

SOUTH SLOUGH RESERVE MANAGEMENT COMMISSION

AGENDA

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

29 July, 2010

128th REGULAR MEETING 1:00-4:00 P.M.

I. Call-to-Order

II. Introductions

III. Approval of the 127th regular meeting minutes

IV. Public Input*

V. Old Business

- A. Report on unauthorized activities (H. Klausner)
- B. Relocation of Administrative offices to Charleston
- C. Other

VI. New Business

- A. Recognition of Commissioner Rich Hamel (D. Rudd)
- B. Review of Draft Energy Plan for SSNERR (J. Bragg)
- C. Fredrickson House
- D. Other

VII. Informational Presentations

- A. Research presentation by Holly Keammerer 2010 NERRS Graduate Research Fellow
- B. Report on regional research initiatives (S. Rumrill)
- C. Overview of wireless network and tour of self contained repeater station (T. Elledge)

VIII. Informational Items

- A. Administration updates including: FY 2011-2013 budget
- B. Education programs update
- 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 127TH REGULAR MEETING

March 18, 2010

COMMISSION MEMBERS PRESENT:

Richard Hamel	Louise Solliday, Chair
Craig Young	James Fereday
Robert Emmett (via telephone)	Kevin Stufflebean
George Boehlert (via telephone)	Mark Ingersoll

COMMISSION MEMBERS NOT PRESENT:

Ron Stuntzner

SOUTH SLOUGH NERR STAFF PRESENT:

Mike Graybill	Kathy Andreasen
Pam Wilson	Steve Rumrill
Craig Cornu	Alicia Helms
Don Smith	Hans Klausner
Tom Gaskill	John Bragg
Adam DeMarzo	Jenna Kulluson
Deborah Rudd	

OTHERS PRESENT:

Nora Terwilliger, SSNERR Advisory
Bessie Joyce, Coos Watershed Association
Jody Hamel, public

The meeting was called to order at 1:00 p.m. by the Chair of the Commission, Louise Solliday.

INTRODUCTIONS:

Chair Solliday introduced and welcomed Coos County Commissioner Kevin Stufflebean as the latest executive appointment to the South Slough NERR Management Commission. Everyone present at the meeting introduced 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 Hamel moved to approve the minutes of the previous meeting and Commissioner Boehlert seconded the motion. The minutes were approved.**

PUBLIC INPUT

There was no public input.

OLD BUSINESS

RECOGNITION OF VOLUNTEERS

The Commission recognized the contributions of the South Slough NERR volunteers. The Volunteer Service Award nominees for year 2009 were named by Louise Solliday. Thank you letters to volunteers who had contributed more than 10 hours of service were signed by Chair Solliday. Certificates were also given and the names of volunteers who had contributed three or more years of service were added to the volunteer recognition plaque displayed in the Reserve's Interpretive Center. Chair Solliday expressed gratitude to all who have donated their time and care to the Reserve; and she thanked Deborah Rudd for her work with the volunteers and the local community. Refreshments were served after the recognition event.

CLARIFICATION OF PUBLIC MEETING LAWS

Mike Graybill provided an update regarding Oregon public meeting law and procedures for staff to solicit comments from the Commission.

With the assistance of SSNERR Commission chair Louise Solliday and Mr. Mark Shumock at the Oregon Department of Justice, staff researched the issue regarding whether e-mail communications between members of the Commission would constitute a public meeting for which formal notice would be required.

The Attorney General's office stated that, if deemed necessary, the Management Commission may give not less than a 24 hour notice to hold a public meeting. Also detailed in the briefing packet were the appropriate steps from the Attorney General's office for staff to solicit input from Commissioners. E-mail exchanges between Commissioners and staff are subject to disclosure under the public records law. If there is a need or desire to keep interactions confidential, it is permissible for staff to discuss the individual views of Commissioners in confidence by telephone.

Commissioner Hamel commented that according to Oregon law, the minutes of a public meeting held on short notice need to state the reason for convening the emergency meeting. He asked the Chair whose responsibility it is to retain e-mail records in the case of Commission members corresponding between each other. Chair Solliday said she would check on whose responsibility it is to retain records if neither of the corresponding individuals is a public employee.

Chair Solliday asked if the Commission would like to formalize a process for dealing with the issues that were raised. Mike Graybill said that he was comfortable with the instructions he received from the Management Commission at the last meeting in November 2009.

NEW BUSINESS

COMMERCIAL CLAM HARVESTING

Chair Solliday introduced a new business agenda item. Representatives from the Oregon Department of Fish and Wildlife and the Oregon State Police have recently called attention to staff regarding possible commercial clam harvesting in the Reserve. Staff is currently looking into the administrative rules that govern activities within the boundaries of the Reserve. Some of the rules were revised several years back and while it is known that recreational shellfish harvest is permitted subject to Oregon's Fish and Wildlife regulations, law enforcement officers have asked staff to provide them with the current version of the rule that specifically precludes new or increased commercial activities such as clam harvesting. Staff will provide an update on the matter at the July meeting.

STATE BUDGET PROCESS

Chair Solliday distributed the Department of State Lands Internal Budget Development Schedule and the Department's Budget Presentation Preparation Schedule to the Commission. She said that the budget forecast looks dismal and the state economist expects a long, slow recovery. The Department of State Lands, which chiefly operates with Common School Funds, has been asked to provide cuts of 10 percent for the Legislature to consider. Agencies funded by General Funds and Lottery Funds have been asked to submit 25 percent. Chair Solliday said State Lands will submit their budget to the Governor on August 1, 2010. She added that she will be able to provide more specifics at the July meeting.

INFORMATIONAL PRESENTATIONS

OREGON COAST EDUCATION PROGRAM

Tom Gaskill, SSNERR Education Program Coordinator, and Jenna Kulluson, Oregon Coast education initiative coordinator, gave a Power Point presentation update to the Commission on the Oregon Coastal Education Initiative (OCEI). The primary objectives for the first year of the OCEI were detailed. One outcome of the project is to develop a network of educators focused on comprehensive coastal education for schools. Initial support for the effort has been obtained through a \$100,000 grant from NOAA's Bay Watershed Estuary Training (BWET) program.

PARTNERSHIP FOR COASTAL WATERSHEDS

Craig Cornu, SSNERR coordinator of monitoring programs, and Bessie Joyce, outreach coordinator for the Coos Watershed Association, presented an update and Power Point presentation on the Partnership for Coastal Watersheds project. Financing has been obtained with a two year award of \$216,000 from the Cooperative Institute for Coastal and Estuarine Environmental Technologies (CICEET). The work will focus on the local effects of climate change and changes in land use linked to the local community's quality of life and long term economic viability.

OREGON SOLUTIONS PROJECT

Mike Graybill provided an update on the current status of the Oregon Solutions project.

Staff has followed up on the Commission's directive at the November meeting to work with the University of Oregon to procure the Hatzel property in Charleston. Commissioner Young set up an appointment with a number of high level administrative personnel at UO, and the university seems to be interested in working with the Reserve.

The University of Oregon Foundation has expressed interest in facilitating the real estate transaction that would be associated with the transfer of funds from the Reserve to the university. Commissioner Young and Mike Graybill have worked together to draft a task order that would be an amendment to the current interagency agreement and that outlines how funds will be transferred and what the Reserve's responsibilities will be to develop the property as an interim site for its administrative offices.

Since the Declaration of Cooperation has been signed for the Oregon Solutions project, Mike Gaul, a representative from the Oregon International Port of Coos Bay, has retired and Steve Denny, the representative from Oregon Department of Fish and Wildlife, has announced his plan to retire in April.

Staff have submitted a \$150,000 proposal to NOAA for federal funds to facilitate moving the administrative facilities to Charleston. These funds would augment the existing funds available to help renovate the structures on the Hatzel property.

Additionally, the Reserve has been invited by NOAA to submit a full proposal to develop "Science On a Sphere" a room sized, global display system that uses computers and video projectors to display planetary data such as ocean circulation on a six foot diameter sphere, analogous to a giant animated globe.

Chair Solliday met with Roy Elicker, Oregon Department of Fish and Wildlife director, to discuss the project. Fish and Wildlife will bear the primary share of the facility cost as they need to provide offices for 24 employees. A meeting is scheduled for the end of April with Senator JoAnne Verger and Representative Arnie Roblan to get recommendations from them on how best to proceed with the project, given the budget situation for the 2011-2013 biennium.

Chair Solliday asked if there was anything else for the good of the order.

ADJOURNMENT

Chair Solliday adjourned the meeting at 3:15 p.m.

SUBJECT:

UNAUTHORIZED ACTIVITIES

ISSUE:

Two separate unauthorized uses of the Reserve have been observed and are reported below.

BACKGROUND:

1. Cattle have been trespassing onto wetlands in the southern portion of the Reserve for some time. The owner has been contacted numerous times to collect and secure his livestock. It is the opinion of Reserve staff and Oregon Department of Fish and Wildlife biologists that grazing and trampling by cattle is causing significant damage to riparian and wetland habitats in the Reserve. The owner of the cattle straying onto reserve property cites elk as being responsible for the habitat damage and for breaking down the fences, allowing his cattle to stray onto Reserve property. Staff is not aware of any plans by the owner to upgrade his fences. He has made minor and marginal repairs upon request.
2. Staff is investigating a report that a neighboring property owner cut trees on Reserve land. We have visited the property and located most (but not all) of the benchmarks and survey markers defining the property line. This preliminary investigation indicates that no trees had been cut on Reserve land but that other developments constructed by the adjoining property owner may potentially be in trespass. The suspect developments may include a horse corral and a portion of a dwelling.

Staff are currently working to confirm that the survey markers and benchmarks in the area have not been tampered with and accurately reflect the administrative boundaries of the Reserve. If a trespass is confirmed, the nature and extent of the trespass will be quantified and documented. Additional information on the status of the trespass should be available at the 128th Commission meeting.

STAFF RECOMMENDATIONS:

1. The Reserve staff and summer Oregon Youth Conservation Corps crew are working to install new fencing in the area of trespass by errant livestock. The fencing materials will cost the Reserve approximately \$3,000 using donated labor and staff labor for installation. No action is requested from the Commission.
2. No action is requested at this time but action may be requested at the meeting if a trespass is confirmed. Equipment, time and professional survey expertise donated by a volunteer, with the assistance of Reserve staff, will confirm that the benchmarks and survey markers accurately represent the administrative boundary. Should the trespass of structures be found and confirmed, the staff will seek direction from the Commission on appropriate actions to resolve the trespass.

SUBJECT:

RELOCATION OF ADMINISTRATIVE OFFICES TO CHARLESTON

ISSUE:

Update on office relocation

BACKGROUND:

Due to evolving and changing action on this subject, a verbal report will be provided to update the Commission at the meeting.

The University of Oregon's Oregon Institute of Marine Biology is working to purchase property adjacent to OIMB, which will advance the project by providing a site to relocate cottage housing, and establish the site for the Coast and Ocean Center. Sen. Joanne Verger and Rep. Arnie Roblan remain interested and involved in this Oregon Solutions project and met recently with Louise Solliday, Mike Graybill, Roy Elikor (ODFW) and Steve Denny (ODFW) to discuss the status of the project.

The Oregon Solutions project implementation team (a subset of the Oregon Solutions community committee) will meet in the near future to finalize program statements needed to develop a near-final budget and building plans, as well as to develop plans for community education about the project and opportunities for community involvement.

STAFF RECOMMENDATION:

No Commission action requested; informational item.

SUBJECT:

SSNERR COMMISSION MEMBER RICH HAMEL

ISSUE:

NOAA's acknowledgment of Commissioner Hamel's contributions and formal acknowledgement of Rich's contributions by members of the SSNERR Management Commission

BACKGROUND:

The National Oceanic and Atmospheric Administration recently honored Rich Hamel for his efforts to support and protect the South Slough Reserve. NOAA recognized Rich for more than a decade of volunteer service to the Friends of South Slough, Inc., and eight years of volunteer service on the South Slough Management Commission. Rich received the 2010 Walter B. Jones and NOAA Excellence Award for Volunteer of the Year. The award honors people and organizations for outstanding contributions in maintaining healthy coasts and oceans.

Commissioner Hamel was selected from an impressive field of nominees whose dedication and hard work epitomize coastal stewardship.

After retiring from a career as an aerospace engineer, Rich served three years on the Friends' fund-raising committee, three years as treasurer, and three years as board president. He served for two Oregon governors to represent the public on the South Slough Management Commission and has served as the vice chairman of the Commission since 2002.

Rich was instrumental in securing funds for the SSNERR interpretive center, for the new interpretive exhibits, and for reprinting the book, *South Slough Adventures*, a collection of stories and historic photos.

Commissioner Hamel was quite surprised when he heard the news from NOAA. The South Slough is clearly a very special place for Rich and he has contributed significantly to the advancement of the Reserve.

As a Friend's board member, Rich managed the Friends' budget, set up software to manage bookstore accounts, and created a database for keeping track of members. He secured funding from the Meyer Memorial Trust for new trails, including a foot bridge spanning a scenic tidal channel as well as helped to obtain a \$9,000 grant from Trust Management Services to provide *Explore Your Estuary* backpacks for visitors to use while hiking in the Reserve.

Rich's support for the Reserve amounts to more than dollars and cents. In 2008 he allowed staff to decorate his pickup truck with an estuary theme for the Bandon Cranberry Festival Parade, and he continues to assist the Friends with grant writing, development, and website management. He and his wife, Jody, also a Friends volunteer, traveled to Washington, D.C. June 10 to receive the award in a Capitol Hill Ocean Week ceremony. Members of Congress and NOAA administrator, Jane

Lubchenco, a former Oregon State University professor of oceanography, and other dignitaries, led the recognition ceremony.

STAFF RECOMMENDATION:

Commissioners should join the staff in congratulating Rich and thanking him for his years of service and contributions to the advancement of the objectives of the Reserve.

SUBJECT:

DRAFT ENERGY PLAN AVAILABLE FOR COMMISSION REVIEW AND COMMENT

ISSUE:

Staff have completed an initial draft of an energy plan to guide all energy related investments at SSNERR, including facility development, land management actions, equipment purchases and program developments related to energy use and production at the Reserve. The draft plan is included in this briefing packet for the Commissioners' review and comments. (See insert.)

BACKGROUND:

At its 125th regular meeting on March 19th, 2009, staff reported progress to the Commission on a number of energy efficiency improvements included in two tasks.

The first task included a number of energy efficient improvements at the Interpretive Center, ECOS lab on the OIMB campus, and Spruce Ranch guest house, including installing a solar hot water supply at an ECOS storage facility; energy efficient lighting at the Interpretive Center; solar powered water pumping systems at the Interpretive Center and Spruce Ranch, and a photo voltaic electric generating system for the Interpretive Center.

The second task was to develop the integrated energy plan following the completion of the Task 1 projects.

STAFF RECOMMENDATION:

Staff requests the Commissioners' direction for further additions, changes or deletions to the draft plan, advisory review, or other actions to be taken before approving a final version of the plan.

SUBJECT:

FREDRICKSON HOUSE RE-PURPOSING

ISSUE:

Should the Fredrickson House be re-purposed to continue its contribution to the public?

BACKGROUND:

With several projects proposed for the area and increased discussions about its current and future status, SSNERR staff recently met to discuss the Fredrickson House site located near the confluence of Wasson and Winchester Creeks that is accessed by a spur road off Hinch Lane. The house is a two-story, former homestead dwelling that has received little maintenance but is commonly adored by the visiting public. Unfortunately, it is also a consistent target of vandalism.

Recently the Friends of South Slough met to discuss options for the Fredrickson House. At a recent meeting, Board members toured the area and were energized by the concept of continuing to use the house and site for a variety of purposes. Following the site visit, committee members agreed that full scale restoration of the house might be prohibitively expensive.

Staff initiated this conversation by agreeing to a common understanding of the current status of the structure. In general the group agreed that the structure, in its current state, is unusable but functions as an icon for visitors. Staff also acknowledged that the structure poses significant safety issues for visitors and presents an attractive nuisance for unintended visitors. Staff identified and evaluated four potential management options for the site:

1. Do nothing.
2. Demolish the structure (potential “learn to burn” exercise for fire crews).
3. Restore the structure.
4. Dismantle it and recycle any useful materials.

Because of safety issues linked to the deteriorating condition of the structure, the status quo or do nothing option is no longer appropriate. Action is warranted. Because the building still has recoverable materials that could be re-used, and staff did not want to see usable materials go to waste, the demolition option was not supported.

Restoration of the structure will be very costly. In addition, a compelling priority use for a restored structure in that location has not been identified. Further, a source of funding to restore this structure is not evident. A previous attempt to place the site on the National Register of Historic Places was not successful. Without recognition as a site of historic significance, it would be difficult to secure the necessary funds to restore the structure.

STAFF RECOMMENDATIONS:

1. Salient architectural details of the house and its associated outbuilding should be carefully documented. This documentation should be permanently archived in SSNERR's records retention program.
2. The house should be dismantled. Reusable materials should be recovered with the intent of using them to construct trail side way points and structures (overlooks, shelters, docks, etc.) designed to reflect the architectural style of the historic period of the house and its associated out-building.
3. The trail side structures should support and enhance existing trail infrastructure, be scaled to fit the locations, and be constructed at a number of locations on the Reserve.
4. When appropriate or feasible, priority should be given to develop trail side way points at known locations of historic activities (of which the Fredrickson House site is certainly one).
5. Staff should work with the Friends of South Slough to seek outside funding from Other Fund and Federal Fund opportunities to help offset the costs associated with this project.

SUBJECT:

COMMERCIAL COLLECTION OF SEAFOOD

ISSUE:

State regulatory agencies request a clarification of the Reserve's administrative rules

BACKGROUND:

Representatives from the Oregon Department of Fish and Wildlife (ODFW) and the Oregon State Police (OSP) called attention to possible commercial clam harvesting in the Reserve. Though Oregon Administrative Rules specifically prohibit commercial bait gathering (O.A.R. 142-010-0021(1)) enforcement officers questioned the legality of commercial harvest of clams for human consumption.

Guided by Chairperson Solliday, staff reviewed the administrative rules that govern activities within the boundaries of the Reserve and determined that O.A.R.142-010-0020(26) restricts "New or increased commercial activities which are not existing as of the creation of the Reserve in June 1974." Chairperson Soliday interpreted this to include all commercial harvesting of clams for any purpose.

UPDATE:

ODFW and OSP have asked staff to provide a clarification on the rule that specifically identifies commercial activities that are permissible in order for their staff to enforce restricted activities. Staff will investigate and document commercial activities that occurred on Reserve lands prior to designation, and a definitive list of permissible commercial activities will be provided to the appropriate regulatory agencies.

MANAGEMENT AND ADMINISTRATION

NEW STAFF ARRIVALS

Heidi Harris rejoined the staff at South Slough, accepting a limited duration position. She is grant funded through March 2011 and is providing database management and GIS assistance at SSNERR's ECOS lab.

Silvia Ballena is here for the summer working in the Friends of South Slough Bookstore as well as providing visitor services. The Friends support Silvia's employment through a temporary employment services agency. Silvia has worked in the past at the Reserve, responsible for these same duties.

Jenna Kulluson, currently working at SSNERR as the Oregon coastal education initiative coordinator for Southern Oregon, has accepted a part time position through the Friends as summer science camp assistant. She held the same position last summer.

The six person Oregon Youth Conservation Corps crew arrived July 1. They have a variety of projects ahead of them for the approximately eight weeks they will be at South Slough.

Two volunteers working full time at the Reserve for the entire summer are settling into their projects and duties. Both come to South Slough from Ireland through separate professional development opportunities.

- **Laura Adams** is a second-year marine science student at the National University of Ireland Galway (NUIG). Family members living in Oregon first contacted the Reserve helping Laura set up a volunteer professional development work experience project. Laura is working with Tom Gaskill to develop a children's guide book of animals in the aquaria exhibit, and is assisting Joy Tally with interpretive programs.

Laura also helps the South Slough lab team with salt marsh plant sampling and will be helping with the native oyster project, as well as summer science camps. She began her internship at the end of June and will work full time at SSNERR through the end of July. When she returns to Ireland, Laura has agreed to be a webinar liaison for one of Education Coordinator Tom Gaskill's live classroom broadcasts.

- **Jeanne Sampier** recently graduate from NUIG with a degree in Environmental Science. Jeanne is here visiting relatives and will be working part time at the Reserve through the end of September. Jeanne wanted to gain some volunteer experience in her field and inquired about volunteer positions at the Reserve while visiting the Interpretive Center with her family.

Jeanne has participated in secretive marsh bird monitoring, marsh plant sampling and will also help with summer science camps and the native oyster project.

Mark Burnap began work with the Reserve on July 6. Mark is a summer session

student at OIMB involved in the PRIME (Promoting Research Investigations in the Marine Environment) internship program, sponsored by OIMB's Centers of Ocean Science Educational Excellence (COSEE).

Mark will conduct field and laboratory investigations to describe the fish and invertebrates that have colonized the native oyster cultch bags deployed at Younker Point, and will develop an underwater still and video camera system that can be used to conduct surveys of oyster populations in subtidal habitats.

NOAA's Estuarine Reserves Division recently awarded two new NERR Graduate Research Fellowships grants to graduate students who will conduct their thesis work within the South Slough NERR. Both of the new NERR GRFs began their grant-supported thesis work in June 2010. The new GRFs are:

- **Holly Keammerer** is a U.O. Ph.D. candidate at the Oregon Institute of Marine Biology. Holly's fellowship will support her effort to evaluate interactions between the seedlings of five salt marsh species and existing emergent vegetation. She will receive one year (\$20,000) of federal support to conduct laboratory and field experiments to examine competition and facilitation within the plant communities that inhabit salt marshes in the South Slough.

Holly will give a presentation at the July 2010 SSNERR management Commission meeting.

- **Matthew Gray** also started his NERRS Graduate Research Fellowship at SSNERR. Matt is a Ph.D. candidate at Oregon State University. His fellowship will address competition between native Olympia oysters and introduced Pacific oysters. He will receive up to three years of federal support (\$60,000) to compare and contrast the feeding biology of Olympia and Pacific oysters in South Slough and in Yaquina Bay to evaluate feeding efficiencies under different field conditions and determine the likelihood of competition for food resources between the two species.

DEPARTURES

Al Pancoast recently completed his tour of duty as South Slough's first Southwestern Oregon Community College intern. Al is pursuing a career in forest management. His internship at South Slough should help make that dream a reality.

Al's work experience focused on various aspects forest stewardship. Al was with us one day a week during the spring term. Nate Damewood, Don Smith, Hans Klausner and Robin Elledge created a work plan for Al to that made the best use of his time at South Slough.

Michelle Miranda relocated to Eastern Oregon in late May and left her position at the Reserve providing visitor services through the Experience Works program.

RECRUITMENT

A recruitment is open for a biomonitoring specialist, a limited duration, 80 percent time position. Funding is available for approximately nine months. Fourteen applications have been rated as qualified, and interviews are pending.

STAFF STATISTICS

Did you know the staff occupying 16 full time, regular positions represent 153 years of experience working at the South Slough NERR? Longevity ranges from the newest staff with two years experience all the way to over 25 years for the longest term staff member.

OPERATIONS UPDATES

Staff continue to work with contractors regarding roof replacement at the Interpretive Center. Through funding available in the maintenance fund (\$20,000 per biennium) and a bequest to be distributed within weeks to the Reserve (for the remainder of approximately \$8,000), staff anticipate a new, metal roof will be installed by the end of summer.

Work will begin prior to this meeting on the solar-powered water system.

The lighting project is on a time and materials contract, with Reserve staff handling much of the installation of fixtures.

NOAA GRANT APPLICATIONS

South Slough NERR's application to NOAA for FY 10 Operations funding was awarded effective July 1 in the amount of \$693,916 in federal funds matched by \$284,536 in state support.

The Reserve also applied for three NOAA FY 10 Acquisition and Construction awards. We requested \$600,000 to complete a three-party land transaction linked to the initial acquisition of Reserve land, \$130,000 to transfer ownership of Hinch Road from Coos County to the SSNERR and to improve exterior security lighting in the vicinity of the SSNERR Interpretive Center, and also \$150,000 to supplement the funding on hand to move SSNERR's administrative offices and services to Charleston.

Only the \$600,000 award was funded; the other two applications were declined at this time.

Construction and Acquisition funds from NOAA are identified for application in the late fall, with applications typically due in November of each year for funding the following summer.

TRAINING, CONFERENCES, PRESENTATIONS AND PROFESSIONAL DEVELOPMENT:

- March 2010. Stewardship Coordinator Hans Klausner participated in the System Wide Monitoring Program Guidance Committee teleconference as the Stewardship sector alternate representative.
- March 2010. Coastal Training Coordinator John Bragg traveled to Waquoit Bay NERR at Woods Hole, Mass., to participate in the NERRS coastal training winter planning meeting.
- March 2010. Education Coordinator Tom Gaskill traveled to the Grand Bay NERR in Gulfport, Miss., to participate in meetings with NERRS education and stewardship coordinators. The meeting focused on climate change education development of the K-12 Estuary Education Program (KEEP). Two presentations provided by experts in climate change, one in Australia and one in Texas, were delivered using Skype, a web-based video conference tool.
- March 2010. Research Coordinator Steve Rumrill continued to serve as a member of the California Marine Life Protection Act North Coast Science Advisory Team. The team met in Eureka, Calif., to help develop and analyze proposals for a network of marine protected areas, state marine conservation areas, and state marine reserves in northern California, and to provide scientific input into California's Marine Protected Area designation process.
- April 2010. Hans Klausner participated in the NERRS Annual and Stewardship Sector Meeting Planning Committee teleconference.
- April 2010. South Slough NERR staff members Craig Cornu and Ali Helms attended a 1½ day workshop in Newport to identify Oregon estuary data needs and to discuss data sharing and data management approaches.
- April 2010. Steve Rumrill assumed duties as president of the Pacific Estuarine Research Society (PERS). After helping to host the 33rd annual PERS conference in Nanaimo, B.C., Steve and other Governing Board members of the Coastal and Estuarine Research Federation (CERF) met in Warrenton, Vir., to plan the next biennial CERF Conference to be held in Daytona Beach, Fla. (Nov. 6-11, 2011).
- May 2010. John Bragg traveled to Portland to participate in scoping for development of a new West Coast Fish Habitat Action Plan.
- June 2010. Hans Klausner participated in a Forest Restoration Learning Network meeting in North Bend, Wash.
- June 2010. Manager Mike Graybill participated in a meeting with NOAA staff and other NERR managers held at Wells NERR in Maine.
- July 2010. Manager Mike Graybill waded into the Washington, D.C. heat for a meeting at NOAA headquarters in Silver Spring, Md. Mike is in his second (and final) year as the manager's representative on the NERRS Coastal Training Program oversight committee.
- August 2010. Public Involvement Coordinator Deborah Rudd will replace Marty Giles as the 2010-2012 Chair of the Bay Area Tourism Committee.
- Tom Gaskill continues to participate as the designee for the Oregon Department of State Lands on Oregon's Environmental Literacy Task force.

- Steve Rumrill continues to serve as Chairman of the Pacific Coast Integrated Ecosystem Assessment Action Coordination Team. The team is helping to implement the West Coast Governors' Agreement on Ocean Health.
- Steve Rumrill is serving as a member of the Scientific Advisory Team for the work group tasked with developing a regional sediment plan for the mouth of the Columbia River Estuary.
- July 2010. Tom Elledge traveled to Monterey, Calif., to participate in a national Geographic Information Systems conference.
- Under the skilled instruction of SSNERR staff trainers Joy Tally and Pam Wilson, all SSNERR staff recently received American Red Cross updated First Aid and CPR certification training. All staff also reviewed safety videos on fall protection.

INPUT ON STAFF ACTIVITIES

February 20, 2010 through July 6, 2010

EDUCATION PROGRAM UPDATE

The Reserve's education program continues to work with schools and community partners at the local and regional level to host site-based activities at South Slough and provide outreach. Grant supported activities associated with NOAA's Bay Watershed Education and Training (BWET) program have fostered new opportunities to work in classrooms using innovative techniques of distance learning and place-based education.

Outreach and training activities are building community awareness of the Reserve, and a growing involvement by Friends of South Slough board members continues to broaden the base of volunteers and strengthen program support.

Education staff are increasingly using telecommunications infrastructure and software to participate in trainings such as webinars, and to deliver programs and conduct meetings with peers at locations throughout the state and nationally. In March, the education coordinator traveled to the Grand Bay NERR in Gulfport, Miss., to participate in meetings with NERRS education and stewardship coordinators. The education sector focused on climate change education techniques and further development of the K-12 Estuary Education Program (KEEP). Two presentations provided by experts in climate change, one in Australia and one in Texas, were delivered using Skype, a web-based video conference tool.

School programs on-site made substantial use of the new North Creek Trail, however, late season storms led to a number of cancellations and several very cold and wet field trips.

EDUCATION PROGRAM TOTALS

A total of 113 educational activities were conducted during this period for 3,041 participants. There were 305 contact hours and 233 hours of preparation recorded. These totals include all types of education, interpretation, training, and outreach. A more detailed explanation of each sub-category is included in subsequent sections of this report.

VISITATION AND VISITOR SERVICES

During this period, 1475 visitors to the South Slough Interpretive Center were recorded for an average of 15 visitors per day. The South Slough Interpretive Center remains open to the public 10am to 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.

FORMAL EDUCATION & TRAINING

During the period from February 20th to July 3rd, 51 formal education programs were offered for 1675 participants. A total of 164 contact hours and 142 hours of preparation time were recorded.

Seventeen community education programs were offered for 438 participants. This included 32 hours of prep time and 39 hours of contact time. Four trainings were conducted for volunteers during this period and are included as a part of the community education totals.

School program participation this spring included Natural Resource Days activities, which are delivered in partnership with the Coos Bay Bureau of Land Management, Oregon State University Extension, and several other community partners. The curriculum is derived from Project Learning Tree, and South Slough is used as a field site for the students. Teacher training activities and coordination with volunteers provide a robust set of field experiences for several hundred local students.

Other programs offered for schools this spring included the renewal of the International Brant Monitoring Project. Using a combination of off-site classroom and field experiences, 4th grade classes studied the migration of Brant geese along the Pacific flyway and reported local observations through a website managed by the Padilla Bay NERR in northern Washington. The program was well received and will be introduced again in the 2010-2011 school year.

THE OREGON COAST EDUCATION PROGRAM

During the winter and spring, classes in Coos Bay, Port Orford, Waldport, Tillamook, and Veneta school districts participated in the piloting of coastal education modules. The activities contained in these modules are under development through grant provided by the NOAA Office of Education's BWET program.

The project is directed by a leadership team of experienced classroom teachers, informal science educators, curriculum specialists, and a professional evaluator. Two coordinators have been working with lead teachers to pilot activities that will be incorporated into the modules.

The exemplary activities have been selected because of proven effectiveness and alignment with criteria defined by NOAA, and expert educators, as providing meaningful watershed education experiences. Additionally, the curriculum chosen for piloting has been modified in consultation with the lead teachers to provide a more comprehensive understanding of coastal environments for students.

Two modules are currently in development and will focus on 1) Coastal Habitats & Species Natural History, and 2) Food Webs & Coastal Ecology.

The following draft guiding concepts derived from various environmental literacy principles have been used to further define curriculum materials for incorporation into the modules:

1. Earth's ocean, estuaries and watersheds are connected and interdependent (connectivity of ecosystems).
2. The world's waterways support an abundance of biologically diverse communities and a variety of unique habitats (diverse life forms use these habitats).
3. Oceans, coastlines, estuaries, and watersheds are dynamic, variable systems with physical, chemical, and biological properties that affect their inhabitants and natural structure (these ecosystems are dynamic and changing).

4. Research and monitoring of ocean systems, coastal habitats, and the connected watersheds will assist in their continued sustainability and health. (Monitoring these systems helps give us data to manage and care for these ecosystems.)

Trainings will be conducted in Charleston and Newport in August to provide classroom educators with the modules and help familiarize them with successful techniques for implementing the coastal education activities in their schools. Support for field experiences to be conducted in the coming school year is provided through the grant.

A second proposal to BWET, requesting \$60,000 to expand the activities of the coastal education program, is currently under review and initial response has been favorable. A supplementary proposal to the Oregon Community Foundation's Gray Environmental Education Fund for \$40,000 was submitted in January. Notice was received in May that a reduced sum of \$11,000 will be provided to support the project to disseminate the coastal education modules to schools in central Oregon and the Portland Metro area.

EDUCATION PROGRAM MARKET ANALYSIS AND NEEDS ASSESSMENT

South Slough NERR will be conducting a study of coastal and marine education efforts throughout Oregon and a more targeted needs assessment study in southwestern Oregon schools during the 2010-2011 school year. This project is being supported by \$15,000 from the National Estuarine Research Reserve System as the initial phase of implementation for the NERRS K-12 Estuary Education Program (KEEP). The study seeks to understand the scope, scale, and delivery methods of coastal and marine education activities in Oregon (market analysis) and the needs for estuarine and coastal education in schools in three target communities in southwestern Oregon (needs assessment).

The Coos Bay Bureau of Land Management (BLM) office has agreed to partner with South Slough on the conduct of this study and will provide an additional \$15,000 to support the work. The Coos Watershed Association will act as the fiscal agent through a cooperative agreement with the BLM and the Reserve to pay for costs associated with study. South Slough is working to identify technical assistance in study design and data analysis through Oregon State University.

The project will begin in September, 2010 and will be completed by December, 2011. Elements of the project will include hiring a part-time project coordinator, developing a contract for technical services, convening the South Slough Education Advisory Group and hosting several focus groups within target communities to gather relevant information and perspectives.

ENVIRONMENTAL LITERACY TASK FORCE

Education Coordinator Tom Gaskill continues to participate as the designee for the Oregon Department of State Lands on Oregon's Environmental Literacy Task force. Recent activities have included the establishment of advisory workgroups to recruit additional expertise in the development of standards and graduation requirements, teacher professional development, and plan implementation.

As a representative member of the task force, Tom participated in workgroup discussions held in May to identify key strands of environmental education activities that will be aligned with Oregon's current graduation requirements. These strands will be used to facilitate increased quality and frequency of environmental education activities in schools.

The three workgroups will meet periodically during the summer to provide input to the task force as they work to complete the plan by September 30, 2010.

COLLABORATION WITH NORTHWEST AQUATIC AND MARINE EDUCATORS

South Slough education staff worked with the Northwest Aquatic and Marine Educators (NAME) to plan the 35th annual NAME conference. South Slough education specialist Joy Tally provided significant logistical support for the conference, which took place in Florence, July 7-10.

The theme of the conference is "No Educator Left Inside: Exploring Ocean & Watershed."

The goal of the conference was to explore current topics in marine and aquatic science while giving educators an opportunity to witness best practices in field experiences. Four pre-conference workshops, as well as an evening keynote address, were open to the public. South Slough hosted a full-day field trip during the conference, presented two educational sessions, and provided outreach at an evening "Sea Faire" event.

INTERPRETIVE & OUTREACH ACTIVITIES

Interpretive programs continue to be offered for a diverse audience of children, adults, and families. A total of 38 interpretive programs were offered and 394 people attended activities ranging from guided walks and paddle trips to summer camps. Eighty nine hours of contact and 50 hours of preparation were recorded.

A variety of outreach activities were also conducted with various community partners at locations off-site of the Reserve. Ten outreach events were held for 534 participants. Fourteen hours of contact time and 10 hours of prep time were recorded for these activities.

Summer programs are currently underway and this year will include four summer science camps offered for several different age levels. Enrollment for the young student camps has been excellent, while camps for middle and high school age students have been slower to fill.

AQUARIUM EXHIBIT AT THE INTERPRETIVE CENTER

The Friends of South Slough received notice from the Coquille Tribal Community Fund that a joint proposal with South Slough Reserve for \$11,100 has been granted. These funds will be used to match a \$35,500 grant from NOAA to develop an aquarium exhibit in the entryway at the South Slough Interpretive Center. The Reserve will work to recruit a professional exhibit fabricator to take conceptual drawings developed by a group of students from the Oregon Coast Community College's Aquarium Science Program through to final design and construction.

South Slough staff and volunteers recently traveled to the Oregon Coast Aquarium to seek technical assistance from staff on the equipment and designs needed for support of the living exhibits. Aquarium specialist Kevin Clifford provided in-depth information and a behind the scenes tour of the aquarium. He has also offered continued consultation as an in-kind contribution to the project.

The next steps for the project include development of a scope of work and recruitment of the exhibit fabricator. This project will be completed by June 30, 2011.

VOLUNTEERS

From February, 2010 through May, 2010, SSNERR volunteers logged in about 660 hours valued at around \$13,500. The hours logged were from the categories of administration provided through the FOSS board and the Experience Works volunteer program; stewardship and trails via the SOCC intern; and education via volunteers and an OIMB student.

The SSNERR volunteer program has included the first Southwestern Oregon Community College intern, Al Pancoast. Since Al's focus is forestry stewardship, South Slough was a good fit as an internship opportunity. Administered through his advisor, Tom Bennet, Al was with us one day a week during the spring term. Nate Damewood, Don Smith, Hans Klausner, and Robin Elledge created a work plan for Al to make the best use of his time at the Reserve.

This spring the Reserve also benefited from Lindy McMoran, an education student attending OIMB. Lindy assisted Joy Tally with several school field trips and interpretive programs.

This summer we have two volunteers from Galway, Ireland, who are volunteering their time at the Reserve. Laura Adams is a second year marine science student who will be assisting Tom Gaskill with the aquaria project and filling in as needed on other tasks. Jeanne Sampier, a graduate student in environmental science, will focus on assisting with monitoring programs and also will volunteer where needed, such as with summer science camps.

On April 22, the Coos Bay-North Bend and Charleston visitor centers and the Reserve held a well-attended, collaborative, volunteer training in the SSNERR auditorium. Representatives from the cities of Coos Bay and North Bend, Travel Oregon, and Bandon Tourism Association, as well as SSNERR Education Specialist Joy Tally, gave presentations and training exercises.

OUTREACH

The Bay Area Chamber of Commerce Tourism Committee continues to explore tourism opportunities in the Bay area. One of their goals, to build a QUEST program in the Bay area, is moving along as scheduled. The first Quest is being built and should be ready to launch in July 2010.

Also, in August, Public Involvement Coordinator Deborah Rudd will replace Marty Giles as the 2010-2012 Chair of the Bay Area Tourism Committee.

The Charleston Community Enhancement Corporation (CCEC) had another successful Oyster Feed and silent auction fund-raiser this year on Saturday, April 24th at the Oregon Institute of Marine Biology cafeteria. With the help of many individuals and local businesses, including many SSNERR staff and volunteers, the CCEC served meals to almost 400 people and raised about \$3,000 to assist the community of Charleston.

The CCEC also partnered with South Slough, Coos Watershed Association, and the Oregon International Port of Coos Bay for a SOLV clean-up of the Charleston Boat Basin area on May 22nd. Over 20 volunteers participated.

The group removed over six cubic yards of waste including an office chair, two propane tanks, a couple of tires and some rusted metal pipe. They also planted native species along Hallmark Creek and ornamental plants in the planters around the marina. Local TV news station KCBY provided media coverage of the event.

The Charleston Merchants Association held board and officer elections in April. The new officers are: Tom Kramer, president; Ruth Barker, treasurer; Marjorie Whitmer, vice president, and Frankie Trask, secretary. Karon Wagoner, Rusty Shield, Tim Hyatt, Donna Keizer, and Aaron Simons were also elected to the board.

A public meeting was held on May 4th at the OIMB cafeteria to discuss the Bastendorff Beach area. The Bureau of Land Management (BLM), Oregon Parks and Recreation Department, Coos County, and local tribal nations are developing a work plan to address some of the issues associated with the multi-owner and user beach area.

Some of the top concerns were lack of restroom facilities, sanitation, vehicle use, noxious weeds (bull thistle, Himalayan blackberry, European beach grass, English ivy and scotch broom); long-term camping, pallet fires and debris, trampling of grass, sensitive wildlife habitat, and trail development.

The work group is gathering public input as part of the scoping phase of the plan. Next they hope to develop a draft management plan with public review and analysis with public comment. The group intends to implement, monitor, revise and amend the plan as needed.

One issue, the restrooms, has already been addressed. At the end of May the BLM installed a restroom and state parks staff are helping to maintain them. For more information go to: www.blm.gov/or/districts/coosbay/newsroom.

From June through October, 2010, SSNERR education staff, the Friends of South Slough, and volunteers will host informational booths at the following venues:

- Farmer's Market in Coos Bay, Wednesdays, June 16 to Aug. 25
- Clamboree in Empire, June 26
- Charleston Seafood Festival, Aug. 21-22
- Mill Salmon Festival, Sept. 4
- Octoberfish, Oct. 9.

SSNERR will also be hosting a National Estuaries Day festival on Saturday, September 25 with a sustainability theme.

FRIENDS OF SOUTH SLOUGH, INC. (FOSS)

Recently, FOSS volunteer and Website manager Rich Hamel met with SSNERR staff at the Interpretive Center for a webinar training given by Matt Menashes, director of the National Estuarine Research Reserve Association (NERRA). Matt provided a web tutorial for using Facebook as a means to expand non-profit audiences, as well as another mode of communication for events and fund-raising. To visit FOSS's Facebook page, go to: <http://www.facebook.com/pages/FRIENDS-OF-SOUTH-SLOUGH/110097302363115>

In April, FOSS met at Spruce Ranch for a strategic planning session to prioritize their 2010 work plan. The meeting was well attended and several SSNERR staff gave brief presentations of their program projects. Additionally, two field trips took place, one was a trip on the Ten Mile Lake to take a look at float house structures and the other was out to the Fredrickson house at the south end of the Reserve.

As a result of the trips and meetings, FOSS has come up with the following tasks:

- Two board members are working directly with Tom Gaskill on implementing the aquaria project; another board member is heading up a committee to develop an Artist-in-Residence program.
- A FOSS-Floats Committee is checking into multi-passenger canoes, as well as float house structures.

Of course, FOSS continues to provide a summer visitor services and bookstore assistant two days a week, and a teacher's aide for summer science camp.

The Friends of South Slough are providing funding via Cardinal Staffing Services for a summer science camp assistant and a front desk visitor services position. The summer camp position includes 140 hours at a rate of \$10 per hour. This position was filled by Jenna Kulluson.

The visitor services position includes Fridays and Saturdays from June 4 through September 4 at a pay rate of \$8.50 per hour. Sylvia Ballena, a former visitor services agent, has come back to provide her excellent customer service skills again this summer.

COASTAL TRAINING PROGRAM

FISH HABITAT PARTNERSHIP DEVELOPMENT

Coastal Training Coordinator John Bragg participated in a two day focus session meeting May 25-26 in Portland to develop a fish habitat partnership for the West Coast based on guidance from the National Fish Habitat Action Plan.

John provided information and perspectives about estuaries, with the intent of ensuring that any regional effort to develop a fish habitat partnership 1) did not duplicate efforts of other organizations and partnerships engaged in habitat protection and conservation; 2) emphasized land-sea connections and 3) emphasized the need to protect and conserve habitats rather than individual species.

This meeting was organized by the Pacific State Marine Fisheries Commission with financial support from NOAA. Multiple NOAA offices were involved in planning and presentation. The coordinator became aware of this meeting a few days before it was held and invited to participate. John was the sole representative of the NERRS at this important, coast-wide planning session.

Outcomes of the session included a broad agreement among participants that a fish habitat partnership, modeled on the successful Joint Venture for Waterfowl program, could effectively contribute to managing the land-sea connections that estuaries and the continental margin provide. John will serve on an interim steering committee that will work over the next 12 months to develop the partnership.

John highlighted the NERRS' potential capability to assist the partnership, which will extend along the coastal margin from southeast Alaska to Baja, California, thus involving international elements. He later advised Matt Menashes, National Estuarine Research Reserve Association director, of potential opportunities to participate in the joint venture.

John volunteered to keep the other West Coast NERRS informed about the progress of the partnership's development. The CTP will explore this opportunity to work with West Coast NERRs to develop a strong NERRS presence within the partnership. The partnership offers an outstanding opportunity for the West Coast NERRS to help development of a successful, international fish habitat partnership emphasizing land-sea connections.

More information is available at <http://www.psmfc.org/habitat/pmefhp.html>

COASTAL MANAGEMENT TRAINING

The CTP will deliver two training workshops in September in partnership with the NOAA Coastal Services Center. The first course, Negotiating for Coastal Resources, Sept. 8, teaches skills for building collaborative relationships based on trust, overcoming barriers to negotiating, assessing people's personal negotiation styles, and preparing for negotiating.

The second course, Project Design and Evaluation, Sept. 9-10, teaches skills to ensure that projects will have the right impact, measuring the performance of

projects, understanding the needs of an audience, and ensuring the right audience is being reached.

WEBSITE COORDINATION AND ASSISTANCE

John provides extensive assistance to SSNERR's web master, Kathy Andreasen, including advice on product placement, organizational design, and other strategies to improve SSNERR's Web presentations. In recent months CTP helped to develop the new *South Slough News Online*, an expanded, paperless version of the classic *South Slough News* newsletter.

John plans, writes, illustrates and recommends placement of many of the articles in the online news and other sections of the website; provides contemporary photographs of commission members, staff and temporary or visiting workers; edits materials submitted for the website; provides technical assistance to the web master on photography file extensions, video uploads, credit and bylines for content providers, links to NOAA web sites or other content providers, and consults with Kathy and SSNERR education staff about general web layout, presentation and content.

USING SOCIAL MEDIA WEBSITES

In recent months John has participated in several NOAA-sponsored web training sessions about using social marketing media at SSNERR.

Although the Department of State Lands administration has not yet approved the use of social media website accounts (e.g., Facebook, Twitter, etc.), Oregon's Department of Administrative Services has approved a general guideline for the use of social media by state agency employees. John has been exploring how to use social media, within the State Lands' guidelines and restrictions, for outreach and education about estuaries.

So far this activity has included participating in the web-based training sessions that are offered by NOAA, to learn how our NOAA and other federal partners are using these new services for education, outreach and professional communication. Web-based trainings that have been offered by NOAA explain how social media may be used to accomplish the reserve's business. Upon approval from State Lands, SSNERR will develop a social media business plan to guide the use of social media to support the reserve's mission.

ENERGY PLANNING

John has assisted the Reserve in finalizing a draft energy plan for SSNERR (reported on elsewhere in this briefing).

RESEARCH AND MONITORING PROGRAM UPDATE

During the period from February 23 to July 7, 2010, South Slough NERR staff members continued work associated with several ongoing research and monitoring projects. Progress is described below:

NERRS SYSTEM-WIDE MONITORING PROGRAM (SWMP)

During the fall and winter, Steve Rumrill, Ali Helms, and Adam DeMarzo continued to operate the three existing programmatic elements of the South Slough NERR System-wide Monitoring Plan: (A) Ambient Estuarine Water Quality; (B) Local Weather Conditions; and (C) Tidal Forcing of Estuarine Nutrients.

AMBIENT ESTUARINE WATER QUALITY

Ali Helms and Adam DeMarzo worked to retrieve, download, calibrate, and redeploy the YSI-6600 Extended Deployment System (EDS) data loggers at the four long-term estuarine monitoring stations on Mar. 2, 4 and 30; Apr. 22; May 12, and June 9-10.

Epifouling organisms (primarily barnacles and mussels) are dislodged on a monthly basis from the SWMP stations. The quarterly data sets, for January through March 2010 were submitted on May 4.

We have started processing the yearly water quality data sets, monthly calibration/field sheets, and metadata for 2010 in anticipation of a March 15, 2011, submission deadline.

The Satlink programs at the three telemetry stations (Charleston Bridge, Valino Island, and Winchester Creek) were reprogrammed to record but not transmit additional diagnostic parameters, including dissolved oxygen charge and pH millivolts. This will enhance the quality assurance and quality control procedures.

A new satellite antenna has been deployed at the Charleston Bridge station. The Stevens V4TH antenna has a helix design that encloses the antenna to help increase performance in severe weather and minimize corrosion problems associated with the Yagi type antennas that have been used since the initial systems were installed.

South Slough NERR is a participant in the NOAA/NERRS project to install and operate real-time telemetry equipment as part of the Integrated Coastal Ocean Observing System. The electronic satellite telemetry equipment at the Charleston Bridge, Valino, and Winchester Creek stations is currently transmitting measurements of estuarine water parameters recorded by the YSI 6600 EDS datasonde.

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. Monthly maintenance

checks were completed by Ali Helms and Adam DeMarzo for all the meteorological station sensors and solar panels, and data was retrieved from the CR1000 datalogger on Feb. 17, Apr. 14, June 7, and June 28.

A GOES satellite transmission system has been installed on the South Slough NERR SWMP meteorological station that automatically sends data files from the CR1000 datalogger to the NERR Centralized Data Management Office.

The near real-time measurements and historical digital data sets generated by the SSNERR SWMP meteorological station are now available on the NERR CDMO website (<http://cdmo.baruch.sc.edu>). The quarterly data sets for January through March were submitted on May 4. The quarterly data sets for April through June 2010 are being prepared for submission on August 1, 2010.

ESTUARINE NUTRIENTS

Monthly nutrient samples were collected during the reporting period. Water samples were collected from each of the 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 chlorophyll A and phaeopigment content at the Estuarine and Coastal Science laboratory (ECOS). The SWMP team has now instituted the preparation and analysis of monthly nutrient, bacteria, and chlorophyll blanks to further ensure data quality.

AVAILABILITY OF SWMP REAL-TIME DATA AND DATA PRODUCTS FOR SHELLFISH GROWERS

South Slough NERR continues to participate in a pilot project to make near real-time estuarine water quality information available. 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>).

A website designed to deliver real-time water quality data and data products to shellfish growers has been operating since July 3, 2007 (<http://www.nanoos-shellfish.org>).

The website provides information about estuarine water quality conditions of relevance to commercial shellfish growers in Oregon, Washington, and Alaska. The project was developed through the cooperation of the South Slough, Padilla Bay, and Kachemak Bay NERRS and Mindfly Web Development as a data delivery element of the U.S. Integrated Ocean Observing System. The website reconfigures data from the NERRS CDMO to display data products tailored to the needs of local and regional shellfish producers.

COASTAL WETLANDS DATA AND INFORMATION WORKSHOP

On April 19-20 South Slough NERR staff members Craig Cornu and Ali Helms attended a 1½ day workshop to identify Oregon estuary data needs and to discuss data sharing and management approaches in Newport. The workshop was hosted

by the Institute for Natural Resources (INR) and facilitated by Lisa Gaines of INR and Esther Lev of the Wetlands Conservancy.

Ali Helms gave an overview of the NERR System Wide Monitoring Program, and Craig Cornu presented the integrated monitoring projects currently underway at the Reserve.

Laura Brophy summarized another SSNERR project funded by the Cooperative Institute for Coastal and Estuarine Environmental Technologies (CICEET), designed to establish a state wide network of tidal wetland reference sites.

Other presentations covered Oregon Explorer, the SLAMM model (Sea Level Affecting Marshes Model <http://www.slamview.org>) for sea level rise affecting marshes, and LiDAR remote sensing information.

The workshop helped to identify data gaps and needs especially in the areas of sediment models, nutrient sources and sinks, hydrology and water chemistry, and habitat models, creating a data web portal for sharing information, as well as how to deal with concerns such as archiving, institutional holding, lack of data mining tools, variability in quality of data and metadata, bridging researchers and managers.

SWMP OVERSIGHT AND GUIDANCE COMMITTEES

Steve Rumrill continued to serve as a member of the NERR SWMP Oversight Committee (SWMP OC). This standing committee works to review field based operations and develop solutions to site-specific problems that are linked to the operation of the SWMP.

Steve and other members of the committee have contributed to the identification of hurdles and technical issues associated with SWMP program advancements within the states and universities, craft solutions to address human resource and budgetary issues within the NERRS and the CDMO, and work directly with NERR sites to ensure compliance with established policies that address the deployment of datalogger equipment, collection and processing of water samples, delays in data submission, data gaps, and SWMP performance measures.

The SWMP OC worked over the spring/summer reporting period to address potential data loss and equipment damage issues associated with the Deepwater Horizon oil spill event in the Gulf of Mexico. The SWMP OC approved the following two actions regarding the oil spill event:

- The SWMP OC granted a one-month extension to the Gulf Coast NERR sites for data submission, with an option to revisit the time extension (in mid-June) after the time commitment needed to deal with the oil spill becomes more clear. The extension applies to 2009 nutrients data submission timetable. The need to submit timely, raw, SWMP data uploads remains in place, because of the value of these data to response efforts linked to the spill. The committee agreed to revisit quarterly submission timetable prior to the August 2010 deadline.
- The SWMP OC recognizes that Gulf Coast NERR sites may require additional

support in the form of equipment, on-site personnel, help to maintain the full operation of their data-loggers, meteorological stations, and water/nutrient/grab sample programs, in a manner that will be of utility to the oil spill response effort.

Gulf Coast NERR sites were encouraged to make an additional effort to maintain frequent and open communications with the SWMP OC to provide updates and to ask for help when they need it. The SWMP OC is ready to pitch in and provide help, equipment, and personnel as needed to make sure that the SWMP infrastructure and data streams are maintained through the full duration of the oil spill event.

The SWMP OC also asked for additional documentation of the rationale for late submission of the estuarine nutrient data by the Apalachicola NERR, Florida.

Steve Rumrill and Ali Helms are full members of the SWMP Guidance Committee, and Hans Klausner and John Bragg serve as alternate members. The mission of the SWMP Guidance Committee is to guide the future direction of the NERR System-Wide Monitoring Program in coordination with research and in full alignment with NERRS strategic planning, and to ensure that the SWMP is effectively represented in the NERRS hierarchy of decision making, aligned with upper-level NERRS planning, and meeting the needs of coastal management and education user groups.

As co-chairman of the Guidance Committee, Steve worked with Whit Saumweber (NOAA Estuarine Reserves Division) and other committee members to hold a series of monthly conference calls that are focused on development of the next revision of the NERR SWMP planning document.

The initial draft of the revised SWMP Plan is currently scheduled for completion in October 2010 for distribution to the NERRS staff during the annual NERRS/NERRA meeting to be held in West Virginia.

RESEARCH PROGRAM

INVESTIGATION OF ESTUARINE BACTERIAL CONTAMINANTS

South Slough staff members continued monthly monitoring of Fecal Indicator Bacteria (FIB) including total coliform, *Escherichia coli*, and *Enterococcus sp.* in tidal waters of the South Slough (see Ambient Estuarine Water Quality above).

The measurements of FIB are of interest to the Oregon Department of Environmental Quality (DEQ) as they continue to develop and evaluate Total Maximum Daily Load (TMDL) standards for fecal bacteria in the Coos Bay estuary. In addition, the FIB measurements are also of interest to the Oregon Department of Agriculture's Food Safety Division (ODA) (Dawn Smith) as they conduct periodic assessments of potential contaminants of commercial oysters and recreational shellfish.

South Slough NERR will continue to provide data and technical support to DEQ and ODA on an as-needed basis, and will offer assistance with extension of the detailed information on FIB for the South Slough estuary into the more expansive regions of the Coos Estuary. In addition, volunteers from the Surfrider Foundation (George Tinker, Dan Matthews and others) continued to use South Slough NERR lab facilities for their routine monitoring of FIB levels at several local beaches.

RESTORATION AND RECOVERY OF NATIVE OLYMPIA OYSTERS

South Slough NERR staff continued work on the experimental out-planting of native Olympia oysters (*Ostrea lurida*) in the South Slough estuary. A total of 335 bags of Olympia oyster cultch (juvenile Olympia oysters attached to non-living Pacific oyster shells) have been deployed into the South Slough estuary within a sheltered sandy-mud basin immediately off of Younker Point.

The population consists of a mixture of hatchery-reared brood stock (that originated in Willapa Bay, Wash.) cultivated by the Whiskey Creek Shellfish Hatchery (Netarts Bay), and locally-adapted Coos Bay broodstock that settled naturally as larvae onto collector bags deployed into the tidal waters of Coos estuary. The cultch bags contain and estimated 3.9 million Olympia oysters.

Steve Rumrill submitted the final report titled "*Restoration of Native Olympia Oysters (Ostrea lurida) within the South Slough Estuary, Oregon*" (Project No. NA06NMF4630033) to the NOAA/Community-based Restoration Program on 31 March 2010.

Adam DeMarzo continued to operate a YSI-6600 datasonde in the shallow subtidal zone immediately adjacent to the oyster grow-out site to develop a continuous time-series database of ambient estuarine water quality parameters (*i.e.*, temperature, conductivity, salinity). Steve Rumrill visited the Whiskey Creek Shellfish Hatchery at Netarts Bay on May 27 to discuss the prospects for an additional batch of Olympia oyster cultch, and work has been initiated within the hatchery to produce 200 bags of Olympia oyster cultch that will be transported into the South Slough (Younker Point grow-out site) in late July or early August 2010.

Steve Rumrill assembled a team of co-investigators (C. Young, R. Emlet, A. Shanks (UO-OIMB), F. Burris, J. Doyle (OSU Extension), J. Bragg (SSNERR)) to develop a new research proposal titled "*A collaborative approach to address larval supplies and settlement as critical early life-history issues during restoration of native Olympia oysters*" that was submitted to the NOAA/NERRS Science Collaborative on 13 May 2010. The proposal seeks \$455,000 over a period of three years to conduct research on the timing of reproduction and fecundity, larval supplies and dispersal, and larval settlement, and to work with a group of local stakeholders to develop a plan for conservation and recovery of Olympia oyster populations in the Coos Estuary and the South Slough.

South Slough NERR hosted an Olympia oyster research exchange and planning meeting at the Oregon Institute of Marine Biology on June 24. The meeting was attended by Dr. Chris Langdon, Matthew Gray, C. Eardley, C. Price (Oregon State University), L. Garcia-Peterio, K. Sawyer (OIMB), S. Groth (ODFW), and S. Rumrill (SSNERR).

Mark Burnap (OIMB / PRIME Intern) began work with the South Slough NERR on July 6. Mark will conduct field and laboratory investigations to determine the community composition of fishes and invertebrates that have colonized the cultch bags deployed at Younker Point, and to help develop an underwater still and video camera system that can be used to conduct surveys of oyster populations in subtidal habitats.

PACIFIC ESTUARINE RESEARCH SOCIETY

As new president of the Pacific Estuarine Research Society (PERS), Steve Rumrill worked with the members of the PERS Executive Committee and the local conference planning committee to conduct the 33rd annual PERS Conference in Nanaimo, B.C. The meeting took place Apr. 29 - May 1 on the campus of Vancouver Island University. The theme for the conference was "*Sustainable Use of Estuarine Environments.*" About 95 estuarine scientists from academic institutions, natural resource agencies, private industry, and non-governmental organizations attended.

During the PERS conference, South Slough NERR staff member Ali Helms delivered a presentation titled "*Utilization of long-term water quality data sets to detect large-scale ocean cycles and small-scale pH shifts in the South Slough estuary, Oregon.*" Steve Rumrill delivered a presentation titled "*Restoration of eelgrass and other habitat types associated with relocation of the NOAA / Pacific fleet into Yaquina Bay, Oregon.*"

In addition, former NERR Graduate Research Fellow Margot Hessing-Lewis (Oregon State University) presented a seminar titled "*Resiliency of seagrass (*Zostera marina*) to blooms of macroalgae (*Ulvoid spp.*): Results from a manipulative experiment within the South Slough estuary.*" Current NERR Graduate Research Fellow Holly Keammerer (University of Oregon) delivered a presentation titled "*Evaluating the role of competition in maintaining the boundary between high and low salt marsh vegetation in a marine marsh.*"

Margot Hessing-Lewis won PERS' Don Heinle Award for the Best Overall Graduate Student Presentation, and Holly Keammerer won the PERS Award for the Best

Graduate Student Presentation.

The next PERS Conference (34/2011) will be held in Astoria, where co-hosts Curtis Roegner (NOAA) and Matt Hunter (ODFW) will convene the meeting along the shoreline of the Columbia River estuary.

COASTAL AND ESTUARINE RESEARCH FEDERATION

As president of PERS, Steve Rumrill also serves as a member of the Governing Board for the Coastal and Estuarine Research Federation (CERF). The CERF Governing Board held a meeting in Warrenton, Vir., on Apr. 20-22 to conduct strategic planning for the future of the organization, and to make plans for the next biennial CERF Conference which will be held in Daytona Beach, Fla., (Nov. 6-11, 2011). The theme for the CERF 2011 Conference is "*Societies, Estuaries and Coasts: Adapting to Change.*"

RELOCATION OF NOAA MARINE OPERATIONS CENTER – PACIFIC TO YAQUINA BAY

Initial planning work has been completed to address a series of estuarine habitat mitigation issues associated with relocation of the NOAA Marine Operations Center-Pacific from Seattle, Wash., to a new dock structure and terminal complex located along the shoreline of Yaquina Bay at Newport.

Construction of the dock structure, terminal, and berths for four oceanographic research vessels will require substantial dredging and excavation of intertidal and shallow subtidal habitat. These disturbances will require mitigation measures for about 2.5 acres of eelgrass and about 4.7 acres of intertidal and subtidal clam and crab habitat. Steve Rumrill continued to work over the spring and summer with a team of private industry representatives, engineers, and natural resource agencies to develop a mitigation plan that can adequately offset losses of eelgrass, crabs, clams, and intertidal tide flats.

WEST COAST GOVERNORS' AGREEMENT – INTEGRATED ECOSYSTEM ASSESSMENT

Steve Rumrill continued to work over the spring and summer as Chairman of the Pacific Coast Integrated Ecosystem Assessment Action Coordination Team (IEA-ACT). The IEA-ACT is an integral component of the West Coast Governors' Agreement on Ocean Health. 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 regional IEAs will be consolidated to provide the foundation for the broader scale Pacific Coast IEA. 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 team integrated the comments into a revision of the workplan. The IEA workplan is currently out for public comment.

NORTH PACIFIC MARINE SCIENCE ORGANIZATION – PICES

Steve Rumrill traveled to Sendai, Japan on Apr. 23-29 to participate in the annual Science Board meeting for the North Pacific Marine Science Organization (PICES), and to attend the International Symposium on Climate Change Effects on Fish and Fisheries.

During the Science Board meeting, members developed plans for the PICES 2010 Conference in Portland; reviewed mid-year reports from the PICES science and technical committees; reviewed the status of publications and reports; discussed capacity building and interactions with other organizations; made final decisions on awards, and conducted other business of the organization.

During the International Symposium, Steve delivered a presentation and poster (co-authored by Ali Helms and Adam DeMarzo) titled “*Variability in pH values and the Potential Influence of Ocean Acidification on Oysters and other Shellfish in Pacific Northwest Estuaries.*”

Steve serves as the Chairman of the PICES Marine Environmental Quality Committee (MEQ), which has responsibilities to promote and coordinate interdisciplinary research in the North Pacific Ocean to improve our understanding of sources and fates of contaminants, ecology of harmful algal blooms, marine environmental aspects of mariculture, and the transport and introduction of aquatic non-indigenous species.

During the PICES 2010 Conference, the Science Board will convene a symposium titled “S1. North Pacific Ecosystems Today, and Challenges in Understanding and Forecasting Change.” The MEQ will co-convene several sessions that focus on a diverse array of topics including: marine aquaculture and wild capture fisheries (Session 7); numerical models of harmful algal blooms (Session 9); application of genomic techniques for marine ecosystem studies (Session 10); identification of vulnerable marine ecosystems in the North Pacific (Session 11); anthropogenic forcing in North Pacific coastal ecosystems (Session 12), and marine renewable energy development in coastal and estuarine environments (Session 14).

Steve Rumrill submitted an abstract (co-authored by Ali Helms and Adam DeMarzo) titled “*Potential influence of multiple anthropogenic stressors on restoration and recovery of native Olympia oysters (Ostrea lurida) in the Coos Bay estuary, Oregon, USA*” for presentation during the PICES 2010 Portland Conference.

EPA WORKSHOP / FINAL INDICATORS OF ECOSYSTEM SERVICES FOR ESTUARIES AND WETLANDS

Steve Rumrill was invited by the US Environmental Protection Agency to participate in a workshop that focused on indicators of ecosystem services within the nation's estuaries and wetlands. The workshop was preceded by two webinar presentations (May 17 and May 19). The workshop was held in Denver, Colo., June 8-10.

The goals of the workshop were to: (1) promote the capacity for natural and social scientists to communicate about the relationships between ecosystems and human well-being; (2) contribute to the development of a community with an understanding of final ecosystem services; and (3) develop an understanding of how well the final services concept can be effectively applied in coastal decision-making.

During the workshop, the group of estuarine scientists worked with social scientists and coastal economists to identify meaningful approaches to economic valuation, and to identify a matrix of user-groups and ecosystem service metrics that will provide a link between the natural resources and the components of estuaries and wetlands that are valued by humans.

COLUMBIA RIVER ESTUARY CONFERENCE

Steve Rumrill was invited to deliver a seminar during the biennial Columbia River Estuary Conference in Astoria on May 25-26. Steve delivered a seminar *titled "Up-scaling to the Tidal Basin: Restoration of Riparian Areas, Salt Marshes, Eelgrass, and Native Oysters within the South Slough Estuary, Coos Bay, Oregon."* The conference was attended by estuarine scientists from academic institutions, natural resource agencies, private industry, and non-governmental organizations.

OREGON CLIMATE CHANGE RESEARCH INSTITUTE – TECHNICAL REPORT

Steve Rumrill was asked by Dr. Mark Hixon (OSU) to contribute to the Oregon Climate Change Research Institute (OCCRI) technical report on the status of climate change in Oregon's coastal habitats. Steve worked with co-authors B. Menge, M. Hixon, P. Ruggerio (OSU), C. Brown, H. Lee (USEPA), and D. Reusser (USGS) to produce chapters that address the status of current knowledge and forecasts regarding the physical and biological manifestations of regional and global climate change impacts within Oregon's marine and estuarine ecosystems.

The draft chapters were completed June 23. The final report should be released in September 2010.

SCIENCE ADVISORY TEAM FOR THE MOUTH OF COLUMBIA RIVER ESTUARY

Steve Rumrill was invited by the OSU Institute of Natural Resources (Sally Duncan) to serve as a member of the Scientific Advisory Team (SAT) for the Mouth of the Columbia River Estuary Regional Sediment Plan. Members of the SAT include T. Oskan (OSU), G. Reeves (USFS), C. Roegner (NOAA), J. Allen, Oregon Department of Geology and Mineral Industries, M. Donnellan (ODFW) and S. Rumrill (ODSL/SSNERR).

The specific functions requested of the SAT are to:

1. Advise and assist with the assembly and analysis of existing information about the impacts of sediment placement on aquatic species and habitats; help identify knowledge gaps and priorities for developing additional information through studies and monitoring;
2. Develop scientific recommendations for an initial alternatives matrix to inform policy decisions about the costs and benefits of potential sediment placement sites
3. Review proposed beneficial use options and develop science-based recommendations about how, where and when nearshore placement can best occur to minimize adverse impacts and maximize benefits
4. Develop prioritized biological and physical study and monitoring plans associated with potential new beneficial use sites; and
5. Help identify potential funding sources to advance priority studies and monitoring needs and pursue funding as opportunities arise.

CALIFORNIA MARINE LIFE PROTECTION ACT – NORTH COAST SCIENCE ADVISORY TEAM

Steve Rumrill continued to serve as a member of the California Marine Life Protection Act (MLPA) North Coast Science Advisory Team (SAT). The SAT is charged with provision of scientific knowledge and technical support to assist the California Department of Fish and Game, the California MLPA Blue Ribbon Task Force, and the California North Coast Regional Stakeholders Group to help them meet the goals and objectives of the California MLPA in the North Coast Study Region (Cape Mendocino to the California/Oregon border).

Members of the SAT met on Mar. 16-17 in Eureka, Calif., to help develop and analyze proposals for a network of marine protected areas, state marine conservation areas, and state marine reserves in the North Coast Region, and to provide scientific input into the Marine Protected Area designation process. Steve delivered a seminar titled “*Marine Habitats, Ecosystems, and Ecosystem Services in the Northern California Study Region*” to the members of the MLPA Blue Ribbon Task Force on March 25 in Crescent City, Calif., and participated in additional SAT conference calls, a teleconference on May 12, and an additional SAT work group meeting (June 29-30 in Eureka).

PROPOSALS SUBMITTED

Proposal Title: *A Collaborative Approach to Address Larval Supplies and Settlement as Critical Early Life-history Issues During Restoration of Native Olympia Oysters*

- Principal Investigator: S. Rumrill (SSNERR/OIMB)
- Co-investigators: C. Young, R. Emlet, A. Shanks (UO-OIMB), F. Burris, J. Doyle (OSU Extension), J. Bragg (SSNERR)
- Fund Source/Program: NOAA/UNH NERRS Science Collaborative
- Funds Requested: \$455,000 / proposal in review
- Project Administration: University of Oregon / OIMB

Proposal Title: *Experimental Restoration of Native Olympia Oysters (Ostrea lurida) within the South Slough Estuary, Oregon*

- Principal Investigator: S. Rumrill (SSNERR)
- Fund Source/Program: NOAA/ERD/NERRA Restoration omnibus
- Funds Requested: \$68,000 / proposal rejected
- Project Administration: DSL/SSNERR

GRADUATE STUDENTS, FELLOWSHIPS, AND INTERNS

GRADUATE STUDENT THESIS ADVISORY COMMITTEES

Steve Rumrill continued to serve as a member of several graduate student thesis advisory committees. These students investigate a variety of marine and estuarine ecological problems and coastal management issues. The student thesis work takes place primarily in the South Slough NERR, the Coos Estuary, and other regions of the southern the Oregon coastal zone.

ONGOING THESIS WORK

- Margot Hessing-Lewis, PhD, Oregon State University Zoology
- Holly Keammerer, PhD, Oregon Institute of Marine Biology
- Kristina Sawyer, MS, Oregon Institute of Marine Biology

WATERSHED MONITORING UPDATE

PARTNERSHIP FOR COASTAL WATERSHEDS PROJECT

Implementation of the \$216,000, two-year project supported by the Cooperative Institute for Coastal and Estuarine Environmental Technologies (CICEET) made the following progress over the past several months (in partnership with the Coos Watershed Association):

We named the project Partnership for Coastal Watersheds (Partnership project for short). In the last report we mentioned the need to develop a more user friendly name for the project than the grant proposal name (Collaborative Planning, Monitoring, and Management: Adaptive Stewardship of Southern Oregon Coastal Watersheds Facing the Dual Stressors of Land Use and Climate Change).

Working with the Partnership project team, advisors from Portland State University's Oregon Consensus Program (in the Mark O. Hatfield School of Government) developed a near-final draft of a convening situation assessment that will guide how we assemble and work with a local stakeholder steering committee which forms the core of the Partnership project.

The advisors conducted 22 interviews with individuals representing a broad array of interests in our community to determine: 1) their level of interest in a community effort to plan for the future; 2) what they think are the most pressing issues for our community; and 3) who they think needs to be part of the steering committee. They reported that there is definite interest in the idea of developing a vision for the project area (some thought it was a great idea and others thought it was an okay idea). The advisors described in detail the issues that respondents thought were most pressing, and offer recommendations that will facilitate community steering committee meetings (based on a collaborative learning approach).

We will use their report and their recommendations as we develop the community steering committee later in the summer. We anticipate that community steering committee meetings will begin in fall 2010.

The advisors' findings appear to be compatible with the recommendations that the American Institute of Architect's Sustainable Development Advisory Team reported at the end of their visit here last month. We are hopeful that the Partnership project will provide a forum for the development of some of the ideas that came out of that planning/visioning exercise.

Coos Watershed Association and SSNERR staff continue to introduce the Partnership project to key local organizations. So far we have presented to 14 groups including the Coos Watershed Association Board of Directors, the Charleston Community Enhancement Corporation, Bio Breakfast participants (a group of local agency, tribal and contract field biologists and program managers); the Oregon International Port of Coos Bay Board of Commissioners; the Coos County Board of Commissioners, the Charleston Merchants Association, the SSNERR Management Commission, the Charleston Volunteer Fire and Rescue Department; the Oregon Department of Environmental Quality; the Cape Arago Audubon Society; the Charleston Sanitary

District Board of Directors; the Oregon Parks and Recreation Department Sunset Bay office; the South Coast Development Council, and the Oregon Resources Corporation.

The Coos Bay *World* newspaper ran an article on the Partnership project on March 12, entitled, "Fighting climate change." Not surprisingly, the issue of climate change has drawn the most comment. The Partnership project does not address whether or not climate change is caused by human activities. Our project seeks simply to create a community forum, and associated monitoring and management frameworks, that will help the community to rationally discuss and prepare for future changes in our watersheds.

The Partnership project team worked with the University of Oregon's Climate Leadership Initiative (CLI) team to develop a proposal (budget total \$290,000) submitted to the NERRS Science Collaborative program.

The proposed project, entitled "*Building Resilience in Coastal Communities: Preparing for Change in Oregon's South Slough National Estuarine Research Reserve and Coos Watershed*," will provide locally-scaled climate change scenarios that will greatly facilitate the Partnership project's community steering committee's work developing a common understanding of possible future scenarios for the project area.

The CLI team will also use those scenarios to inform the broader Coos watershed community about options for building resilience to the local effects if climate change.

The proposal has been developed through both pre- and full proposal stages and a response to mostly favorable proposal comments was recently submitted to the grant selection committee. A decision is expected by the end of the summer.

Partnership project-related watershed assessment activities are underway in the project area to establish a snapshot of current conditions for the community steering committee to use in their work. Activities include stream habitat assessments; stream gauging, water quality monitoring (stream and estuarine); salt marsh vegetation community monitoring; forest stand inventory, including both ground-based and LiDAR (Light Detection and Ranging) interpretation; road and landing surveys, etc.

COOPERATIVE INSTITUTE FOR COASTAL AND ESTUARINE ENVIRONMENTAL TECHNOLOGIES (CICEET)-FUNDED TIDAL WETLAND REFERENCE SITE MONITORING PROJECT

This project continues into its final year (grant ends Dec. 31, 2010). We have completed the first draft of a user's guide for iButton temperature loggers used in the field to quantify site-specific tidal inundation periods and tidal extremes. We have been contacted from others interested in using these relatively simple, inexpensive methods and are advising them on how we set up our project and what worked well and what did not work so well.

There is money left in the grant (mainly from the wireless water level, temperature and conductivity loggers our contractor failed to deliver) to support an Oregon State University graduate student's project that seeks to add to the tidal wetland reference conditions database established by the project. The student will test two

new hypotheses: 1) soil carbon content (percent organic matter) differs significantly between least-disturbed tidal wetlands and disturbed (former) tidal wetlands, and 2) tidal wetland restoration sites recover soil carbon sequestration functions.

An additional objective is to develop a basic conceptual model of the drivers associated with carbon sequestration in Pacific Northwest tidal wetlands.

NOAA RESTORATION CENTER-FUNDED REFERENCE SITE MONITORING PROJECT

This project is entering its third field season. We have hired Heidi Harris as the ECOS lab assistant. Heidi is the data manager and field assistant for the reference sites project and will lead the development of an ECOS lab projects catalog.

The project is entering the data analysis stage. Heidi has formatted SSNERR's reference sites project vegetation and groundwater elevation data (not an insignificant task!) using templates developed by project participants to facilitate data analyses to be completed by staff at the Wells NERR in Maine.

We have begun the third season of fieldwork which includes salt marsh community data collection (percent cover, shoot density and stem height for three key species), water level logger deployments for the groundwater wells, and soil sampling (pore water salinity, organic content and bulk density). Thanks to Public Involvement Coordinator Deborah Rudd, we have been very ably assisted in the field by a small army of volunteers including Dennis Philips, Karen Sparks, Max Beekam, Jeanne Sampier, Laura Adams, Judy Hamilton and Oskar Klausner.

Over the winter, SSNERR Estuarine Monitoring Coordinator Ali Helms confirmed that the number of sampling plots (10 per transect) we're using is adequate to characterize change in vegetation species composition and percent cover by conducting a series of statistical power analyses on the 2008 and 2009 vegetation. This verifies that our initial power analyses run (without the benefit of two years of data) at the start of the project were accurate.

In mid-March we received the NERRS Real Time Kinematic Global Positioning System (RTK GPS) survey equipment that all Reserve sites now share. We established six additional elevation benchmarks in the Reserve to facilitate various projects (e.g., implementation of SWMP biomonitoring which includes salt marsh vegetation, eelgrass and sediment dynamics monitoring).

We also established one remote benchmark and completed marsh elevation surveys at the Yaquina River project sites.

SWMP BIOMONITORING PROJECT

The implementation phase of SWMP biomonitoring will begin in summer 2010 with support by the NERRS. 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.

SSNERR staff has established a limited duration Natural Resource Specialist II position to lead the project which we are currently working to fill. The biomonitoring coordinator's tasks will be to establish a permanent network of paired eelgrass and salt marsh monitoring sites in different hydrographic regions of the South Slough estuary and establish baseline conditions at those sites for plant species percent cover, shoot density, etc., so we can 1) quantify change in vegetation patterns over spatial and temporal scales; 2) determine relationships between vegetation patterns and environmental factors (e.g., pore water salinity, elevation/tidal inundation period, etc.); 3) assess estuarine ecosystem health; and 4) characterize the local effects of climate change in these biological communities.

The project will functionally expand and make permanent the reference monitoring network established by the current reference sites project (see above) and the SWMP Biomonitoring pilot project implemented in 2004-05.

Funding for this long-term monitoring effort is anticipated to be made available to individual NERRS sites every other year.

MEETINGS AND PRESENTATIONS

South Slough Coordinator of Monitoring Programs Craig Cornu presented the Partnership for Coastal Watersheds project with Bessie Joyce and Jon Souder (both with the Coos Watershed Association) to the following organizations:

- Oregon Resources Corporation
- Charleston Fire and Rescue Department
- SSNERR Management Commission
- Oregon Department of Environmental Quality
- Cape Arago Audubon Society
- Charleston Sanitary District Board
- Oregon Parks and Recreation Department (Sunset Bay office)
- South Coast Development Council

In April, with Ali Helms, we presented and discussed the various SSNERR monitoring programs at the Coast Workshop convened in Newport by the Wetlands Conservancy to develop methods for sharing estuarine and coastal watershed monitoring data among the organizations interested in collecting and using the data.

