GIS, a mobile, Bend-based provider who traveled to South Slough to deliver the training. Skill in using GIS has nearly become a requirement for anyone addressing issues that affect land use and natural resource management. South Slough CTP continues to play an important role in providing much-needed GIS training throughout the Oregon coastal zone; the working relationship with Juniper allows the Reserve to schedule training at the reserve, with the trainer providing all work materials, lessons, computers and software licensing for the course. The primary audience for GIS training includes planners, tribal nations, habitat restoration professionals, and watershed councils.

CTP continues to develop its networks with coastal watershed councils. Recently CTP coordinator John Bragg and manager Mike Graybill made a presentation to the membership of the Lower Rogue Watershed Council about Oregon estuaries and how they differ from the estuary at the mouth of the Rogue River. The Rogue lacks many of the features of other Oregon estuaries, having no tide flats, little or no salt marsh, and no eelgrass or other salt tolerant plants that typify Oregon estuaries. Despite this lack of the typical estuarine features that contribute to healthy salmon runs, the Rogue River produces a large run of Chinook salmon. The Lower Rogue council is interested in restoring or enhancing their estuary, which is restricted to the lower four and a half river miles of a 5,100 square-mile watershed.

The CTP coordinator attended the Heceta Head conference Oct. 28 to participate in discussions about Oregon's estuaries. The coordinator also joined South Slough staff to participate in the NERRS annual meeting, held at the US Fish and Wildlife Service's National Conservation Training Center in Shepherdstown, West Virginia, October 11-15.

Stewardship Program Update

Quarterly Stewardship Program Activities – August through October 2010

I. Habitat Restoration

- A. Restoration from Ridge-Top to Estuary: The Oregon Watershed Enhancement Board (OWEB) proposal that staff developed with Ducks Unlimited, ODFW and BLM was not selected for funding. This proposal would have begun implementation of the Reserve's *Upper Watershed Restoration Action Plan* which encourages a whole watershed restoration approach focused on improving interrelated habitats from the ridge-tops to estuary.

Staff will continue to refine this proposal and seek other funding sources and partners to implement it. On-going discussions with the Oregon Department of Forestry will concentrate on completing this project without financial assistance from OWEB. Initial talks have been productive and it is conceivable that ODF staff might be able to provide expertise in timber cruising, growth modeling, prescription design, engineering and contracting toward the Reserve's forest restoration efforts.

In advance of project implementation and as a complement to the Partnership for Coastal Watersheds Project with the Coos Watershed Association, staff have begun the installation and monitoring of Forest Inventory Assessment (FIA) plots within the Reserve. These plots are designed to be incorporated into the U.S. Forest Service's National FIA program and will provide the Reserve with forest health status and trends information including, growth rates, species composition, understory vegetation and fire risk. FIA plots are installed as permanent study plots to be monitored every five years.

- B. Native Oyster Re-establishment: *Ostrea lurida* (native Olympia oyster) was considered extinct in Coos Bay prior to being reintroduced in the 1980's. Self-sustaining populations of *O. lurida* occur in select locations in Coos Bay, but

their recovery in South Slough has been slow. The Reserve has committed to studying the limiting factors of *O. lurida* recovery and establishing a robust, self-sustaining population in South Slough. Building on previous efforts, staff and a crew from the Oregon Youth Conservation Corps continued to augment the population established at Younker Point in 2008. This summer, we out-planted 200 bags of hatchery raised *O. lurida* cultch (shell material settled by oyster spat), cleaned and secured the 300 bags currently at the site, and investigated the survival patterns of cultch previously out-planted. We also removed invasive species and other fouling organisms from naturally settled cultch collected in Coos Bay and transplanted them to South Slough. This brings the cultch bag total at Younker Point to approximately 550 which represent an estimated 6 million juvenile *O. lurida* now in South Slough.

- C. Port Orford Cedar Restoration: Port Orford cedar (*Chamaecyparis lawsoniana*) has been devastated by an introduced root rot pathogen since the 1950's. Coos and Curry Counties have been particularly impacted and the Reserve has lost a majority of its *C. lawsoniana* to root rot. In partnership with the Dorena Genetic Resources Center (a collaboration between Oregon State University, the U.S. Forest Service, and other Federal and State agencies) staff are currently designing a research plot for monitoring the performance of recently developed root rot-resistant *C. lawsoniana*. This research plot is designed to determine the resistance of genotypes newly acquired by the Center and to test the long-term viability of those known to have short-term resistance. Information collected from this planting will help inform the future restoration of this species on Reserve lands and throughout the affected area.

II. Watershed Monitoring

- A. Partnership for Coastal Watersheds Project: Implementation of the two-year \$216,000 Cooperative Institute for Coastal and Estuarine Environmental Technologies (CICEET)-supported project made the following progress over the past several months (in partnership with the Coos Watershed Assn.):
1. The Partnership for Coastal Watersheds Project leaders continued working with the Oregon Consensus (OC) team (from Portland State University and University of Oregon) to complete a situation assessment report which provides guidance for a series of stakeholder

and technical advisory team meetings that form the foundation of the Partnership project. The OC team completed the report in August and submitted it to Partnership project leaders.

During this reporting period, Partnership Project leadership team familiarized the OC team with the purpose of the Partnership Project, to outline the team's goals and expected outcomes for the stakeholder meetings, and to identify key community stakeholders. The leadership team also familiarized OC with local environmental and community issues and provided them with a historical context for those complex issues.

We worked with OC to identify a list of key individuals in the community representing a broad range of community viewpoints and who would be invited to participate in the project stakeholder meetings. From that list we selected 25 individuals for the OC team to interview as the basis for the situation assessment. The interviews were conducted by OC in May 2010. Nineteen community members agreed to participate and the information OC gleaned from these meetings is invaluable.

Overall the OC team's findings supported and reinforced many of the assumptions that formed the foundation of the Partnership for Coastal Watersheds Project and the community process the project leadership team is developing. The interviews provided many recommendations which have helped the team determine the quality and size of the stakeholder meetings, the roles specific participants can play, and who might best facilitate the stakeholder meetings. The report has also been sent to all the community members interviewed for the project.

The community's perception of the South Slough Reserve was discussed by several of the report's interviewees. Here's an excerpt from the report:

“Interviewees had mixed perceptions of SSNERR. For example one interviewee noted that SSNERR, due in part to its affiliation with the Oregon Institute of Marine Biology, is viewed as a bit of an “ivory tower” and not connected to the local community. Another interviewee suggested that SSNERR “doesn't play the role it should

be playing in the community.” Additionally, one interviewee expressed frustration at the perception that SSNERR is “for marine reserves, but not against LNG.” On the other hand, some interviewees noted that the inclusion of the Coastal Frontal watershed in the Partnership for Coastal Watersheds project area could be perceived as another land acquisition attempt by SSNERR. Nevertheless, there were some interviewees who expressed their desire to have SSNERR expand to protect the land surrounding the estuary.

There is a much more consistent perception of the Coos Watershed Association (CoosWA) among the stakeholders interviewed. When asked about their perception of CoosWA, interviewees noted that CoosWA is known for having diversity on its board and representing a much broader range of stakeholder interests. However, some interviewees did not consider either SSNERR or CoosWA to be leaders or significant players on community issues.”

2. By the end of the first week of November, the project team will begin recruiting participants for the Partnership project stakeholder meetings by forming the Partnership Steering Committee. Using OC's situation assessment recommendations, we've finalized the goals of each of the planned Steering Committee meetings and have articulated the ultimate outcome for the overall effort. We have also been in contact with Gregg Walker, chair of the Department of Speech Communication, adjunct professor of Forest Resources, and director of the Peace Studies program at OSU, who specializes in collaborative learning facilitation methods to facilitate the initial Partnership Steering Committee meetings. We anticipate that the first Partnership Stakeholder Committee meeting will be held sometime during the first two weeks of December.

We believe stakeholder recruitment will be made a little easier by another community visioning effort that has recently taken place in Coos Bay: the three day community visioning charrette led by the American Institute of Architects' Sustainable Design Assessment Team (SDAT). The SDAT process served to energize many of the community members we're hoping will be involved in our project. The project was facilitated locally by the South Coast Development Council. The SDAT conducted two days of facilitated meetings focused on specific issue categories (downtown development,

economic issues, natural resources, transportation...etc.). The goal of the sessions was to establish for the SDAT a snapshot understanding of what our local issues are so they could help our community start creating a common vision for a “sustainable future”. They presented their recommendations verbally in a community meeting on the final day of their visit here. A written report is to be delivered sometime during fall or winter 2010/11.

The Partnership Project provides our community with a chance to take SDAT’s general recommendations and put them into practice. With the participation of some key individuals who may now be newly aware of the value of community visioning, we can develop what may be seen as a test vision for the communities in our two Partnership Project watersheds- which may serve as a model for the entire community at some point in the future.

3. This summer we began the watershed assessment tasks associated with the Partnership project. Initial field based assessment tasks have focused on establishing the monitoring infrastructure for the longer term data needs such as stream discharge and local tidal datums.

The watershed assessment team, comprising CoosWA and SSNERR personnel, has been working on watershed assessment tasks including:

- Establishing stream gauge and temperature loggers and associated monitoring protocols (e.g., collecting monthly data for stream gauge ratings curves) in representative project area streams
- Conducting aquatic habitat inventories for the same streams
- Collecting and analyzing monthly stream water quality samples collected at stream, gauge sites
- Conducting road and landing surveys to assess the potential for mass movements of sediment during precipitation events
- Establishing a network of forest stand inventory sites and collecting baseline data (both ground-based and LiDAR interpretation)
- Expanding SSNERR’s network of eelgrass and emergent marsh vegetation monitoring sites
- Setting up and testing SSNERR data-flow vessel based water sampling methodology.
-

We are shifting to fall/winter season tasks including;

- Expanding SSNERR's network of Sediment Erosion Tables (SET),
- Expanding SSNERR's network of emergent marsh groundwater monitoring wells,
- Conducting level surveys at eelgrass, marsh, and SET sites, and
- Compiling and summarizing existing and historic data from monitoring conducted by others in the project area.

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This information will provide the stakeholders with a baseline snapshot of ecological and physical conditions in the project watersheds. This baseline will inform both the stakeholder meetings as they work to establish a common understanding of watershed conditions and could potentially support the creation of a community vision for the study area. These data will also form the basis for a series of environmental indicators that will be established with the assistance of the technical advisory group.

4. Last time we reported that University of Oregon's Climate Leadership Initiative (CLI), part of the University of Oregon's Institute for a Sustainable Environment, joined the Partnership Project as technical advisors and were looking to secure funding so they could provide the project with "down-scaled" climate model data for the project site. CLI submitted a proposal to the NERRS Science Collaborative program to support their participation in this project but their proposal was not selected for funding.

Project team members Bessie Joyce and Craig Cornu participated in a CLI-sponsored climate change preparedness and adaptation training in Klamath Falls, OR. The training helped us understand potential local climate change impact projections, how to develop strategies to incorporate climate preparedness and adaptation into management actions, and how to communicate effectively with our community about local climate issues.

5. In August the Partnership for Coastal Watersheds Project team selected Lakeside Oregon based web site designer Justin MacDuff to help develop the Partnership for Coastal Watersheds web site. The objectives for the web site are to:
 - Function as the central information node for Partnership Project participants and interested individuals and organizations.

- Function as the home for a biennial State-of-the-Watersheds document to be developed by project partners that will allow participants review the status of the watersheds and decide on priorities for future, management, actions.
- Create a user-friendly interface to maximize the site's usefulness for a variety of technical and non-technical audiences.

The website is in development. We expect the initial portions of it to be accessible during the first week of November. This will coincide with the initial recruitment for membership on the Partnership project steering committee. The web site will provide a location for prospective committee members to find information about the project.

The website will also host an on-line survey designed to give the steering committee a sense of issues and perspectives important to members of the community. It is also being designed to accommodate social networking (Web 2.0) functions such as (e.g. facebook, live remote reporting, teleconferencing) should the steering committee identify a need for Web 2.0 tools.

B. Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)-funded tidal wetland reference site monitoring project: This project is wrapping up (ends officially Dec 31, 2010 with final report due by the end of February 2011) with the following activities:

1. We completed a draft User's Guide on using temperature-sensing iButtons to detect tidal inundation in wetland habitats during the last reporting period, and distributed it to several end users for review and field testing. We will finalize the User's Guide during the next reporting cycle.
2. Funding is being used to support Megan MacClellan, an Oregon State University graduate student, who is adding a marsh carbon sequestration element to the tidal wetland reference conditions database. Field sampling including collection of soil samples at most of the project sites has been completed. Soil carbon content (% organic matter) will be compared between least-disturbed tidal wetlands and disturbed (former) tidal wetlands. The soils analyses will focus on determining whether tidal wetland restoration sites recover soil carbon sequestration functions. Megan is also working to

develop a conceptual model of the drivers associated with carbon sequestration in Pacific Northwest tidal wetlands.

3. Our collaborative study of tidal wetlands with NOAA/CO-OPS was completed during this reporting period. We finalized coastal inundation models that factor in the fluvial and tidal influences for all of the marsh study sites. This valuable collaboration has generated a new approach to modeling inundation of coastal wetlands. The method and products were presented by Lijuan Huang at NOAA's Brown Bag seminar series. We will provide detailed results in our final report.
4. Oregon State University library staff have begun entering project data, narrative interpretation, study site maps, contact information for site access, and other project details into the Oregon Explorer website. The project final report and other detailed results will be posted at the end of the grant reporting period.
5. In a project building on the findings of our tidal wetland reference site project results, Master's degree candidate Julie Doumbia of our project team (CICEET project investigator Laura Brophy's advisee at OSU) completed her study on Measuring Tidal Inundation Regime with Temperature Loggers in Mangrove Habitat of Southeastern China. Doumbia's research was funded by the National Science Foundation's East Asia and Pacific Summer Institute; temperature sensors (iButtons) purchased through our CICEET grant were used for the field study in China. Doumbia's study successfully demonstrated the use of iButton temperature sensors for detection of tidal inundation in subtropical mangrove swamps. Julie's project expands the geographic scope of potential application for this CICEET-funded technology.

C. NOAA Restoration Center-funded reference site monitoring project: This project has completed its third field season and continues with the following activities:

1. During this reporting period, SSNERR staff member Heidi Harris continued to compile project data and help us complete field tasks associated with the reference sites project. Heidi is moving all the project data into the templates the team developed for the project including groundwater level, vegetation percent cover, stem density and shoot length and pore water salinity (soils data to come). She has

posted SSNERR's data templates on the NERRS intranet site to be accessible to Chris Peter at Wells, Maine NERR, who is conducting the data analyses.

2. We measured the vegetation percent cover, stem density and shoot length at the reference sites during the months of July and August 2010. We also collected pore water salinity data at all plots during the same summer months. The vegetation and pore water data were combined with those data collected from previous years in the reference sites project data templates and made available to Chris Peter for analysis as mentioned above.

We also measured the summer 2010 (dry season) ground water elevations in the study marshes. Water level loggers were placed at restoration and reference sites for a minimum two week intervals.

The ground water well deployments will address our project's groundwater dynamics objective which is to understand how similar the restoration site groundwater attributes (water level, temperature, and salinity relative to daily tidal fluctuations, episodic precipitation events, and storm surges) are to those attributes recorded at the reference sites.

3. As part of the NERR System, South Slough NERR is eligible to borrow a high precision Real Time Kinematic (RTK) Global Positioning System (GPS) elevation survey equipment from NOAA's estuarine reserves division. SSNERR staff used the RTK equipment earlier this year but were unable to recover accurate data for some vegetation plot locations at a project site in Yaquina Bay. This was likely due to variable availability of satellites in that narrow river valley. This summer we brought leveling equipment (Topcon auto-level and stadia rod) and SSNERR's sub-meter Trimble GPS backpack unit to the site and collected accurate elevation and lat/lon coordinates for the "problem" plots. We made the appropriate corrections to our spatial data for the project sites in ArcGIS.
4. We collected soil samples adjacent to each of the groundwater wells at the Kunz marsh and Danger point sites and submitted them to Oregon State University's Central Analytical Laboratory to determine bulk density and organic content. Soil sample collection is now completed for the project. When the results are sent back to us, we will compile the data in the soils template and upload it to the NERRS intranet site.

5. We continue to participate with PI's from the other NERR sites on this multi-site project to ensure standardization in sampling design, data collection and data management.

D. System Wide Monitoring Program Biomonitoring project: Field work for the 2010 season of the NERRS System Wide Monitoring Program (SWMP) biomonitoring project began in July 2010 after the Reserve hired Judy Hamilton to serve as the biomonitoring coordinator on this NOAA funded project. The goal of the project is to establish long-term biological monitoring sites to document changes in eelgrass beds and emergent salt marshes in the South Slough estuary and assess the local effects of climate variability and change using these biological communities as indicators. To date, Judy has established a network of 10 paired eelgrass and salt marsh monitoring sites in different hydrographic regions of the South Slough estuary and has just finished field work designed to characterize the salt marsh and eelgrass communities at those sites. Judy will also establish the marsh surface elevation monitoring stations at all sites that don't already have stations established. Surface Elevation Tables are portable instruments that attach to stationary posts placed in the field. SET measurements allow us to measure the elevation of the soil surface in salt marsh and eelgrass habitats on a yearly or seasonal basis and ultimately to characterize the change in sediment elevation over time. Understanding small scale changes in sediment elevation at these sites will help us interpret any changes seen in the biological communities we're focusing on.

III. Watershed Activities

- A. Proposed Mining In South Slough Watershed: The mineral sands mining project proposed by Oregon Resources Corporation (ORC) for the coastal frontal watershed (west of the South Slough watershed) has been fully permitted. A multi million dollar processing plant currently under construction near Bunker Hill in Coos Bay. As of this writing, the Coos County Board of Commissioners are debating whether or not to grant a two-year extension of the ORC's enterprise zone tax waiver for the processing plant. The county is also in the process of reviewing ORC's proposal to expand mining into the Coos County Forest, and thus in the South Slough watershed. Negotiations are ongoing.

- B. Oregon Youth Conservation Corps Crew: In partnership with the SWOYA Boys and Girls Club and the South Coast Business Employment Corporation, the Reserve again hosted six local youth dedicated to conservation and stewardship projects. The crew was employed for seven weeks and during this time they removed several invasive terrestrial species, maintained and improved hiking trails, assisted with building the south boundary fence, cleaned and transplanted native Olympia oysters, and worked with the OIMB maintenance staff to clean up newly acquired land for campus expansion.

IV. Land Management

- A. Land Acquisitions:
 - 1. NOAA's Coastal and Estuarine Land Conservation Program (CELCP) released its ranking of priority projects for FY11 funding. South Slough NERR's proposal was ranked 5th in the nation. Our proposal is for \$1.68 million to purchase the upper reaches of the Anderson, Wasson and Hayward Creek watersheds. This purchase would allow the Reserve to manage and study entire sub-watersheds that drain into South Slough.

To identify the final cost of this transaction, an independent appraisal and timber cruise of the subject properties was conducted by Mason, Bruce and Girard, Inc. and the final appraised value was comparable to the estimates developed for the CELCP proposal.

2. \$600,000 has been secured from the NOAA Land Acquisition and Construction Program for the purchase of surface rights (timber and development rights) on parcels classified as Common School Fund (CSF) trust lands in the South Slough watershed. This purchase is intended to compensate the CSF for the potential timber revenue of these lands and transfer management authority to the Management Commission. The appraised value of these properties was significantly higher than estimated. Staff are working with NOAA and the Oregon Department of State Lands (DSL) to secure funding for the completion of this acquisition.
3. At the direction of the SSNERR Management Commission staff are evaluating a proposal from the Charleston Sanitary District (CSD) to transfer a .06 acre bay-shore parcel to the Department of State Lands for the benefit of the Reserve. The CSD parcel sits at a low point along Cape Arago Highway in the Barview district and is currently the site of a sewer pump station. The property adjoins and is surrounded on two sides by a much larger shoreline and tideland parcel owned by the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians (Tribes). Our research indicates that the Tribes are also considering a similar proposal from CSD.

The Reserve and the Tribes have a standing cooperative agreement in place. Correspondence with staff at the Tribes suggests an interest in partnering with the reserve to undertake stewardship and educational programming at the site. If the Tribes assume ownership of the parcel, the Reserve would be welcomed as a partner in the future restoration and development of the site.

IV. Meetings / Presentations

South Slough NERR Stewardship Program Coordinator, Hans Klausner:

- August 13: Met with David Greer, Senior Planning Manger for Plum Creek, to review appraisals and address any questions that the seller might have.
- August 19: Presented the final accomplishments of the OYCC crew on Reserve stewardship projects.
- September 15-17: Attended the Pacific Northwest Native Oyster Restoration Workshop.
- October 11-15: Attended the Annual NERRS/NERRA Meeting.
- October 26: Attended the USDA Rural Jobs Development Forum.

South Slough NERR Coordinator of Monitoring Programs, Craig Cornu:

- September 2010: Briefed state Representative Arnie Roblan on the Partnership for Coastal Watersheds concept and discussed his possible role as an “influential convener” to help Bessie Joyce and Jon Souder (both with the Coos Watershed Association) convene the Partnership Project’s community steering committee.
- October 2010: Met with Leesa Cobb and other Port Orford Ocean Resource Team (POORT) staff to outline the objectives of the Partnership for Coastal Watersheds project and to get POORT’s advice on how to run a successful community-based ecosystem management effort, with Bessie Joyce (Coos Watershed Association).

INPUT ON STAFF ACTIVITIES

RESEARCH AND MONITORING PROGRAM UPDATE

During the period from 1 July 2010 to 1 Nov 2010 South Slough NERR staff members continued work associated with several ongoing research and monitoring projects. Progress is described below:

I. NERRS System-Wide Monitoring Program (SWMP):

During the spring, summer, and fall, Steve Rumrill, Ali Helms, and Adam DeMarzo continued to operate the three existing programmatic elements of the South Slough NERR SWMP: (A) Ambient Estuarine Water Quality; (B) Local Weather Conditions; and (C) Tidal Forcing of Estuarine Nutrients (see A-C below for summaries).

A. Ambient Estuarine Water Quality: Ali and Adam worked to retrieve, download, recalibrate, and redeploy the YSI-6600 Extended Deployment System (EDS) dataloggers at the four long-term estuarine monitoring stations on July 14; August 5 & 18; 22; Sept. 22, 24, 27; Oct. 20 & 29, 2010. Fouling organisms (primarily barnacles and mussels) were dislodged on a monthly basis from the SWMP stations. The datasets, for April-June, 2010 were submitted on August 1, 2010 & the datasets for July-Sept 2010, will be submitted by Nov. 1, 2010. The yearly water quality datasets, monthly calibration/field sheets and metadata for 2010 have begun initial processing for submission by March 15, 2011.

The Satlink programs at the Charleston Bridge, Valino Island, and Winchester Creek telemetered stations were reprogrammed in order to record but not transmit additional diagnostic parameters, including Dissolved Oxygen Charge

and pH millivolts, for enhancement of the quality assurance/quality control procedures.

A new type of satellite antenna has been installed at the Charleston Bridge station and will be installed at the three other telemetered stations. The new Stevens V4TH antenna has a helix design that encloses the antenna to help increase performance in severe weather and minimize corrosion problems we have experienced with other antenna configurations.

South Slough NERR is a participant in the NOAA/NERRS effort to install and operate real-time telemetry equipment as part of the national backbone of the US Integrated Coastal Ocean Observing System. The electronic satellite telemetry equipment at the Winchester Creek station is currently transmitting measurements of estuarine water parameters recorded by the YSI 6600 EDS datasonde. We completed a firmware upgrade on 10/20/10. The Charleston Bridge and Valino Island stations transmit data intermittently and work is underway to resolve these issues. In October, we mounted telemetry equipment on the tower for the new Elliot Creek station. The Elliot creek station will replace the Sengstacken site due to sediment build up at Sengstacken; We are working to install the protective casing at Elliot before we move of the sonde to the new station.

B. Local Weather Conditions: The South Slough NERR SWMP Weather Station has operated continuously with recordings of air temperature, relative humidity, barometric pressure, wind speed and direction, precipitation, and solar radiation every 15 minutes. Ali Helms & Adam DeMarzo completed monthly maintenance on all the meteorological station sensors/ and solar panels. Data were retrieved from the CR1000 datalogger on August 3, Sept. 3 & 28, and Oct 29, 2010. Ali and Adam installed a GOES satellite transmission system on the meteorological station that automatically sends South Slough datafiles from the CR1000 datalogger to the NERR Centralized Data Management Office in South Carolina.

The near real-time measurements and historical datasets generated by our meteorological station are now available on the NERR CDMO website (<http://cdmo.baruch.sc.edu>). The April-June 2010 datasets were submitted on August 1, 2010 & and the July-Oct 2010 data are scheduled for submission on Nov. 1, 2010. The meteorological datasets, monthly log sheets and metadata for 2010 are currently being processed for submission to the CDMO for final review by April 15, 2011.

C. Estuarine Nutrients: Monthly waterborne nutrient sampling was conducted during the reporting period. Water samples were collected from each of four SWMP nutrient sampling locations in South Slough. Subsamples were sent to the University of Washington's Marine Chemistry Laboratory for the analysis of dissolved inorganic nutrients. Adam DeMarzo analyzed subsamples for Chl-a and Phaeopigment content at the South Slough laboratory. The SWMP Team now prepares and analyzes monthly nutrient, bacteria, and chlorophyll blanks to further ensure data quality.

D. Availability of SWMP Real-Time Data / Data Products for Shellfish Growers: South Slough NERR is a participant in a project to make estuarine water quality datasets available on a real-time basis. The measurements of estuarine water parameters are now available on several websites (http://nerrs.noaa.gov/ioos/realtime_map.html; <http://cdmo.baruch.sc.edu>; <http://www.weather.gov/oh/hads/>; <http://www.nws.noaa.gov/oh/hads/>; <http://www.nanoos.org>). The website that is specifically designed to deliver real-time water quality data and data products to local and regional shellfish growers has been operating since 3 July 2007 (<http://www.nanoos-shellfish.org>). The website continues to provide information about estuarine water quality conditions for commercial shellfish growers in Oregon, Washington, and Alaska. The project was developed in cooperation between the South Slough, Padilla Bay, and Kachemak Bay NERRS and Mindfly Web Development as a data delivery element of the US Integrated Ocean Observing System. The website functions to pull datasets from the NERRS Centralized Data Management Office and then reconfigures the data and develops new data products that meet the specific needs of local and regional user-groups.

SeagrassNet Monitoring On August 10 & October 7th, 2010. Ali Helms, Adam DeMarzo, Judy Hamilton, and Craig Cornu completed the quarterly eelgrass field sampling at Valino Island using the SeagrassNet sampling protocol. SeagrassNet is an international monitoring program established in 2001 to document the worldwide status and health of seagrasses; the program has grown to include over 100 sites in 30 countries. Quarterly field sampling includes data collection from three permanent transects near Valino Island, each with 12 samples of spatial cover, shoot density, canopy height, biomass, and flowering shoots. South Slough began submitting eelgrass monitoring data as part of this program in 2004; since that time the Day Creek channel has migrated south and is influencing the edge dynamics of South Slough's SeagrassNet eelgrass bed. As a result of this channel migration, a few of the quadrats at the North end of the transects are now bare. However, preliminary analysis of data shows that the overall average eelgrass spatial cover and density at this site are increasing slightly or staying the same.

Informational Issue: West Coast Governors' Agreement on Ocean Health – Federal Funding Opportunity

Background: South Slough NERR participated directly in development of two components of the West Coast Governors' Agreement on Ocean Health (WCGAOH). First, Steve Rumrill served as a Co-Principal Investigator (along with the Directors of the state Sea Grant Programs in OR, CA, and WA) during development of the *West Coast Regional Marine Research and Information Plan* (2009). The planning team conducted 16 needs assessment workshops in OR, CA, and WA over 2007-2008, and compiled information from over 5,200 comments into a series of three regional cross-cutting themes and eight broad priority topics for new research. The *West Coast Regional Marine Research and Information Plan* was cross-referenced to the West Coast Governors Agreement Action Plan, and incorporated as one of the initial components of the WCGAOH in 2009.

Second, Rumrill continues to serve as Chairman of the WCGAOH Integrated Ecosystem Assessment - Action Coordination Team (IEA-ACT). The IEA-ACT is also an integral component of the West Coast Governors' Agreement on Ocean Health (WCGAOH). The Action Coordination Team has developed a working draft of the West Coast IEA Workplan that proposes to establish four Regional-IEAs that will serve as the initial focal areas for the integrated assessments. The four Regional-IEAs are: (1) Central California/Morro Bay to Monterey Bay; (2) Northern California/Mendocino to Point Saint George; (3) Coastal Oregon Port Orford to Cascade Head; and (4) Olympic Coast/Puget Sound). The R-IEAs will be consolidated in the future to provide the foundation for the broader scale Pacific Coast IEA, and the efforts will be coordinated with activities undertaken by the Regional Associations of the Integrated Ocean Observing Systems (*i.e.*, NANOOS, CenCOOS, SCOOS), the Pacific Coastal Ocean Observing System (PACOOS), the *West Coast Regional Marine Research and Information Plan*, the NOAA-Integrated Assessment of the California Current Large Marine Ecosystem, and other ongoing regional efforts (*i.e.* USEPA-CEMAP, PISCO). The IES-ACT received review comments on the proposed workplan from the three states and the public, and the team worked over the summer to integrate the comments into a revision of the workplan.

NOAA issued an announcement (15 Sep 2010) for a new Federal Funding Opportunity (FFO) that will support the priorities identified by Regional Ocean Partnerships (including the WCGAOH), and help make advancements toward Coastal and Marine Spatial Planning (CMSP). In response to the funding opportunity, the IEA-ACT was asked by the WCGAOH Executive Committee (Brian Baird / CA; Jessica Keys / OR; Bob Nichols / WA) to conduct a “crosswalk exercise” (below) that identifies priorities and items contained in the action plan that intersect strongly with the activities described by the NOAA FFO. The R-IEA Action Coordination Team submitted their response to the crosswalk exercise on 19 Oct, and the priorities for proposal development will be established during a series of state-wide workshops (CA/Nov12; OR/Nov 15; WA/Nov 16, 2010). A tri-state writing team will assemble the regional proposal on behalf of the WCGAOH following the state workshops, and the deadline for submittal of the regional ocean partnership proposal is 10 Dec 2010. It is possible that the regional proposal may incorporate priority topics identified by the *West Coast Regional Marine Research and Information Plan*, and include further design of the R-IEAS to include the West Coast EBM network and the network of National Marine Sanctuaries, National Estuarine Research Reserves, National Wildlife Refuges, and state Marine Conservation Areas and Marine Reserves.

Action Coordination Team: Integrated Ecosystem Assessments

Top 3–5 Region-Wide Priority Tasks in ACT Work Plan That Intersect with CMSP	Description of How This Task Meets the Requirements of the FFO
1. Finalize the workplan for development of West Coast Regional- Integrated Ecosystem Assessments, to include strong collaboration with the West Coast EBM Network	R-IEAs directly address the FFO focus on Coastal and Marine Spatial Planning, including a particular emphasis on a synthesis of relevant science and use of an Ecosystem-Based Management Approach that addresses cumulative effects in coastal areas

2. Convene the West Coast IEA Workshop to define the objectives, biogeographic scope, information needs, methodologies, outcomes, and performance measures for R-IEAs	Incorporate multiple existing uses and new emerging issues into a synthesis of relevant spatial data on ecosystem structure, function, services, and human uses on a regional scale; identify regional goals and objectives for appropriate uses of coastal areas; establish methods to evaluate tradeoffs, cumulative effects, and sustainable uses in a manner that can accommodate changing environmental conditions.
3. Establishment of West Coast R-IEA Leadership Team, Technical Steering Committees, and Regional Stakeholder Groups	Encourage the broad-based inclusive engagement of stakeholders in the planning process
4. Identify and finalize the West Coast IEA Pilot Projects, including regional R-IEA implementation teams, and identification of regional coastal management needs to be addressed by R-IEAs; design R-IEAs to include the West Coast EBM network and the network of National Marine Sanctuaries, National Estuarine Research Reserves, National Wildlife Refuges, and state Marine Conservation Areas and Marine Reserves	Build upon existing marine spatial planning efforts
5. Develop R-IEAs to include exploration of alternative coastal management scenarios and risk	Application of decision support tools to help planners and stakeholders assess the implications of alternative ocean use scenarios

analyses	throughout the region.
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Staff Recommendation: This item is included for informational purposes. No specific actions are requested of the South Slough NERR Management Commission at this time.