Coastal Features

INFORMATION ABOUT THE RHODE ISLAND COASTAL RESOURCES MANAGEMENT PROGRAM

SUMMER 1997 VOLUME V, NO. 4

Council Proposes Army Corps Reconnaissance Study of Salt Ponds

The CRMC has proposed that the Army Corps of Engineers undertake an environmental enhancement study of the south shore coastal ponds. The study would focus on dredging the flood tidal deltas and breachways in the Ninigret-Green Hill system, Winnapaug, and Quonochontaug ponds to improve water circulation for eelgrass and water quality, and uncover substrate important to fish and shellfish. As part of the study, the CRMC is also proposing that the Corps investigate the feasibility of placing sandy dredged material from the breachways and flood tidal deltas in and updrift of known piping plover nesting areas in order to provide a wider backshore (berm) on the beach and reduce flooding and erosion of plover nests. Since breachways were constructed to open the salt ponds permanently during the early and mid-1900s, major changes to the hydrology and habitat of the ponds have taken place. Alterations in water depth, circulation and salinity have had dramatic impacts on the range of habitat types, fisheries, and vegetation of the ponds. Today, the most obvious problem caused by the permanent opening of the ponds is the rapid increase in the rate of sedimentation in the channels and flats of the flood-tidal deltas. Another serious problem is pollution from nitrogen and bacteria loading due to development in the watersheds of the ponds.

To address the sedimentation and water quality problems associated with the permanent opening of the salt ponds, the CRMC is proposing that the Corps undertake a study focusing on six specific activities. As requested by the CRMC, the Corps would investigate the feasibility and benefit of:

- dredging the Ninigret Pond breachway, sediment catchment basin, and flood tidal delta, and the channel to Green Hill Pond to restore water circulation and eelgrass beds;
- dredging the Winnapaug flood tidal delta and breachway to restore benthic habitat for historic use by lobsters, shellfish and finfish as well as to restore water circulation and eelgrass beds;
- dredging the Quonochontaug Pond flood tidal delta and breachway to restore water circulation and eelgrass beds;
- purchasing a dredge to maintain sediment catch basins;
- improving fish passages in streams running into the salt ponds; and
- constructing tidal gates at each of the breachways to control salinity and sedimentation within the ponds.

The Council believes that these activities will result in significant environmental benefits for the salt ponds particularly with regard to water quality by improving water circulation. Habitat benefits would also be realized as a result of the water quality improvements and potentially through the nourishment of

continued on page 8

Inside This Issue

Council Begins Natural Resources and User Groups Analysis for Aquaculture

by Christine Tietjen

The State of Rhode Island, also known as the Ocean State, earned its nickname from the 420 miles of coastline that outline its waters. These waters are continuously utilized by multiple-user groups, including commercial fishermen, recreational fishermen and boaters, coastal land owners, and aquaculturists, to mention a few. Regulatory agencies are faced with finding ways to manage natural resources and balance the use of the resources. Nowhere is this more evident than in the Rhode Island Salt Ponds, where user conflicts tend to be more prevalent. Many issues have developed between the existing aquaculture operations within the salt ponds and other user-groups.

The Coastal Resources Management Council (CRMC) has been delegated the lead agency for permitting and coordination of aquaculture within Rhode Island. Currently, the only marine-based aquaculture development taking place within our state's waters are in the salt ponds. Presently in existence are 7 aquaculture operations, located in Ninigret Pond, Point Judith Pond, and Winnapaug Pond.

The CRMC requires all potential aquaculturists to complete a formal application for an aquaculture operation. Following the completion of the application, CRMC will either approve or deny the application. This process involves the permitting staff to assess if the operation will conflict with other uses in the location. Recommendations are also provided from DEMs Division of Fish and Wildlife and Rhode Islands Marine Fisheries Council.

Currently, the CRMC is creating a Natural Resource User Group Analysis Map in an effort to assist the permitting staff in reviewing an aquaculture application. The map will include the location of various natural and human uses of the ponds, including shellfish beds, eelgrass beds, flounder spawning habitats, marina locations, anchorage locations, and public access points, among others. The analysis map will aid the CRMC in assessing whether the proposed aquaculture operation will be in conflict with other uses or natural resources. The map will help clarify the location of major conflicting uses in the ponds and improve the permitting process.

The data utilized for the creation of the map has been obtained from various sources, including CRMC approved Harbor Management Plans, DEMs Division of Fish and Wildlife, the CRMC, and other studies conducted within the coastal salt ponds. These sources contributed shellfish and eelgrass bed densities, public access points, anchorage and marina locations, and spawning flounder data coverages. The information that has been gathered is being applied by a mapping application called Maptitude. Maptitude has the characteristic of being able to layer various coverages and allow the CRMC to make assessments of conflicting uses.

The map is expected to be completed in late summer and will be utilized by the staff for future applications. If the map proves useful, Narragansett Bay will also be mapped through the same process and objective in mind. For now, the salt ponds are a first priority due to the aquaculture operations in existence and the expressed interest by other potential aquaculturists.

Coastal Features

Coastal Features is a publication of the Rhode Island Coastal Resources Management Council. Its preparation was financed in part by a grant from the National Oceanic and Atmospheric Administration pursuant to the Coastal Zone Management Act, as amended.

This issue of *Coastal Features* was edited by Laura Miguel. To comment on any article or to make address changes, write the CRMC at the Oliver Stedman Government Center, 4808 Tower Hill Road, Wakefield, RI 02879 or contact us on-line at ricrmc@riconnect.com.

Planning for COASTWEEKS '97 Underway

This year the national COASTWEEKS celebration is scheduled from September 20, 1997 through October 10, 1997. Started in 1982 to focus attention on the value of our coast and its natural resources, COASTWEEKS has since become an annual nationwide event. This will be Rhode Island's tenth year as a participating state in the celebration.

Planning for COASTWEEKS '97 is currently underway and the Council, together with R.I. Sea Grant, will once again be organizing and printing the COASTWEEKS calendar. The calendar will include a listing of educational and recreational events for the entire family. As in past years, the COASTWEEKS celebration will be kicked-off nationally with a coastal cleanup. Here in Rhode Island, "Get the Drift and Bag It" will once again be sponsored by the Audubon Society of Rhode Island.

Persons or organizations interested in sponsoring a COASTWEEKS event are encouraged to contact the Council at 277-2476 as soon as possible. Those interested in obtaining the COASTWEEKS calendar can also contact the Council during normal business hours (M-F, 8:30-4:00).

Comings and Goings...and, Happenings

...Welcome to our newest employee, Laura Ernst, a Marine Resources Specialist hired by the CRMC this past February. Laura's primary responsibilities will be to update and revise the Council's Special Area Management Plans for the Salt Pond Region and the Narrow River. Both of these geographic-specific management plans have served the Council well since their initial development, but are now over ten years old; 13 years in the case of the Salt Pond Region SAMP. Much has changed since then, and it will be Laura's job to bring each up to current standards.

Laura brings a perfect blend of experiences to the task. She initially assisted the University of Rhode Island's Coastal Resources Center in undertaking a cumulative and secondary impacts study of both SAMP watersheds for the Council, from which she based her Master's Thesis. From there she went to Washington on fellowship to the NOAA National Marine Fisheries Service, where she undertook various policy initiatives. Welcome Laura.

...Goodbye to Jim Boyd, an Environmental Scientist who started with the CRMC in the regulatory section reviewing numerous applications for activities within the Council's jurisdiction, then moved on to the policy section, where of late he focused his energies (of which he has a lot) on aquaculture. Aquaculture is has become an intensely debated issue for the state this past year, and Jim has served the Council well by representing it in various legislative commissions, hearings, and public relations. Jim's former life included work as a shellfisherman, which earned him the respect of the Rhode Island Shellfishermen's Association, a dedicated group of quahoggers who are keeping a close eye on any aquaculture initiative.

Jim is moving on to greener pastures, so to speak, as his wife Emily, has been accepted to Penn State Medical School. Good luck to both Jim and Emily.

...Baby Philip has Arrived! Congratulations to Laura Miguel and her new son, Philip! Laura, a Marine Resources Specialist with the Council (and this newsletter's editor), and her husband David welcomed their second child into the world on May 14, 1997. Mother and child are doing quite well, though we haven't heard from David yet. Baby Philip joins his sister Kelly Rose as the latest Miguel born with a permanent smile on his face.

CRMC Develops Freshwater Wetlands Program

During the 1996 legislative session, amendments were made to the Council's enabling legislation (R.I.G.L. 46-23) which have significant consequences for the management of freshwater wetlands in Rhode Island. Essentially, the General Assembly required the CRMC and the RIDEM to divide authority over the regulation of freshwater wetlands in the state through the cooperative development of a jurisdictional line. Those wetlands seaward of the line were to be considered "freshwater wetlands located in the vicinity of the coast" and, as such, now fall under the exclusive jurisdiction of the Council. Freshwater wetlands inland of the jurisdictional line remain under the jurisdiction of the RIDEM except where the freshwater wetlands are affected by an aquaculture project.

Prior to the adoption of the amendments, applicants for activities located within the Council's area of jurisdiction which also had the potential to impact freshwater wetlands were required to apply to both the Council and the RIDEM, Division of Freshwater Wetlands for approvals. Hence, a primary intent of the amendments was to streamline the process for permit applicants by requiring only a single agency review.

Since their adoption in July 1996, the Council has been working to meet the requirements of the amendments. The first task to be achieved was the designation of a jurisdictional line. Council staff worked closely with the RIDEM, Division of Freshwater Wetlands staff in determining an appropriate line. Together, they considered, in detail, existing freshwater wetland areas, roadways, and town plat maps, as well as personal knowledge gained through field experience, to arrive at a logical and practical division of jurisdiction. In most cases, the agreed upon line follows roadways. In cases where a road did not exist or was not a logical jurisdictional divider, the staff of each agency worked together to find another reasonable approach. In many cases this involved reviewing town plat maps and conducting field inspections.

Following agreement on the line, the next step was the development of maps depicting each agency's jurisdiction. To that end, the Council has been working with the RIDEM and the University of Rhode Island to have the line digitized and available through the Rhode Island Geographic Information System, and hard copies of the maps printed. It is expected that this task will be complete by the time this edition of *Coastal Features* goes to print.

Associated with the designation of freshwater wetlands jurisdictional areas, and critical to the successful protection and management of freshwater wetlands in the vicinity of the coast, is the development of Council procedures and regulations for the management and protection of freshwater wetlands within its jurisdiction. While it may seem that the easiest approach to this task would be simply to adopt RIDEM's existing procedures and regulations, such an approach, in effect would require the duplication of RIDEM's, Division of Freshwater Wetlands within the Council. Since no funds were appropriated for meeting the mandates of the amendments and implementing the Council's new authorities, this was clearly not possible. A major challenge, therefore, has been to develop a program which relies upon the existing Freshwater Wetlands Act and associated regulations as implemented by RIDEM, but which can be implemented through established CRMC permit review procedures. Efforts have also been made to incorporate appropriate recommendations of the Governor's Committee on Freshwater Wetlands to improve the current permitting process.

The Council is eager to move forward in implementing its new freshwater wetlands authorities. Regulations have been drafted and staff has been working with the DEM, Division of Agriculture to ensure the proper management of alterations to wetlands associated with farming activities. In addition, informal discussions on the draft regulations have taken place with various industry and environmental groups so that potential concerns can be addressed early in the process. It is expected that proposed regulations will be ready for public review and comment this summer.

CRMC Hosts Forum on Subdivision Review Act

On May 8th, the CRMC sponsored a forum for coastal municipality planners and staff on the Land Development and Subdivision Review Enabling Act of 1992 (the Act). The forum, held at URI's Alton Jones campus, afforded municipal planners and other local officials, and CRMC staff an opportunity to discuss the Act's implementation with respect the CRMC's existing permit requirements and review process.

Derwent Riding, Principle Environmental Planner for the state Division of Planning/ Department of Administration, and a primary author of the Act, presented a comprehensive overview of the Act and its components as its relates to local implementation and the CRMC's jurisdiction and review processes.

Lee Whitaker, Supervising Planner of the Town of North Kingstown, which has experienced significant development pressures in recent years, started the morning with a description of North Kingstown's experience in implementing the Act, and how their implementation has been coordinated with the CRMC's review processes..

In adopting the Act, the General Assembly sought to address the need for a uniform and updated approach to the application and review process associated with land development activities following the adoption of the Rhode Island Comprehensive Planning and Land Use Regulation Act and the Zoning Enabling Act of 1991. The Act provides a framework whereby the steps for, and applicable requirements of, the review of a pro-posed development project are identified early in the planning process. Pursuant to the Act, developers meet with regulators prior to submitting any formal applications and are provided guidance on applicable plans, ordinances, regulations, standards and procedures which may affect the proposed development.

During the master plan phase for major land development and subdivision projects, the developer provides general information on: natural and man-made features of and around the development site; coastal zone, wetland and floodplain boundaries; the proposed design concept including any public improvements and dedications; the anticipated construction schedule; and potential neighborhood impacts. A specific review process which identifies the initial concerns of local agencies, state agencies, federal agencies (as appropriate) and adjacent communities is then undertaken. Following a public informational meeting, during which the applicant presents the proposed development, and oral and written comments are accepted, the municipal planning board renders a decision to either approve the master plan as submitted, approve the plan with changes and/or conditions, or deny the application. Upon receiving master plan approval, the applicant may then apply for all other applicable state permits, including any required by the CRMC.

Once appropriate state approvals are obtained, the application then moves to the preliminary plan phase of the review. At this point the applicant provides specific information on the proposed development including engineering plans, necessary legal documents, and final written comments of other local authorities. If a technical review committee has been established, it reviews the preliminary plan application and makes a recommendation to the planning board. A public hearing is held and the planning board then decides to either approve, approve with conditions, or deny the application.

Prior to final plan approval, arrangements for the completion of all required improvements must be in place, any additional material requested in the preliminary plan approval provided, and all property taxes be current. In cases where the project is being constructed in phases, the applicant must also provide up-to-date drawings depicting completed portions of the project.

As discussed during the forum, the CRMC participates in the subdivision review process through its existing preliminary determination process. Applicants proposing major land development or subdivision projects apply to the CRMC for a preliminary determination, at which time CRMC staff sit down with the developer and municipal

continued on page 6

continued from page 5

officials and provide initial comments on the project as proposed. Applicants then use the CRMC's preliminary determination, in conjunction with other applicable state approvals, to address the state's concerns and develop the preliminary plans for local approval. It is at this stage that the proposed project goes from concept to reality, as engineering plans and studies, as well as legal groundwork is begun in earnest.

Participants in the CRMC's workshop expressed overall satisfaction on the efforts of the parties to come together and share their experiences as well as their outstanding questions. As local and state officials were on hand at the workshop, questions were addressed immediately.

The participants also asked that the process as experienced by the Town of North Kingstown and the CRMC, and discussed in detail at the workshop, be formalized and distributed to the municipalities. This is being undertaken and should be available soon.

CRMC Participates in URI's Partnership for the Coastal Environment

Coastal Fellow Jason Marino Joins the CRMC for an Extended Semester

by Jason Marino

It brings me great pleasure as a coastal fellow to be given this opportunity to talk about the Partnership for the Coastal Environment, which has proven to be the hallmark of a University of Rhode Island (URI) education. To better acquaint you with this program, I'd like to first present its history by discussing who initiated these partnership programs, how they are run, what faculty, staff and external partners are responsible for running these programs, and the role of the students and how they are mentored by their project sponsors and team leaders. In concluding, I will discuss my past experience as a coastal fellow working with the folks at the Coastal Resources Center (CRC) and my current role and responsibilities as a fellow working here at the Coastal Resources Management Council (CRMC).

Introduction

The Partnership for the Coastal Environment is a direct response to President Carothers' long-term vision for integrating teaching, research, and outreach at the University of Rhode Island (URI). He has been the engine behind these partnership programs at URI and sees them as a vehicle for meeting the following goals:

- To promote collaborative learning between faculty and students.
- To engage in the search for new knowledge.
- And to apply this knowledge in classrooms and in public and professional settings on the state, national, and international levels.

This partnership's primary goal is to position the university at the forefront of national and international efforts to study and manage diverse coastal environments. Many are aware of URI's well established international reputation, however, this partnership program by targeting a broad array of faculty and staff, and by extending its reach to undergraduate education, is building on a history of strength in this little corner of the world.

Partnership Overview

The Coastal Partnership is a lose affiliation of 40 faculty and staff members from ten different departments, three colleges, and two different campuses. It all stemmed from Professor Art Gold's (Department of Natural Resources Science) e-mail effort about 18 months ago seeking faculty and staff participation. Those who stepped forward to help establish this partnership did so because of their interest in collaborating with others from different disciplines on problems of the coast and in finding new venues for preparing students for life beyond the university. Although these individuals come from diverse disciplines such as Natural Resources Science, Fisheries, Aquaculture and Veterinary science, Marine

Affairs, Resource Economics, the Graduate school of Oceanography, the Coastal Resources Center, Plant Sciences, Political Science, Philosophy (Philosophy? You may ask. Yes, the philosophy of coastal aesthetics-Aesthetics are primary considerations for those involved with tourism, economic development, and resource economics in coastal areas) , and Community Planning they were all in search for more effective and inclusive ways to study and manage the problems facing Rhode Island's coastal waters.

Partnership Structure and Research

The Partnership itself is managed by a group of eight faculty and staff who represent the various disciplines and meet bi-weekly. The team, during its first year adopted several overarching themes for partnership research:

- Land-use and Water Quality Management in Coastal Watersheds
- Coastal Ecosystem Function
- Aquaculture Techniques
- Economics of Aquaculture Systems
- Ecosystem Modeling as a Guide for Decision Makers.
- Water Quality Monitoring

This research is happening in conjunction with external partners who themselves play a key role in arriving at the outcomes of these research projects. Such partners include state agencies, private non-profit concerns, Rhode Island municipalities, federal programs and departments, and other universities and research groups. Present external partners include the following: EPA Narragansett Bay Lab, EPA Region 1, Ocean State Aquaculture Association, RI CRMC, RI DEM, RI House of Representatives, Joint Committee on Energy and Environment, City of Warwick, Town of South Kingstown and the Town of East Greenwich.

Coastal Fellows and Mentors

The Partnership recently appointed 50 new fellows into the program, these fellows are sponsored by URI faculty and staff, as well as by the external partners. All fellows are working on problems specific to the coastal environment of Rhode Island, but with applications to broader geographic areas. Students work as fellows for a minimum of eight months. They provide 20 hours of work per week during the summer and 10-12 hours during the school year in exchange for a $2,000 stipend and 3-4 academic credits. Each fellow is substantively involved in the actual work of the project, and generally responsible for one entire aspect. The project sponsors and team leaders mentor students closely but allow them to work independently where possible. Approximately 2/3 of the fellows are undergraduates and 1/3 graduates. The graduate students function as peer mentors, particularly where students may need a fair bit of orientation in a specific research setting. Upon entering the fellowship program, students are responsible for preparing a learning contract which establishes for both student and professional mentor the goals, expectations, and products of the fellowship. Students are also responsible for signing up for a two-credit weekly colloquium provided by the partnership which allows for all partnership players (faculty, staff, fellows, outside partners and assorted other students) to examine selected problems of the coastal environment over a protracted period of time. Faculty, staff, and external partners gather to both lecture and converse with one another across disciplines and nationally renowned speakers appear every 4-5 weeks to address a particular topic. This colloquium enables coastal fellows and other assorted students to learn and understand how their own small research piece contributes to the larger fabric of knowledge on a particular topic.

Having experienced the Coastal Fellowship Program one time already working for the CRC on a project titled "The Marina Outreach and Best Management Practice Implementation Project", I can honestly say that it has proven to be the highlight of my academic career. I have come to realize that employers are not seeking test takers, which institutions of higher education so ignorantly train students to become but rather they seek individuals equipped with the skills needed to assess situations, analyze data, suggest solutions and communicate information to others. This Partnership Program has exposed me to all the above. Through the process of developing my potential in assessing environmental related issues I've enhanced my computer as well as my public communication skills. I've gained an enormous wealth of hands on experience; and perhaps most importantly I'm

Continued on page 8

CRMC Members

Sandra Thornton-Whitehouse, Chair
George N. DiMuro
Noelle F. Lewis
Jerry Sahagian
Turner C. Scott
Lloyd Sherman
Michael Tikoian
John Shekarchi, Esq.
Robert Ellis Smith
James Beattie, RIDEM
Augustino Nunes
Peter Troy
Representative Paul E. Moura
Representative Eileen S. Naughton
Senator Dennis L. Algiere
Senator Patrick McDonald

Grover J. Fugate, Executive Director
Goldman and Biafore, Legal Counsel

continued from page 7

meeting and developing relationships with professionals in the field who are assisting, directing, and guiding me as well as providing contacts and opportunities towards my career interests.

I look forward to continuing my role as a coastal fellow working here at CRMC in assisting the Policy section of the CRMC in its efforts to develop comprehensive programs for aquaculture, primarily, and dredging. I'm sure my mentor (supervisor) Jeff Willis will maximize the learning opportunities of the fellowship. From my short time here thus far, I'm convinced my fellowship with CRMC will prove to be a true asset in preparing me for life beyond the university.

continued from page 1

piping plover and least tern nesting areas with sandy dredged material.

The proposal was submitted to the Corps in April. The reconnaissance study is the first step to determining the environmental benefits of the proposed projects. It will also provide the CRMC with a feasibility analysis (cost/benefit) on getting the work accomplished and what would be the necessary next steps that could be taken to finish the job. The CRMC is hopeful of good news by mid-May.

Coastal Features

RI CRMC
Oliver Stedman Government Center
Tower Hill Road
Wakefield, R.I. 02879

Bulk Rate
U.S. Postage
PAID
Permit No 1286
Providence, R.I.

Printed on Recycled Paper