The Newsletter of the Rhode Island Coastal Resources Management Council

Coastal Features

CRMC
Coastal Resources Management Council

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CRMC funds 6 habitat restoration projects

Fish passages will be restored with latest round of funding

The RI Coastal Resources Management Council has awarded funding for six habitat restoration projects through its RI Coastal and Estuarine Habitat Restoration Trust Fund.

The Council approved the funding at the January 22 semi-monthly meeting in Providence.

Source: NBEP

This year's Trust Fund projects include the restoration of a fish passage on the Blackstone River in Pawtucket.

Projects approved for funding include fish passage restoration projects on the Ten Mile, Woonasquatucket, Blackstone and Pawcatuck Rivers, as well as a salt marsh restoration project located at Silver Creek Salt Marsh in Bristol. The remainder of the funding will be used to purchase low ground pressure equipment for the R.I. Department of Environmental Management (DEM), which will be made available for use in habitat restoration projects statewide.

"The CRMC is encouraged by the number and quality of restoration projects it received this year and the now extremely competitive proposal process," said CRMC Chairman Michael M. Tikoian. "It is great to see all of the good that has been done with the help of these funds through the years – numerous habitat restoration projects,

(Continued on next page)

CRMC adopts RI Invasives program

The Rhode Island Coastal Resources Management Council (CRMC) has received federal funding from the U.S. Fish & Wildlife Service toward the implementation of its new Rhode Island Aquatic Invasive Species Management Plan, which was adopted by the Council in January 2008.

The RI Aquatic Invasive Species Management Plan (RIAIS Plan) is the first comprehensive effort to assess the impacts and threats of aquatic invasive species in Rhode Island. It outlines a series of management strategies intended to prevent the introduction and curb the spread of aquatic invasive species. The plan, developed and implemented on the state level by the CRMC, priori-

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Habitat Restoration, *continued from Page 1*

fish ladder construction projects and continued support of other related work. Rhode Island's coastal and estuarine habitats will be greatly improved through these efforts and we look forward to seeing the results of this work."

The DEM was awarded $100,000 toward the construction of Denil fishways and eel passages at Omega Pond Dam, Hunts Mill Dam and Turner Reservoir Dam on the Ten Mile River in East Providence. The new fishways will restore anadromous fish runs for river herring and American shad and the new eel passages will connect the Ten Mile River with Narragansett Bay, restoring prime fish habitat that is currently limited by obstructions. The Ten Mile River project has been identified by DEM as the most important fish passage restoration project in the state. When completed, it will provide 340 acres of spawning habitat for alewives, and approximately 3 miles of riverine spawning habitat for blueback herring and American shad.

The Council awarded $40,000 to the Woonasquatucket River Watershed Council for restoration of fish passage at Paragon Dam on the Woonasquatucket River in Providence. This project is part of a larger effort to restore fish passage on the lower Woonasquatucket River. The first fish ladder was installed at Rising Sun Mills last year and partially funded through the Trust Fund. The project partners are now working to remove Paragon Dam, which is located a quarter-mile upstream from the Rising Sun Mills fish ladder.

The Wood-Pawcatuck Watershed Association will receive $35,000 from the Trust Fund toward planning for fish passage restoration at the Lower Shannock Falls Dam in Richmond. The removal of Shannock Falls Dam and abandonment of the adjacent mill race is the next step in the effort to restore fish passage in the upper Pawcatuck River. This work will open the Pawcatuck River system to nearly 1,300 acres of upstream spawning and rearing habitat for anadromous fish.

The Blackstone River Watershed Council will

(Continued on next page)

CRMC, Aquaculture Working Group present subcommittee report

The CRMC Working Group on Aquaculture Regulations first convened in 2000. The CRMC saw a need for increased communication between the regulatory agencies, scientific community and aquaculture and fishing industries. After two years of meeting, members determined that the goals had largely been met and ceased meeting. In early 2007, in response to mounting concerns about the growth of the aquaculture industry and its impacts on the environment, the group reconvened.

The first order of business was a review to provide science-based information on the limits to aquaculture development in Rhode Island. Areas of examination included water quality; diseases; invasive species; physical impacts of aquaculture gear; essential fish habitat; and carrying capacity. The working group also recommended instituting an Ecosystem Approach to Aquaculture. Members of the working group who contributed to this effort were named as the "Subcommittee on Biology." The subcommittee's intent was to summarize the state of knowledge in the above areas and to bring forward recommendations to the full working group. A first draft of the report was presented in September 2007 and the final report was approved by the full working group at the January 2008 meeting.

There is a considerable amount of peer-reviewed, scientific research on aquaculture operations and their relationship to the environment. Farming of fish in pens and shrimp in ponds can have significant detrimental environmental effects; however, the shellfish aquaculture practiced in Rhode Island is most likely beneficial for the environment, for a number of reasons. Oysters filter phytoplankton from the water, allowing light to penetrate so that submerged aquatic vegetation (SAV) can grow from the bottom. In doing so, oysters remove nutrients from the water and can help ease the eutrophication problems in Rhode Island's estuaries. Oyster operations also provide refuges for the juvenile stages of several species of economically important fishes.

The physical presence of shellfish aquaculture in Rhode Island waters has, as any human activity, an impact on the natural environment. The question is whether that impact is acceptable to ecosystem structure and function and, by extension, to a Rhode Island public that does not want to see its estuaries degraded. The report of the subcommittee indicates that shellfish aquaculture, as currently practiced in Rhode Island, has net positive impacts on the ecosystem. (Source: CRMC Working Group on Aquaculture Regulations- Subcommittee on Biology - Report on Biological Impacts of Aquaculture)

The full report is available on the CRMC web site: http://www.crmc.ri.gov/projects/aquaculture.html.

Habitat Restoration, *continued from Page 2*

receive $35,000 to restore anadromous fish passage across two dams on the lower Blackstone River in Pawtucket. This project is part of a larger effort to restore anadromous fish runs on the Blackstone River that have been obstructed for almost 200 years by human-built structures. The project will improve the Blackstone River ecosystem, increase recreational opportunities and provide economic benefits for the towns of Pawtucket, Central Falls, Cumberland and Lincoln.

The Council awarded $10,000 to the Town of Bristol for the restoration of the Silver Creek Salt Marsh, a 13-acre tidal estuary on the eastern shore of Bristol Harbor. The creek is tidally restricted by an old railroad bridge, the Route 114 Bridge and a town-owned foot bridge. These restrictions have impounded freshwater, diminished connectivity with the Bay and have allowed for Phragmites australis expansion in the salt marsh. The project goals include improvement of tidal flow and flushing, restoration of the native salt marsh plant community, and reduction of mosquito breeding habitat.

The Trust Fund also provided $5,000 to the DEM Mosquito Abatement Coordination Unit for the purchase of low-ground-pressure utility vehicle equipment that will be used to transport soil excavated from salt marsh water management projects to upland disposal sites. It can also be used to spray herbicide in Phragmites control projects. The equipment is made available for use in restoration projects statewide, and is often used as a source of non-federal, "in-kind" match for federal funding.

This year's approval also includes a new contingency list of projects. In the case that a funded project cannot move forward, the funds awarded to that project will be reallocated to the highest ranked project on the contingency list.

Source: Wood-Pawcatuck Watershed Association

The Wood-Pawcatuck Watershed Association will receive $35,000 from the Trust Fund toward planning for fish passage restoration at the Lower Shannock Falls Dam in Richmond, pictured above. The removal of Shannock Falls Dam and abandonment of the adjacent mill race is the next step in efforts to restore fish passage in the upper Pawcatuck River.

Habitat restoration projects are funded through the RI Coastal and Estuarine Habitat Restoration Trust Fund and are selected from recommendations by the RI Habitat Restoration Team, established by CRMC, Save The Bay and the Narragansett Bay Estuary Program in 1998. Members of the team serve as a technical advisory committee for the CRMC as required by law. Funds for the program come from the state's Oil Spill Prevention Administration and Response Act (OSPAR), established by the legislature following the 1996 North Cape oil spill. Each year, the Trust Fund and CRMC receive $225,000 from the OSPAR account to fund habitat restoration projects in the state. To date and including this year, the Trust Fund has awarded $1.2 million for 40 projects, which have leveraged more than $11 million in matching funds. This year's funding leveraged more than $3.3 million, at a leverage ratio of 15:1. Projects funded through the Coastal and Estuarine Habitat Restoration Fund have helped to achieve statewide restoration goals set forth by the Governor's Bay Commission Habitat and Restoration Panel in 2004. The team, through multiple project partners' efforts, has met the goal of restoring 100 acres of coastal wetlands by 2008, and is on target to achieve the goal of restoring another 100 acres of coastal wetlands by 2015. The full 2007-2008 Coastal and Estuarine Habitat Restoration Trust Fund report is on CRMC's web site at http://www.crmc.ri.gov/projects/habitats.html.

CRMC announces Point Judith Marina as second Clean Marina in Rhode Island

The Rhode Island Coastal Resources Management Council recently designated the state's second Clean Marina. Point Judith Marina, located on Point Judith Pond in Narragansett, is the second Rhode Island marina to be designated under the CRMC's Clean Marina Program.

The CRMC adopted the Clean Marina Program in February 2007; the voluntary program is designed to protect the state's coastal waters and benefit the marina industry in Rhode Island. Program partners include the RI Department of Environmental Management, RI Marine Trades Association and Save The Bay. As a clean marina, Point Judith Marina will receive a special plaque recognizing its status, as well as flags showing the Clean Marina logo.

"The CRMC applauds Point Judith Marina as the second Clean Marina in Rhode Island. The marina and its staff have gone to great lengths to become certified," said CRMC Chairman Michael M. Tikoian. "This program provides an easy to follow process through which Rhode Island marinas can ensure they are environmentally friendly and responsible facilities. We look forward to celebrating other marinas' accomplishments as they are designated Clean Marinas."

The Clean Marina Program is designed to reward marinas that go beyond regulatory requirements by applying innovative pollution prevention best management practices (BMPs) to their day-to-day operations.

"The CRMC, DEM, and RIMTA have worked hard to put this important program together," said Don Vivenzio, general manager of Point Judith Marina. "We know there are currently a number of applications submitted by other marinas, and we wish them the best with the inspection process. We would also encourage the rest of the marine facilities in Rhode Island to consider using the Clean Marina Guidebook as a tool and a goal toward environmental compliance, and eventually applying for Clean Marina status."

The CRMC Clean Marina Program logo

As part of this program, a Rhode Island Clean Marina Guidebook and self-assessment checklist serve as tools to assist marinas toward becoming RI Clean Marinas, a designation that certifies marinas, boatyards and yacht clubs that have voluntarily exceeded regulatory requirements and have adopted measures to reduce pollution, and recognizes them as environmentally-responsible businesses. Program information is available on the CRMC web site at http://www.crmc.ri.gov/projects/cleanmarinas.html. A Clean Marina pledge requires that marinas striving for this designation pledge to do their part to keep the state's waters free of harmful chemicals, excess nutrients and debris. It also states that the marina owners will identify opportunities and implement practices to control pollution associated with vessel maintenance; fueling; sewage handling; storm water management; and facilities management. The marina, once a pledge is signed, must implement the pollution prevention practices within one year and apply to the CRMC for the designation as a Rhode Island Clean Marina.

"Point Judith Marina is honored to be one of the first marinas in Rhode Island to be awarded clean marina status," Vivenzio said. "We would like to thank our crew for their efforts and assistance, and our customers who helped and cooperated with everything from our recycling programs to the use of vacuum sanders. We know that this will be a continuous educational process for all involved."

Marinas that achieve this status will be presented the RI Clean Marina Award and other highly publicized incentives to distinguish them as top tier "green" businesses that offer clean, safe, and environmentally friendly facilities. The designation would also be in lieu of an Operations and Maintenance Plan, now required under the revised Section 300.4 CRMC regulations.

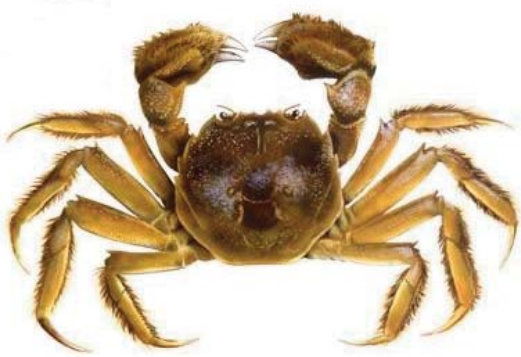
"The CRMC would like to thank the RI Marine Trades Association, the DEM and Save The Bay for their involvement in helping to develop the Clean Marina Program," Tikoian said. "Point Judith Marina, along with others undergoing their certification, will show other marinas that this process works and results in a benefit to both the marina and the environment."

RIAIS Plan, *continued from Page 1*

tizes state agency leadership for action, continuation of current research on the risks of various transport vectors, coordination with industry to minimize invasions, development of a regional web page and database on AIS distribution and education initiatives. The RIAIS Plan was created by the CRMC under the federal Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 as amended by the National Invasive Species Act of 1996 (NISA) through a partnership of URI, RI Natural History Survey, RIDEM, Save the Bay, the US Coast Guard, NOAA, USDA, and USFWS, among others.

The threat of non-native species is not a new concern to Rhode Island. European settlers intentionally introduced numerous non-native plans and animals upon arriving in the New World. Accidental introductions also occurred during this time. Rocks used as ship's ballast that were discarded in New England coastal waters are a likely source, or vector, for the introduction of European marine species such as the common periwinkle. Recent globalization of the economy and the increase in commerce and new trade routes has also caused a spike in the rate of these introductions in the present-day, some causing significant environmental and economic damage that require costly control or remediation.

Invasive species – defined as a non-indigenous species that threatens the diversity or abundance of native species of the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activities dependent on these waters – are considered to be second only to direct habitat destruction as a cause of declining biodiversity in the U.S. Species that have invaded Rhode Island waters include the European green crab, Asian shore crab, lace bryozoan, codium, the red macroalgae Grateloupia turuturu and various species of sea squirts and shellfish pathogens. Other invasive species of concern (due to their proximity to Rhode Island and/or high potential for environmental and economic damage) include the following:



Source: New Zealand Ministry of Fisheries

The Chinese Mitten Crab (Eriocheir sinensis)

- Veined Rapa whelk
- Chinese Mitten crab
- Suminoe oyster
- Pacific oyster
- *Caulerpa* sp.
- Japanese kelp

The RIAIS Plan also addresses freshwater invaders, such as aquatic macrophytes like variable watermilfoil and curly pondweed, which have become established and are spreading in lakes and ponds. Introduced Phragmites and purple loosestrife are also spreading, clogging waterways and pushing out native species.

The CRMC's RIAIS Plan is the first comprehensive effort to assess the impacts and threats of aquatic invasive species in Rhode Island, and to outline a series of management strategies to prevent the introduction and spread of aquatic invasive species, spread over a five-year period. The plan calls for communication and coordination between agencies and groups in the state; monitoring; education, outreach and training; research and development; planning and assessments; prevention and control; and legislation and regulation.

"The CRMC is proud to be the front-runner in Rhode Island on developing an aquatic invasive species plan that can be implemented on a statewide scale. I'd like to thank our CRMC staffer Kevin Cute for his hard work on this plan," said CRMC Chairman Michael M. Tikoian. "Aquatic invasive species are destructive and wreak havoc on our native habitats and the species that live within them, and it is vital that the state has a plan for managing existing invasive species, and prevent the introduction of others." *The RIAIS Plan is available on CRMC's web site : http://www.crmc.ri.gov/projects/invasives.html.*

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This issue of Coastal Features was compiled and edited by Laura Ricketson-Dwyer. To comment on any article or to make address changes please contact the CRMC.

CRMC awards science fair prizes

The RI Coastal Resources Management Council has awarded savings bonds to six Rhode Island junior, middle and high school students for their winning projects in the 2008 Amgen Rhode Island Science and Engineering Fair.

This year's science and engineering fair took place on March 15 at the Community College of Rhode Island's Knight Campus in Warwick, and showcased engineering, science and environmental projects from 70 schools and students from grades 6 through 12. This year students showed a total of 476 projects, and the CRMC awarded bonds for projects ranging from water quality and public access to current hot topics like climate change and alternative energy sources.

In the Senior Division, for students in grades 9-12, the first place prize of a $100 savings bond from the CRMC was awarded to Emilia Raimondo from LaSalle Academy for her project, "The Unrecognized Menace in Narragansett Bay: Phosphorous Does Affect Eutrophication in Salt Water." Krista Hoffman, also of LaSalle Academy, was awarded the second place prize of a $50 savings bond for her project, "Is There a Correlation between Current Arsenic Levels in Surface Soils and Historical Land Use in Rhode Island?" Third place and a $50 savings bond went to Diandra Verbeyst from St. Mary Academy Bay View for her project, "Too Much of a Good Thing II." Nicole Coumoyer from Smithfield High School received honorable mention from this division for her project, "Water of the Future."

The CRMC also awarded three savings bonds in the Junior Division for students in grades 6-8. The winner of the first place $100 savings bond was Alexia Malone Oliver from St. Philomena School for her project, "How Quickly can Oysters Clear Different Concentrations of Algae from Filtered Water?" The second place savings bond for $50 went to Nicholas Simone from St. Mary's School for his project, "Would a Windmill be good for Johnston?" Anthony Macari, III from N.A. Ferri Middle School received third place and a $50 savings bond for his project, "Melting Away Our Future." The honorable mention award for the junior division went to Taylor Chelo from St. Philip School for her project, "America's Best Sand for Castles."

The students received congratulatory letters and certificates from the CRMC, and will also receive their savings bonds. The Council has been giving out special awards for the science fair for more than 10 years.

"As part of our educational outreach, the CRMC is honored to take part in events like the science and engineering fair, which encourage students to get interested in environmental science and other science-related research," said CRMC Chairman Michael M. Tikoian. "It is vital that we, as Rhode Islanders, provide resources and opportunities for the next generation to learn about their environment and how to manage it responsibly. It was quite evident from this year's fair that our future is in the hands of some very intelligent and imaginative young people."

This is the 60th year of the science fair, and the second year that Amgen has served as the title sponsor.

CRMC OKs Narragansett HMP

The Rhode Island Coastal Resources Management Council (CRMC) recently gave a five-year approval to the Town of Narragansett Harbor Management Plan, which the town council adopted in December 2006.

The town's Harbor Management Plan (HMP) was developed to comply with the CRMC's Section 300.15 of its program, Municipal Harbor Regulations. Following a staff review of Narragansett's plan, the CRMC determined that the HMP for the town was consistent with the RI Coastal Resources Management Program and the CRMC's Guidelines for the Development of Municipal Harbor Management Plans. The R.I. Department of Environmental Management, under the CRMC guidelines also found the town's plan in compliance with the State Water Quality Regulations, and the U.S. Army Corps of Engineers has determined that the HMP is in compliance with its rules related to federal navigation projects. The RI Statewide Planning Program has also declared that the Narragansett HMP is consistent with State Guide Plan elements.

On condition of the five-year approval, the town must amend the HMP's harbor management ordinance to include CRMC regulations regarding outhauls, and apply to the CRMC for a consistency determination per Section 300.15 of the RICRMP whenever proposing to adopt harbor rules, regulations or programs. The town must also submit an annual list of all town-issued mooring permits during each of the five years.

"The CRMC is pleased that the Town of Narragansett now has an approved Harbor Management Plan for the next five years," said CRMC Chairman Michael M. Tikoian. "These HMPs are vital tools in evaluating harbor management activities, ordinances and policies, and they provide a framework for sustainable and environmentally responsible harbor management by our coastal municipalities. We applaud the town in their endeavor."

The CRMC is authorized by the State of Rhode Island to implement regulations and planning programs designed to encourage coastal communities to develop comprehensive municipal Harbor Management Plans. Due to an increase in coastal population density in RI and a simultaneous increased demand for water-related activities and uses of harbor and shoreline areas, the CRMC established comprehensive rules and regulations regarding the development of municipal HMPs.

Harbor Management Plans are designed to:

• Provide a comprehensive and continuous evaluation of municipal harbor management activities;

• Provide for a detailed assessment of current and/or proposed municipal harbor management programs, ordinances or regulations to ensure compliance with applicable regulatory and management requirements of the state; and

• Delegate the primary management authority and responsibilities of consistent local harbor management programs to municipalities.

According to the program, every coastal community should have a well-thought out and carefully developed HMP that provides a long-term vision for controlled growth and development of harbor and shoreline areas. A sound HMP allows for the community to guide waterfront development expansion, marinas, mooring fields and other recreational boating activities. The Harbor Management Plan is a proactive approach to management; the key is to address these issues before they reach a critical point.For more information about Harbor Management Plans, go to http://www.crmc.ri.gov/projects/harbormanagement.html.

Council Profile: Don Gomez

CRMC Council member Don Gomez is as busy now as he was before he retired, after working for more than 30 years as an electrical engineer in Research and Development of undersea warfare technology at the Naval Undersea Warfare College (NUWC) in Newport.

And his outlook on his busy schedule is simply this: "If you can call it fun, it's not work."

Gomez, 64, is a native son of Little Compton; he grew up there, went to school at Josephine Wilbur School (now the Wilbur & McMahon School), married his long-time sweetheart Judith Ann, raised a family and now spends the little free time he has working in his woods, as he calls them, growing hybrid day lilies and going fishing.

CRMC Council Member Don Gomez

Most of the time, however, Gomez can be found still doing what he loves: working for NUWC and other private companies part-time and as a consultant on undersea warfare, physics, acoustics and other operations. And he's still taking courses in technology associated with this line of work.

Gomez has also been serving his town of Little Compton, since childhood in some respects, and he continues to be involved at that level, in addition to serving on the CRMC Council.

"I took care of cows at a farm across the street, starting at age 8 or 9," Gomez said. "Then at 12, I set up the pins at the bowling alley and I did that for a few years. At 13 I started to caddy and did that for several years, overlapping with the bowling alley."

He has served on the town's planning board, zoning boards, charter review commission, municipal trust, chaired the town's pension committee, its budget committee and served two years as the town council president. He's currently serving a four-year term on the school committee, and is co-chair of the facility subcommittee, which is in the process of planning for the construction of a new school. And he was recently elected chairperson of the Little Compton Republican Town Committee.

"I've always participated in town sorts of things," he said. "My father was on the school committee and the town council. Back then they didn't have the open meetings law, so they'd stand around an old coal stove in a store and decide the fate of Little Compton. My mother thought that was a good place for me to be."

He met his wife in second grade, he said, and they got married in his third year of college at Northeastern University. The university offered a co-op program, which Gomez took part in for four years, and that program started him at NUWC as a GS-3 earning $75 a week. By graduation the co-op work experience allowed him to start at a higher pay level than most coming out of college and into civil service. During his time at NUWC, Gomez amassed an impressive resume: he has numerous performance and achievement awards including the prestigious Naval Meritorious Civilian Service Award; he holds several patents and invention disclosures for unmanned undersea vehicles; and he has authored a number of technical papers.

For Gomez, keeping busy is a must. And doing R&D at NUWC was perfect for him, he said. This grandfather of three is even taking a boat operating course with his grandson through the US Power Squadron (it will be his third time taking it).

"If you want something done, give it to a busy person," he said. "I get into something for three to five years and then I get bored. That's why I love fishing – you can never figure it out."

His role as Council member – he was appointed last November – suits him well.

"I didn't realize I was as much of a tree-hugger as I am," he said jokingly. "I'm one of a few to come from the East Bay (and sit on the Council), so the town is happy."

As for his work to-date on the Council, Gomez said he's excited about the challenges that have come his way. The CRMC is on the cutting edge, he said, and the agency's brand of "research and development" is something of which he likes being a part. The most difficult aspect of his role as a Council member, Gomez said, is, "having to deny people for the good of the state…you have to do it.

"You teach by example," Gomez said. "You talk the talk; you've got to walk the walk. For me it's a learning experience, because it's so complex."

Council Members

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Brian A. Goldman, Legal Counsel

CORRECTION: *This graph shows a historic sea level rise of 0.64 feet between 1930 and 2006. In the Winter edition of Coastal Features, the sea level rise was incorrectly printed as 64 feet. We apologize for the error and any confusion it might have caused.*

This publication is printed on recycled paper

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