

# Coastal Features

INFORMATION  
ABOUT THE RHODE  
ISLAND COASTAL  
RESOURCES  
MANAGEMENT  
PROGRAM

WINTER 1999

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## Coastal Buffer Zones

The requirement for, and importance of maintaining, coastal buffer zones is a frequent source of misunderstanding for applicants. Permit applicants often question the CRMC's rationale for imposing buffer requirements, particularly when neighboring properties do not have buffer zones. Further illustrating the lack of understanding, buffer zone alterations are the most common type of violation of Rhode Island coastal program.

The CRMC's requirement for the establishment of coastal buffer zones is based on its legislative mandate "to preserve, protect and, where possible, restore ecological systems," and is supported by scientific research on the value of buffer zones. When determining buffer requirements, the Council must balance this mandate with the property owner's right to develop and use the property. The following is provided to help applicants and the general public better understand the CRMC's buffer requirements.

### What is a buffer zone?

Generally, a buffer zone is a naturally vegetated area that serves as a transition zone between different land and/or water uses. The CRMC's primary focus is the **coastal** buffer zone which is defined as, "a land area adjacent to a shoreline (coastal) feature that is, or will be, vegetated with native shoreline species and which acts as a natural transition zone between the coast and upland development." (RICRMP Section 150)

Buffer zones have been widely accepted as a method for minimizing the impacts of forestry and agriculture on adjacent waterbodies since the 1950s. More recently, buffer zones have been used as a tool for mitigating nonpoint source pollution impacts to waterbodies. Buffer zones also provide a variety of additional benefits for protecting coastal areas.

### What benefits do coastal buffer zones provide?

- **Water quality:** As noted, coastal buffer zones are a valuable tool for protecting water quality and mitigating nonpoint source pollution caused by a variety of land uses by trapping sediments and other pollutants as well as removing nutrients.
- **Habitat Protection:** Coastal buffer zones contribute to habitat (both plant and animal) by providing: increased species diversity; protection from predation; breeding and nesting sites; hibernation sites; foraging sites for resident and migratory species; and, protection for rare and endangered species.
- **Protection of Scenic and Aesthetic Quality:** One of the primary goals of the Council is to preserve, protect, and where possible restore the scenic value of the coastal region in order to retain the visual diversity and unique visual character of the coast as seen by hundreds of thousands of residents and tourists each year from boats, bridges, and such vantage points as roadways, public parks and public beaches. (RICRMP Section

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## CRMC Staff Changes

Over the past few months, there have been a number of changes in personnel at CRMC. We are pleased to welcome two new Wildlife Biologists to the CRMC permit staff.

**Brian Harrington** joins the CRMC staff after graduating this past spring with a Bachelor's degree in Wildlife Biology from URI. Brian grew up in the Potowomut section of Warwick and is an avid birdwatcher and football fan. Brian currently resides in Warwick and recently became engaged to be married. Brian will be working on Category A applications and in enforcement.

**Tracy Dudek** joins the CRMC staff as a Wildlife Biologist. Tracy is also a graduate of URI with a degree in Wildlife Biology and has considerable expertise in the field of wildlife habitat management. Tracy has spent the last six years working with the DEM Division of Fish and Wildlife on a seasonal basis as a Wildlife Assistant at the Great Swamp. When Tracy is not helping out at the South Kingstown Pound, she enjoys the outdoors with her personal pet menagerie.

And sadly, two of CRMC's longtime favorites (although perhaps not with program violators), Charlie Brown and George Seavey have recently moved on.

**Charlie Brown**, half of the CRMC enforcement team, has changed positions and is now working for the Department of Environmental Management, Division of Fish and Wildlife at the Great Swamp. Among his new duties, Charlie will be conducting population surveys of fur-bearing animals and providing general assistance where needed. His considerable knowledge, as well as his consistently pleasant and evenhanded approach to his duties and colleagues, will be great assets to the staff at Great Swamp and sorely missed at the CRMC.

**George Seavey**, the other half of the CRMC enforcement team, retired from state service on December 30<sup>th</sup> (see related story on opposite page). George began his career in coastal resources management in 1974 at URI's Coastal Resources Center (CRC) where he worked as one of the authors of the original Coastal Resources Management Program. While at the CRC, which served as the Council's policy staff for a number of years, George also researched and authored numerous technical reports that were used to develop and refine Rhode Island's coastal program over the years. Among the many publications George worked on was a nationally recognized oil spill contingency plan, and an innovative dredged materials disposal plan which remains an important

reference today as the state moves forward with plans to dredge the Providence River shipping channel.

George was one of the first hired as permanent staff to the Council in 1986. During his tenure, George worked to ensure that the Council's regulations (many of which he was responsible for developing) were enforced consistently and equitably, while at the same time, being reasonable with unwitting violators.

George's considerable knowledge will be sorely missed, but his many valuable contributions to coastal resource management in Rhode Island will endure.

## Coastal Nonpoint Program Update

On the 25th anniversary of the Clean Water Act in October 1997, Vice President Gore directed the Environmental Protection Agency (EPA) and the Department of Agriculture to work with other Federal agencies, including the National Oceanic and Atmospheric Administration (NOAA), to develop a Clean Water Action Plan within 120 days. The Vice President specifically requested Federal agencies to "develop a comprehensive Action Plan that builds on...clean water successes over the past five years and addresses three major goals: enhanced protection from public health threats posed by water pollution; more effective control of polluted runoff; and promotion of water quality protection on a watershed basis." (see story on page 7 for information on RI's efforts to develop a Watershed Approach) Relative to the coastal nonpoint program initiated under section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), the Clean Water Action Plan announced by President Clinton in February 1998 included the following Key Action:

- NOAA and EPA will work with coastal states and territories to ensure that they have developed programs to reduce polluted runoff in coastal areas and that these programs are at least conditionally approved by June 1998 and that all programs are fully approved by December 1999, with appropriate state-enforceable policies and mechanisms.

In October 1998, EPA and NOAA issued Final Administrative Changes to the Coastal Nonpoint Program Guidance for Section 6217 of CZARA. The purpose of these changes was to provide the flexibility for states and territories to complete development and successfully implement their coastal nonpoint programs, while maintaining the core principles of the program. Originally, the program guidance specified strict timeframes and ap-

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### Coastal Features

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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@ricconnect.com.

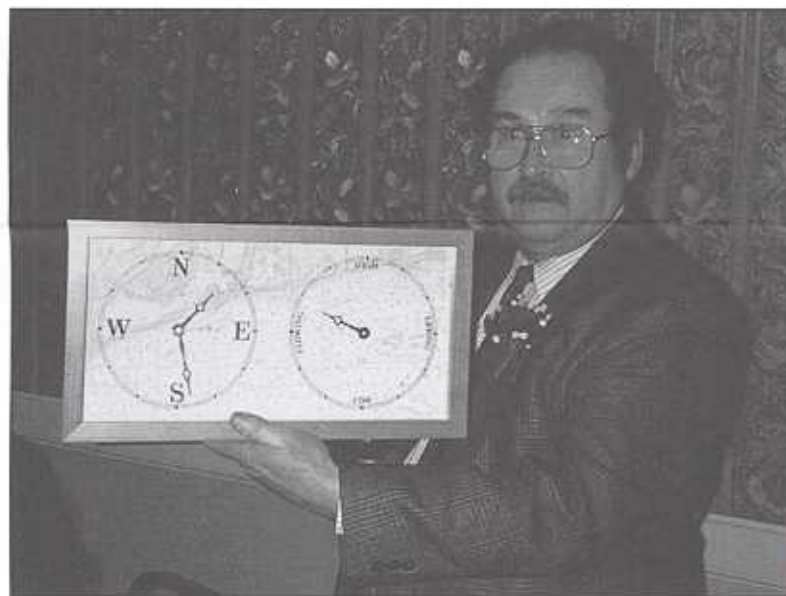


## *Council Hosts Retirement Party for George Seavey*

On January 29, 1999, a retirement party in honor of George Seavey was held at Evelyn's Villa in Warwick. In spite of the nasty weather, many colleagues and friends turned out to pay tribute to George and his achievements in the forefront of coastal management. In addition to George's family and colleagues at the CRMC, guests included former CRMC employees, George's former co-workers from the Coastal Resources Center at URI, and present and past Council members. In appreciation of his 25 years of service to Rhode Island, Grover Fugate, CRMC Executive Director, presented George with citations from the Senate and House, as well as "a compass that tells time."



*CRMC Executive Director Grover J. Fugate presents George with citations from the Rhode Island House and Senate.*

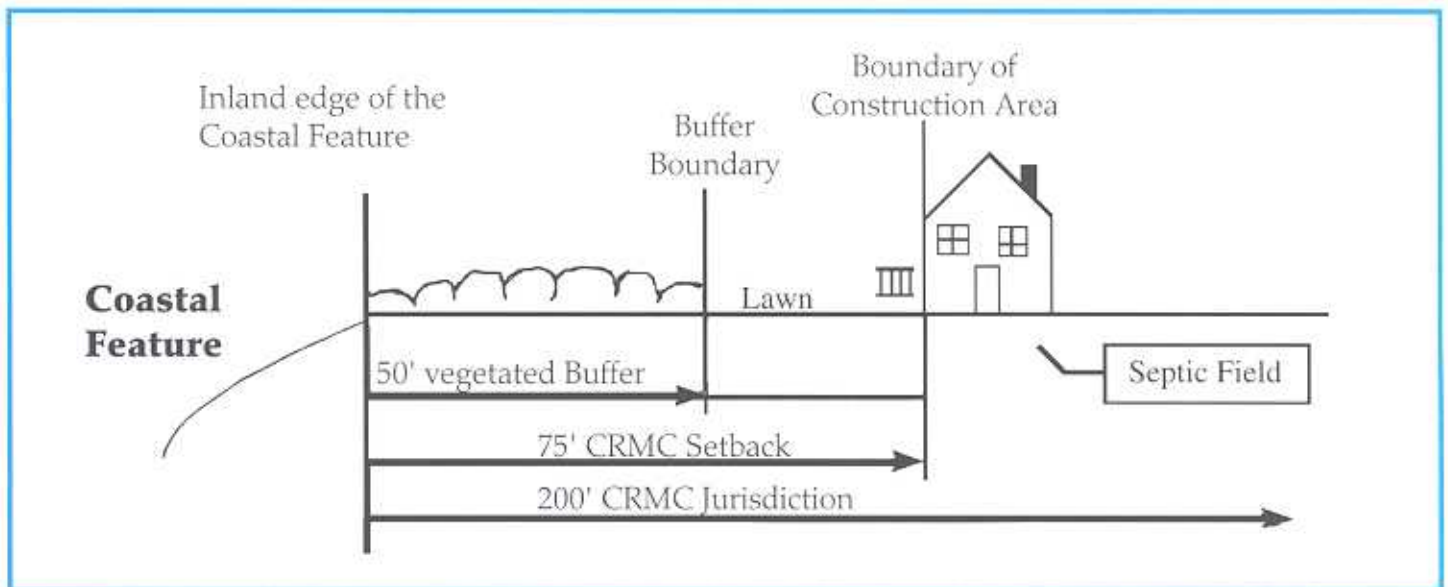


*George graciously accepts "a compass that tells time"*



*In spite of bad weather, the turn out was great to honor the CRMC's first retiree.*

The evening was loaded with laughs and stories of George's many experiences with CRMC. And special thanks are due to Joanne Moore for pulling it all together. To all who were able to share in the evening, it was clear that George was admired and respected for his work. It was also clear that, in spite of a difficult and often thankless job in enforcement, George had maintained his sense of humor and professionalism throughout the years. George will be greatly missed by his friends at CRMC, and although some violators of the coastal program may think things will be easier now, BEWARE! If you thought George was tough....



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330) Further, by providing habitat for a diversity of wildlife and plants, the aesthetic value and appeal of the coastline is enhanced. Coastal buffers also preserve the natural character of the shoreline while mitigating the visual impacts of development. Since tourism is currently the state's second largest industry, by providing a visually attractive coastline, coastal buffer zones can contribute indirectly to the economic well-being of the state.

- **Flood Control:** Coastal buffer zones aid in flood control by reducing the velocity of runoff and encouraging filtration of precipitation and runoff into the ground rather than allowing runoff to flow over land and flood low lying areas. In addition, coastal buffer zones often are located in flood plain areas and therefore provide additional protection from coastal flooding.
- **Erosion Control:** Since buffers slow the velocity of runoff flow, as well as dissipate the flow and reduce channelized flow, they reduce the probability of problems associated with erosion downstream of buffer areas.
- **Protection of Historic and Archeological Resources:** In states like Rhode Island, where many early settlements were located along the shoreline, buffer zones can help protect potentially important cultural and archeological resources by preventing disturbance associated with development.

#### How do buffers work to remove pollutants?

A primary purpose of buffers as a water quality management tool has been to remove sediment and its attached pollutants from surface water runoff by reducing the velocity of surface water, and thereby allowing for sediments to settle out into surface soils. Once absorbed, some pollutants, such as nutrients, can be taken up from ground water resources and utilized by plants. Denitrification, which converts nitrate (a significant source of pollution to many coastal waters) into nitrogen gas, can also take place under some circumstances, further reducing pollutant loading.

#### What factors influence the effectiveness of buffers?

Generally, the effectiveness of buffers in providing water quality as well as myriad additional benefits is dependent upon a number of factors such as buffer width, vegetative composition, and surrounding land use but, the accepted rule of thumb is "bigger is better, and some is better than none." (Desbonnet, et al 1994) To effectively treat surface water runoff, the flow of surface water must be slow, shallow and uniform (Desbonnet, et al 1994). Conditions within the buffer such as: soils; depth of water table; type, density and maturity of vegetation; buffer width; and slopes will affect the buffer's ability to reduce runoff velocity, allow sediments to settle, and allow filtration and biological uptake of nutrients. Additionally, the effectiveness of buffers is dependent upon by conditions in the surrounding area from which runoff entering the buffer is generated. Land use patterns, including amount of impervious surface, pollutant types and concentrations in the runoff entering the buffer, and volume of runoff will all impact the buffer's pollutant removal capacity.

#### What is the difference between a buffer and a setback?

A coastal buffer zone differs from a construction setback (see RICRMP section 140) in that the setback establishes a minimum distance between a shoreline feature and construction activities, while a buffer establishes a natural area adjacent to a shoreline feature that must be retained in, or restored to a natural vegetative condition. (see figure)

#### When does the CRMC require a buffer zone?

Generally, buffer zones are required for any new development adjacent to a coastal feature. This includes residential, commercial and industrial development as well as energy facilities and roads, bridges and highways. For existing residential development, the CRMC will require a buffer for activities requiring Category A and Category B reviews when: RIDEM requires modification or expansion of the existing septic system; the footprint of the structure, as of August 8, 1995, is expanded 50% or more; or, the structure is demolished and when rebuilt, is expanded or results in a change of use.



### Are any activities allowed within the buffer?

To achieve maximum benefits, a coastal buffer zone should be left in an undisturbed state. However, the Council recognizes that owners of coastal properties have reasonable expectations with respect to the use and enjoyment of their property. Therefore, in applying buffer zone requirements, the Council seeks to balance its legislative mandate to “preserve, protect, and where possible restore ecological systems for this and future generations” with the rights of individual property owners. Through a Council-approved buffer management plan, certain activities that have been determined to be compatible with the Council’s public trust responsibilities may take place within a buffer zone. These activities can include shoreline access paths, view corridors, and alterations to vegetation for the purposes of habitat management, nuisance species control, safety concerns or to allow picnic tables, benches, etc. The Council may also allow small, uninhabitable structures, such as gazebos or storage sheds within a buffer zone. It is important to be aware that *any alteration to a coastal buffer zone or the natural vegetation (i.e., any area not presently maintained in a landscaped condition) within 200 feet of any coastal feature requires Council approval.* Property owners considering such alterations are encouraged to obtain the Council’s latest version of “A Guide to Landscape Management in the Coastal Zone” and to consult RICRMP section 150 for further guidance on buffer zone management policies.



## CZM Staff Attend Dredging Workshop

During January 1999, Council staff attended and made a presentation at the Dredged Material Management and State Coastal Zone Management Programs Workshop, held in New Orleans, Louisiana.

This first-of-its-kind workshop brought together federal agencies responsible for dredged material management, port managers, and state coastal management programs in order to improve understanding of federal dredging requirements and processes vis-à-vis requirements contained in the Coastal Zone Management Act (CZMA), and to help participants avoid future conflicts between state CZM programs and federal agencies in the implementation of each program. A major purpose of the workshop was to develop effective and efficient procedures to review proposed dredging and dredged material disposal activities. The workshop is expected to be held regularly as a means for coordinating and educating participants on federal and state dredging requirements.

Council staff presented a case study of Rhode Island’s efforts in the development of a dredged materials management program via the on-going Army Corps of Engineers’ (ACOE) project to maintenance dredge the Providence River and Harbor. This project is unique to the ACOE and was highlighted at the workshop because, unlike most other states, Rhode Island does not have a designated dredged material disposal site. Although the ACOE is bound by National Environmental Policy Act to explore all alternatives for the disposal of dredged materials, this alternatives analysis is usually conducted with due consideration of a state’s designated disposal site. Because the state does not have a designated dredged materials disposal site, the ACOE will not only be exploring alternatives, but will also be conducting a site selection for these materials. Once found, the ACOE will have an acceptable option to dispose of these materials for the Project. However, the ACOE is seeking a site for this Project only; that is, it is not looking for a long-term disposal site for the state, a dilemma that Rhode Island seriously needs to address. This dilemma was partially addressed by recent state legislation that directs the Council to find a long-term dredged material disposal site.

Rhode Island is fortunate to have the ACOE undertake this process, since the state, in its efforts to find a long-term dredged materials disposal site, can use and benefit from the research conducted as part of the ACOE’s site selection process. The remainder of staff’s presentation highlighted this relationship between the ACOE’s work on the Providence River and Harbor dredging project and the Council’s efforts to develop long-term Dredged Materials Management Plan (DMMP).

Major issues areas discussed over the course of the workshop were:

- Coordination of the federal dredged material planning process with state coastal zone management programs;
- Identification of federal and state partnering opportunities to meet dredging, CZMA and state objectives;
- Development of efficient and effective processes for state, federal and project sponsor coordination.

A field trip was made to the Port of New Orleans to view the continuous dredging operations undertaken by the Port to keep their bulkhead areas free of siltation from the Mississippi River. Relative to these ongoing operations, Rhode Island’s dredging needs and associated costs seem minor.



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approval criteria which some states had argued were unachievable and did not allow for limited resources to be targeted to the most serious coastal nonpoint pollution problems. Both the states and Federal agencies recognized that while the goals of CZARA remain valid, the original program and schedules were overly ambitious and that additional flexibility for the states would be needed to enable states to successfully implement their programs. The Administrative Changes provide flexibility in the following areas:

- Enforceable policies and mechanisms - NOAA and EPA agree to allow states to rely on voluntary or incentive based programs for management measure implementation provided that the state can demonstrate adequate back-up enforcement authority. For example, in the case of Rhode Island, the state will be allowed to rely on voluntary agricultural programs for management measure implementation provided the state can show, through a legal opinion, that the existing Water Quality Regulations can be used to address water quality problems related to agriculture.
- Targeting - NOAA and EPA agree that states may focus resources on preventing and controlling significant nonpoint source impacts on coastal resources and human health. By allowing for targeting, states can balance the need for broad implementation, as originally required, with the desire to address immediate and specific water quality problems and threats in priority watersheds. Furthermore, by allowing for targeting, states can better coordinate other programs and water quality initiatives (i.e., the development of Total Maximum Daily Loads, state nonpoint programs implemented under section 319 of the Clean Water Act, the National Estuaries Program, etc.) with their coastal nonpoint programs.
- Timeframes - Schedules for program implementation will be coordinated with those of other programs and initiatives, and an iterative process for implementing and assessing management measure effectiveness is supported in the Administrative Changes.
- Program implementation/evaluation - States will develop five-year strategies for program implementation that will then be used as a basis for evaluating progress in achieving program goals.
- Resources - NOAA and EPA recognize that limits on resources will necessitate the implementation of management measures incrementally.

Since the Final Administrative Changes were issued, NOAA and EPA have been working closely with states to reassess previously issued Findings and Conditions on state CNPs in light of the new guidance. Rhode Island's CNP was originally approved in September 1997 with six condi-

tions. NOAA and EPA have reviewed these conditions and are now working with the state to develop approaches and strategies so that the conditions can be removed. The following is a summary of proposed approaches for meeting the conditions in light of the Administrative Changes:

- Agriculture/Confined Animal Facilities - As noted, RI will pursue obtaining a legal opinion to indicate that the RI Water Quality Act can be used to prevent nonpoint pollution and, where necessary, to require implementation of the confined animal facilities and nutrient management measures related to animal waste.
- Urban/Construction Site Chemical Control - RI will address this condition through minor amendments to CRMC regulations and the *Soil Erosion and Sediment Control Handbook*, and through the development and distribution of a brochure on construction site chemical control.
- Urban/ISDS for Nitrogen Limited Waters - Based on the Waste Water Management District program, the Community Septic System Loan Program, the state's newly developed *Septic System Inspection and Maintenance Handbook*, DEM's municipal reference manual, and proposed changes to the Narrow River and Salt Ponds Special Area Management Plans, it appears that RI has satisfied the requirements of this measure.
- Urban/ISDS Inspection - see above
- Hydromodification/Protection of Water Quality and Habitat from Existing Channels and Dams - This measure will be met through DEM's Nonpoint Source Program and the state's watershed planning initiative (see story on page 7).
- Wetlands/Protection of Wetlands with Nonpoint Source Benefits - RI appears to have met this measure.
- Monitoring Plan - RI still needs to develop a detailed monitoring strategy that builds on existing monitoring efforts.

Over the next year, CRMC and DEM will be working together to meet the outstanding conditions and move forward with full approval of RI's CNP. Working with EPA and NOAA, we are confident RI will become one of the first states to obtain full approval for its program. More importantly, we are hopeful that the CNP, in coordination with the many efforts underway throughout the state to address water quality problems associated with nonpoint source pollution, will result in an effective approach for achieving cleaner coastal waters.



# Rhode Island's Watershed Approach Under Development

Since late 1997, a statewide committee has been developing a strategy for addressing Rhode Island's resource management needs on a watershed level. With the participation of numerous representatives from a variety of state agencies including the CRMC, non-profit environmental groups, academia, and the Environmental Protection Agency, RIDEM and the Coastal Resources Center at URI have coordinated the development of a framework for Rhode Island's Watershed Approach. At the outset of this effort, participants agreed that a collaborative approach, which recognizes watersheds as the primary planning unit, would be most effective for reaching the common goals of water resource protection, management and restoration.

While Rhode Island's Water Approach is still very much in the development stage, the Watershed Approach Writing Committee has completed a framework for the Watershed Approach that will be tested and refined over the next year. The following is a brief summary of the overall strategy and key components of Rhode Island's Watershed Approach, as currently envisioned. Again, it must be emphasized that the Watershed Approach is a work in progress and completely open to comments and suggestions. With the input of experienced resource managers, watershed activists, and others the approach will be modified and improved. Additionally, the framework will change to reflect lessons learned in a pilot project to test its actual implementation.

**Mission:** The Rhode Island Watershed Framework will serve as a means for coordinating and integrating the programs, tools and resources of multiple stakeholder groups to better protect, maintain, and restore the ecological structure and function of watersheds and support the sustainable uses of watersheds for the benefit of Rhode Island's citizens.

## Key Components of Rhode Island's Watershed Approach

- **Watershed boundaries** rather than political boundaries are used to define management areas. Watersheds make ecological sense but create political complexity since they cross political boundaries. Rhode Island's watersheds are small, and will be managed in 5 regions.
- **Watershed coordinators:** When the watershed approach is fully implemented, each watershed group will have a full-time, dedicated coordinator responsible for convening watershed teams and guiding the watershed approach process in the watershed.
- **Watershed teams:** Through watershed teams, stakeholders will have the opportunity to become involved in identifying watershed-specific issues and concerns, and to participate meaningfully in all phases of the basin management cycle. It is envisioned that the Watershed Teams will be composed of community

interests and organizations, environmental organizations, and local, state and federal agency representatives.

- **Local watershed organizations:** Each Watershed Team will actively recruit membership from any local watershed organizations including Watershed Councils recognized by the Rhode Island Rivers Council. These local groups will be encouraged to take leadership in developing strategies for watershed management.
- **Watershed action teams:** Citizen based monitoring and advocacy groups on tributary streams will be encouraged and supported by the watershed approach.
- **Basin management cycle:** A flexible management cycle will provide continuity and opportunities for integration. It will be implemented in phases statewide.
- **Watershed action plans** will serve as fundamental guides for articulating short and long term goals and for managing priority activities. The plans are intended to be relatively short, reader-friendly documents that are updated periodically. Short-term action plans will serve as the one year work plan for the Watershed Team. Longer-term plans (5 year) provide a broader view of issues and priorities in the watershed area.
- **Executive Watershed Council** composed of decision-makers and upper management representatives of state and federal agencies, statewide organizations, private industry and other partners will guide the implementation of the watershed approach. The Executive Watershed Council provides a vehicle for promoting inter-agency collaboration as well as collaboration among a wide range of interest groups and stakeholder groups. The Executive Watershed Council is responsible for setting priorities and allocating human and financial resources to priority watershed efforts statewide. This is accomplished by allocating funds to the Watershed Action Plans prepared and submitted by Watershed Teams.

Over the next year the Watershed Approach will continue to be refined and expanded to better define and clarify important details such as: What are some specific commitments required of partner organizations? How does the watershed approach relate to the regulatory functions of agencies? How does the watershed approach relate to and add value to municipal efforts? How does and approach build and strengthen local capacity? To help answer some of these questions, the Watershed Approach will be piloted in the South County region during the next year.

For more information on the Watershed Approach, contact Meg Kerr at URI's Coastal Resources Center, 874-6224.

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