

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
FY 2002-2003 WORK PLAN - OFFICE OF WATER RESOURCES**

I. Introduction:

Rhode Island enjoys an abundance of water resources that support vital uses such as drinking water, recreation, habitat and commerce, among others. The state has approximately 1,383 miles of rivers, 21,800 acres of lakes and ponds, and approximately 92,500 acres of freshwater swamps, marshes, bogs and fens including 72,000 acres of forested wetlands. Estuaries, including Narragansett Bay and the coastal ponds, cover 152 square miles. Underlying the state are 22 major stratified drift (sand and gravel) aquifers as well as usable quantities of groundwater in almost all other locations from the bedrock aquifers. The Office of Water Resources (OWR) implements a variety of programs aimed at protecting and restoring the state's surface waters, groundwaters and wetlands.

Over the past two decades, public and private investment in point source pollution control has paid off in significantly improved water quality conditions reflected in the resurgence of recreational boating in the Upper Bay and re-opening of shellfishing areas. However, despite some improvement, there remains significant work to be done to reduce impairments of water resources; e.g. shellfishing restrictions, etc. Toward this goal, DEM recognizes the need to work on a watershed basis to abate both point and non-point pollution sources and develop new strategies, where needed, to protect and restore resources. Given the local nature of most non-point pollution, OWR is placing greater emphasis on partnerships with other agencies and stakeholders to accomplish protection and restoration goals. To maintain and enhance its capabilities, DEM is seeking new funds to continue a targeted local grant program to support watershed restoration efforts. Components of the program will include assessment, feasibility and design studies, pollution abatement measures and habitat restoration.

OWR programs play a pivotal role in controlling wastewater discharges, promoting non-point source abatement, preventing groundwater pollution and averting alterations to freshwater wetlands. New watershed-based initiatives are helping to build partnerships and enhance management of water resources at both the state and local level through better land use planning, collaborative projects and other means. The targeting of activities, ranging from permitting to financial assistance, to priority watersheds is expected to improve overall effectiveness. New emphasis is being placed on restoring both freshwater wetland and coastal habitats. Permit streamlining measures have begun to improve efficiency. Additional progress is expected after further actions, including data system improvements, are implemented over the next few years.

The OWR includes 11 major programs. Those programs are: Individual Sewage Disposal Systems (ISDS) and Freshwater Wetlands Permitting; Groundwater and Surface Water Quality Certifications and Underground Injection Control (UIC); Rhode Island Pollutant Discharge Elimination System (RIPDES) and Pretreatment; Wastewater Treatment Facilities (WWTFs) and sludge management; Shellfishing Area Water Quality Monitoring; Groundwater Protection; Water Quality Classifications and Standards; and Water Quality protection and restoration (TMDL/Assessment).

II. Mission:

To protect, preserve, and restore the State's water resources, which include surface waters, groundwaters and wetlands.

III. Program Highlights

Within its broad range of planned activities, the OWR will focus attention on a number of strategic initiatives over the next two years. A common theme among many of the initiatives is the pursuit of watershed-based approaches to resource protection and restoration. This approach represents a significant new manner in which DEM plans to organize its work, in collaboration with various partners, to more effectively accomplish environmental goals. Significant OWR initiatives for FY02-03 are highlighted below:

- **Water Quality Restoration Plans (WQRPs) - TMDLs**

The Clean Water Act requires each state to comprehensively assess waters of the state and develop water quality restoration plans that specify the maximum amount of each pollutant (Total Maximum Daily Loads or TMDLs) that may be discharged for each impaired waterbody, the sources of contamination, and plans for eliminating or abating them to restore water quality. DEM has targeted 116 waterbodies over the next 12 years. Current WQRPs often focus on the causes of impairment, either pathogens, nutrients, metals, or other pollutants for each waterbody. The Department will assess how it can conduct more comprehensive waterbody assessments that assess pollutants from air, water, and waste sources and include pollution prevention actions as well as restoration for each waterbody. Additionally, DEM is projecting that assessment and abatement needs will exceed available funding. It will be critical to secure additional funding to achieve water quality improvements.

- **Permit Streamlining**

Permit Streamlining continues to be a priority in the Office of Water Resources. To date, over 37 recommended actions have been successfully implemented in water-related programs pursuant to the KPMG report. During 1999-2000, two new task force groups met to review the Wetlands and ISDS Permitting programs as a result, major reforms are planned. A large-scale revision of the ISDS Rules and Regulations, as summarized in the Draft ISDS Stakeholder Report, will be out to public notice in early FY02 pending stakeholder input. Topics anticipated to be included involve new techniques for leachfield construction, new sewage flow rates, new septic tank standards and risk-based requirements for installation of denitrifying systems. In response to described in the Wetlands Task Force Final Report dated March 2001, the Office of Water Resources will complete actions that will contribute immediately to streamlining including policy, regulatory and administrative initiatives, including a four-phase revision to the Freshwater Wetlands Regulations. The Regulations will be reorganized to provide better clarity about application requirements, review criteria and the approval process and unnecessary administrative restrictions will be eliminated to provide more flexibility. In Order to continue to improve the clarity and predictability of the Regulations and the review process, new tiers of applications will be developed. New guidance materials will be developed and workshops will be conducted for consultants, applicants, and municipalities. Over the next two years, additional streamlining initiatives are planned for ISDS, wetlands, and UIC and groundwater programs. OWR will play a key role in the department-wide project to design and eventually implement an integrated permit tracking and data management system.

- **Wetland Program Development**

In addition in YR02-03, DEM will develop the framework for and draft Rhode Island's first statewide wetlands conservation strategy. Currently, there are several divisions within DEM conducting activities related to wetlands protection or restoration. One goal of the strategy will be to improve coordination of such activities to maximize effectiveness. Additionally, with stakeholder collaboration, DEM will develop a framework of recommendations for improving the effectiveness of state activities with respect to federal, local or private efforts to protect and restore freshwater wetlands resources. This effort will promote partnerships, seek new incentives for protection, and enhance non-regulatory programs as a complement to existing regulatory protections. It is expected that wetlands protection will be integrated with watershed-based environmental planning efforts.

- **Local Wastewater Management**

DEM has encouraged all communities that rely significantly on septic systems to implement local wastewater management programs (WWMDs). As of June 2001, a total of 22 communities (81% of those targeted) are participating. We will assist the remaining five communities to initiate WWMDs. DEM is also continuing to facilitate the appropriate application of innovative and alternative ISDS technologies.

- **Stormwater Management**

In 2001, DEM will promulgate rules to implement Phase II of the stormwater regulations in accordance with federal stormwater requirements. The new program will require most RI communities to address the 6 minimum measures established by EPA for municipal stormwater drainage systems. DEM will offer planning grants, technical support and guidance to help communities meet this unfunded federal mandate.

- **Abating Combined Sewer Overflows (CSO)**

DEM will continue close coordination with NBC, as Phase I of the Narragansett Bay Commission's CSO pollution abatement project moves into construction in 2001. This project will be the biggest and most expensive water pollution abatement effort undertaken in RI to date, and will substantially reduce the number of days that Conditional Areas A and B are closed to shellfishing each year and improve water quality for swimming and other recreational uses.

- **Reducing Nutrients**

Releases of organic wastes, fertilizers, and other nutrient-rich materials can degrade water quality by stimulating the growth of algae and bacteria. These organisms as well as other pollutants, reduce the level of dissolved oxygen in the water, harming fish and other aquatic life. Discharges from wastewater treatment facilities (WWTFs) are the largest contributors of nutrient pollution. DEM is working with wastewater treatment facilities (WWTFs), facilitating the use of advanced septic system technologies, and promoting other best management practices (BMPs) to reduce and prevent nutrient pollution.

- **Addressing Dredge Disposal Needs**

DEM will continue to work with the Coastal Resources Management Council (CRMC), other agencies, and stakeholders toward disposal options to meet dredging needs in RI, including disposal sites for both routine dredging projects and the proposed dredging of the Providence shipping channel. DEM and CRMC will develop a policy for the disposal of dredge materials that identifies potential beneficial uses of dredge material as part of the effort to resolve the current dredging impasse.

- **Monitoring**

The Department will develop a comprehensive monitoring strategy in 2002 to track conditions systematically to close the data gaps on current sources of pollution for remediation, and to tell whether we are making progress in the long term.. Securing funding to carry out the monitoring over the long term is critical to directing scarce resources to the most urgent water problems.

- **Protecting Drinking Water Sources**

Surface runoff, illegal dumping, accidental spills, and failing septic systems can contaminate drinking water supplies and pose significant health risks. DEM oversaw the replacement of most single-walled metal underground storage tanks in RI with double-walled, corrosion-protected tank systems, adopted soil-based siting for septic systems to ensure that the soil is suitable for subsurface treatment, and works with communities to develop

protection plans for all public wellhead areas. We will continue to work with the Department of Health (DOH) to coordinate DEM's Wellhead Protection Program with the DOH Source Water Assessment Program.

- **Balancing Water Budgets**

Rapid growth in the size and spread of new development and increased demands for water for irrigation and other uses place many stresses on water resources: greater demands for consumption, risks of spills, polluted runoff, and degraded aquatic habitat and wetlands. In some areas, these demands have contributed to water shortages and use restrictions mainly in summer in recent years. The Blackstone, Hunt, and Pawcatuck River systems have been dangerously low during some summer months. We are collaborating with stakeholders and state and local agencies to determine water needs and manage water use.

- **Habitat Restoration**

Responding to increased public interest, OWR will take several important steps to encourage habitat restoration. In the Freshwater Wetlands Program, rule changes to facilitate the approval of beneficial habitat restoration projects will be promulgated. Additionally, OWR will continue to collaborate with URI toward the development of freshwater wetlands restoration strategy. A Wetland Restoration Plan for the Woonasquatucket River Watershed will be completed including a feasibility analysis of selected sites. With respect to coastal habitats, DEM will continue to provide leadership in the collaborative effort to complete mapping and photointerpretative projects, which provide a strong technical basis for pursuing restoration projects. Working collaboratively with partners, including CRMC, USFW, ACOE, as well as with non-governmental groups, DEM will develop a State Habitat Restoration Strategy that will prioritize projects, focus resources and expertise, and seek to establish reliable funding mechanisms for coastal habitat restoration.

IV. Baseline Conditions:

As mentioned, while progress has been made, the state needs to continue to invest in protecting and restoring its water resources. In planning its work for the next two years, OWR reviewed the baseline conditions of the State's water resources, which are summarized in the following:

- **Surface Waters**

With respect to surface waters, available baseline water quality data indicate that most lakes and rivers assessed support all their designated uses; 83% of lake acres, 67% of river miles and 69% of estuarine waters (sq. mi.) assessed fully support all designated uses. The state has documented impairment in 125 specific water bodies and needs to continue to develop watershed restoration plans, based on thorough water quality assessments, for these areas in order to restore healthy aquatic habitats and reduce public health threats associated with fishing and water recreation. In addition, the Department needs to increase baseline monitoring in order to have adequate information to prioritize work and make informed decisions; currently, the water quality of 53% of river miles and 24% of lake acres is not assessed due to a lack of data.

With respect to surface waters, **bacterial contamination** continues to be the leading cause of impairments, especially in marine waters and freshwater streams. About 25% of shellfishable waters are closed, either on a permanent or conditional basis. The unabated CSO discharges associated with the NBC wastewater system represent a significant problem. Plans to abate CSOs are moving forward and will constitute the largest pollution control project in the state's history. DEM recently approved the preliminary design for Phase I of the CSO project. Other sources of bacteria include septic systems, stormwater runoff, certain agricultural operations, animal wastes, etc.

- SA waters – 128square miles assessed for shellfishing use: 75% fully support shellfishing,; 17% partially support (conditionally open); 8% permanently closed.
- 5% of lake acres, 24% of river miles and 7% coastal waters assessed are considered impaired for swimming.

A second priority concern with surface water is **excessive nutrient enrichment** – which is the leading problem with lakes and ponds. Additionally, monitoring of the Bay is revealing increased evidence of plankton blooms and hypoxia (low dissolved oxygen) due to excess nutrients in portions of the upper half of the Bay. Key sources are WWTFs, septic systems, stormwater, etc. Correspondingly, there is increased interest in developing cost-effective strategies to reduce nutrient inputs from wastewater treatment facilities (WWTFs) into Narragansett Bay. OWR is also working closely with WWTF operators to provide training and assistance in piloting treatment processes to reduce nutrients. The Wastewater Treatment Facility Program will also review and approve the planning and design for a new round of plant upgrades needed to meet more stringent permit limits for nutrients.

The enforcement of industrial pretreatment requirements has greatly reduced the loading of **toxics into surface waters**. Vigilance is still needed. The historical releases of toxics have caused contamination of sediments. Although the extent of contamination in sediment is not fully known, there is data indicating a concern for urban rivers and the Upper Bay. There are currently no established sediment criteria against which to evaluate sediment data.

* 17% of lake acres, 26% of river miles and 27% of coastal waters assessed are considered impaired for aquatic life uses.

Another challenge in managing water resources is ensuring adequate quantities to support desired uses, such as drinking water, habitat and irrigation. **Low flows** have been documented as concern in the Blackstone and Wood- Pawcatuck Watersheds. DEM is currently participating in a collaborative effort to manage water use for a sub-watershed (Usquepaug).

- **Groundwater**

Approximately two-thirds of Rhode Island communities utilize groundwater to meet all or a significant portion of their water supply needs. Groundwater resources are currently classified as follows: GAA-20%, GA-71%, GB-9%, GC<1% of state land acreage. As of June 1999, 671 public wells were in use. DEM has designated wellhead protection areas (WHPAs) for all public wells covering 93,660 acres or 14% of the state. WHPA range in size from 15-2000 acres each. With respect to groundwater resources, it is believed that most contamination problems are historical in nature. Volatile organic compounds (VOCs), associated with gasoline and solvents, continue to be a leading cause of contamination, being detected in 15-30% of public wells tested for the last decade. Leaking USTs and past waste disposal practices are the primary sources. In the past decade, the number of known contaminated sites has risen sharply due to better reporting, more stringent site assessment practices and other factors. Remediation of groundwater is usually lengthy and often technically infeasible, particularly in bedrock aquifers. Given the challenges with remediation, prevention is emphasized in groundwater protection programs and reflected in requirements such as the upgrading of USTs, etc. Nitrate contamination in groundwater has been identified as another growing concern. The full extent of this problem is not known, but merits further attention.

- **Wetlands**

With respect to wetlands, Rhode Island has historically lost a significant portion of its original resource base. As much as 50% of the state's coastal marshes have been lost. Eelgrass beds, valuable nursery and feeding grounds for important commercial and recreational species, now number about 100 acres, down from historical coverage of hundreds of acres. For freshwater wetlands, it has been reported that up to a 37% loss has occurred, but that figure has been deemed less accurate. State and Federal regulatory programs are in place and effective in minimizing the further loss of wetlands, although compliance remains a concern. New strategies are being developed to promote and facilitate proactive wetland restoration.

With respect to freshwater wetlands, DEM has committed to developing a comprehensive conservation strategy that will recommend ways to enhance protection of the many values of wetlands through non-regulatory programs. Over the long term, there is need to develop a better means to assess the ecological health of wetland systems to measure the effectiveness of protection efforts. Work continues among partners to reverse the impacts to coastal wetlands caused by ditching, impounding, filling and restricting tidal flow. A collaborative effort is well underway to develop a statewide coastal habitat restoration strategy.

Office of Water Resources' Workplan Table of Contents			
I. SURFACE WATERS	Page	III. WETLANDS	Page
<i>Point Source Pollution Control</i>		1. Freshwater Wetlands Program	26
1. Regulate discharges of pollutants	8	2. Increase wetland program capacity	26
2. Prevent release of toxics	10	3. Wetland habitat restoration	27
3. Design, construction, and operation of WWTFs	12		
<i>Non-Point Source Pollution (NPS) Control</i>		IV. IMPROVED EFFECTIVENESS	
4. Implement NPS Management Plan/CNPPCP	15	1. Regulatory Reforms	28
5. Ensure projects do not degrade water quality	16	2. Improve data management	29
		3. Raise public awareness	29
<i>Targeted Watershed Activities</i>			
6. Protect and Restore Watersheds	17		
7. Shellfish Growing Areas	19		
<i>State-wide Support</i>			
8. Surface Water Classification & Standards	20		
9. Financial & Technical Assistance	21		
II. GROUNDWATER			
1. Prevent contamination of public drinking water wells	23		
2. Prevent groundwater contamination due to subsurface discharges of pollutants	24		
3. Prevent groundwater contamination due to pesticides and fertilizers.	24		
4. Groundwater Classification/Standards	24		
5. Groundwater Restoration	24		
6. ISDS – new systems	25		
7. ISDS – repairs	25		

OBJECTIVE I: Reduce pollutant loadings to achieve surface water quality goals and support all designated uses.		Environmental Indicators: - Reductions in pollutant loadings from WWTFs, where applicable - Percentage of assessed surface waters supporting all designated uses - Impaired surface waters restored following implementation of TMDLs (reported via 305B)
STRATEGIES*	ACTIVITIES	Performance Measures*
Point Source Pollution Control 1. Regulate the discharge of pollutants into surface waters or wetlands. <i>The RIPDES program currently includes 25 major and 108 minor permits as well as about 190 discharges covered under general permits. Water quality based limits are incorporated into all major permits. Over the next few years, limits will be refined based on assessment studies performed as part of TMDL projects. To address low dissolved oxygen conditions in coastal waters, OWR expects further reduction in nutrient loadings will be needed.</i>	1a. Through revised permit limitations, improve the protection provided to receiving waters. Reissue the following 10 major permits to incorporate refined water quality based effluent limits: Clariant Corporation, Mobil, NBC Bucklin Point, NBC Fields Point, and E. Providence by 12/01. Manchester Street, Westerly by 06/02; Blount Seafood, Warren by 09/02; and Newport by 12/02. Continue to process/issue new permits. 1b. Track compliance with the requirements of the following 14 consent agreements: Bradford Dyeing Associates, Bristol, Cranston, Kenyon Industries, NBC Fields Point, Newport, Warren Warwick, Westerly, West Warwick, Woonsocket. 1c. Issue or modify 10 consent agreements to ensure compliance with water quality based limits: New Shoreham (09/01), Kenyon, Bradford Dyeing Associates (03/02); Clariant Corporation (03/02); NBC Fields, NBC Bucklin, East Providence (06/02); Westerly (09/01 & 12/02); Warren, Blount Seafood (03/03), and Newport (06/03) 1d. Reissue minor permits in accordance with RIPDES backlog reduction plan consistent with EPA's national goals: . Issue a General Permit for Non-contact Cooling Water (NCCW) that potentially effects 34 existing minor permits (12/01). Reissue 25 NCCW minor permits with General permits by 03/02. Reissue 3 Fish Processing and 4 Aquaculture minor permits by 06/02, Reissue 11 minor permits with Sanitary Discharges by 12/02, Reissue 16 minor permits for groundwater remediation by 03/03, Reissue 5 minor permits for water treatment facilities by 06/03.	<ul style="list-style-type: none"> • Reduce the backlog in major permits to: 28% by 9/01, 12% by 12/01, 16% by 3/02, 8% by 6/02, 0% by 9/02, 0% by 12/02-6/03. • Compliance with reissued RIPDES permits will result in the following rivers meeting DO standards: Pawtuxet River, Greystone Mill Pond (Woonasquatucket River), and Blackstone River (pending MA WWTF compliance). • Reduce the backlog of minor permits to: 67% by 3/02, 50% by 12/02, and 35% by 6/03

	<p>1e. Continue to enter data into the PCS and PET systems and coordinate with EPA regarding the QNCR. EPA will assist with training. Perform data clean up. Enter WENDB information. Perform audits and manually correct violations tied to Administrative Orders.</p> <p>1f. Promulgate Phase II Regulations, develop guidance and General Permits, and implement Phase II stormwater program requirements. This process will include:</p> <ul style="list-style-type: none"> - Promulgate Phase II Regulations (08/01) - Present Phase II information at RI Storm Water Conference (10/01) - Develop Municipal Compliance guide and outreach (03/02) - Develop BMP Menu (12/02) - Issue Small MS4 General Permit (12/02) - Issue General Permit for Construction Activity 1-5 acres (12/02) - Issue General Permit/Draft Individual permit for DOT (12/02) - Review Waiver Requests (12/02) - Authorize coverage for DOT Phase II Permit (03/03) - Authorize coverage for 29 small MS4 permits (03/03) - Review "no exposure" certifications and re-certifications (03/03) - Reissue the General Permit for Construction Activity >5 acres (03/03) - Reissue the General Permit for Industrial Activity by (03/03) - Issue a Multi-sector General Permit for Industrial Activity by (06/03) <p>1g. Continue to issue individual and general stormwater permits for industrial and construction activities.</p> <p>1h. Issue the following priority individual Industrial Storm Water Permits for "significant contributors": TF Green(12/01); RI Mall (03/02), Warwick Mall (03/02)</p> <p>1i. Develop a response plan for implementation of short-term RIPDES program actions based on the report "Watershed Specific Storm Water Permitting by the Blackstone River Watershed" in coordination with the TMDL and Watershed Action Plan (12/01)</p>	
--	---	--

	<p>1j. Continue to coordinate with CRMC regarding permitting requirements for aquaculture facilities including site visits and regulatory determinations as necessary.</p> <p>1k. Issue groundwater remediation general permits and approvals for Emergency Responses and short-term remedial projects.</p> <p>1l. Continue to coordinate with OWM and provide technical assistance for groundwater remediation projects at Superfund Sites. (Picillo Farm (01/02), Davis Liquid Waste Superfund(01/02),Centerdale Manor (02)</p> <p>1m. Implement the User Fee program. Work on possible program changes to provide a better assessment of the impacts of wastewater discharges.</p> <p>1n. Prepare the following reports:</p> <ul style="list-style-type: none"> - Number/percent of facilities covered by a current individual permit, operating with an expired permit, pending applications, and disputed permits on appeal (12/01 & 12/02). - Status of permittees compliance with the 1994 CSO policy (12/01 & 12/02). - Report number/type of facility and status of other general permits (12/01 & 12/02). - Generate quarterly compliance reports and enforcement actions, as appropriate (quarterly). - Report number/type of facility and status of stormwater permit, e.g. current, expired, etc. (12/01 & 12/02). 	
<p>2. Prevent release of toxics through effective pretreatment programs.</p> <p><i>Fifteen of 19 POTWs implement local pretreatment programs due to the extent of industrial wastewater discharged into their collection systems. The other POTWs regulate discharges to the sewer with DEM assistance, as appropriate.</i></p>	<p>2a. Conduct 6 pretreatment compliance inspections (PCIs) and 2 pretreatment audits within the next two years. Inspections/Audits to be conducted include: Warren (07/01), Woonsocket (11/01), East Providence (02/02), Newport (05/02), West Warwick (08/02), Smithfield (11/02), Warwick (02/03), NBC Bucklin (05/03). Local officials and industries will be referred to OTCA for assistance integrating pollution prevention techniques.</p> <p>2b. Promulgate final amendment to the State Pretreatment regulations to reflect previous changes to the federal regulations, (DSS, PIRT and project XL) and incorporate incentives for pollution prevention as feasible.</p>	<ul style="list-style-type: none"> ● Number/% of pretreatment programs audited or inspected. ● Number of audits or inspections finding significant deficiencies and number of local programs upgraded to achieve compliance. ● Pretreatment Regulations revised for federal consistency.

	<p>2c. Continue to review and process all 15 Pretreatment Annual Reports. Review 8 reports per year for compliance with RIPDES permit reporting requirements. (06/02 & 06/03)</p> <p>2d. Provide ongoing guidance and technical assistance to POTWs and Industrial Users by responding to requests for information and regulatory interpretation and by providing referrals to OTCA to promote pollution prevention initiatives and improved industrial pretreatment compliance.</p> <p>2e. Review and process formal modifications to existing approved Industrial Pretreatment Programs in the form of Local Limits Development reports, Sewer Use Ordinance amendments, Enforcement Response Plans, categorization of Industrial Users, and procedures for sampling/inspection RIEDC, Westerly (09/01); Cranston (12/01), East Greenwich (03/02); NBC Field's Point and Bucklin Point (02/02), East Providence (05/02), Warren (02/03), West Warwick (08/03)</p>	
--	---	--

<p>3. Ensure that all major wastewater treatment facilities are designed, constructed, and operated to protect the quality of the state's waters.</p> <p><i>Due in part to multi-faceted state effort to promote their proper operation and maintenance, RI WWTFs have continued to generally perform very well - with 17 of 19 receiving good to excellent performance ratings for conventional pollutants based on 1998/1999 data. Design of the state's largest water pollution project – implementing Phase I of the CSO abatement strategy will be completed in 2002. Construction will take place over the next 5 – 6 years.</i></p>	<p>3a. Conduct annual POTW compliance evaluation inspections at 25 major facilities in accordance with the inspection schedule. Conduct periodic proactive O&M inspections of major facilities. (Approximately 30/year)</p> <p>3b. Inspect 1 minor facilities targeted in Woonasquatucket Watershed by 12/01, 3 significant non-compliers by 03/02, and 10 facilities associated with minor permit re-issuance by 06/03.</p> <p>3c. Review/investigate WWTF/collection system bypass/overflow events and WWTF operational problems, (+- 75/yr.) Make recommendations concerning enforcement, as appropriate.</p>	<ul style="list-style-type: none"> • Summarize 2000-2001 WWTF performance data and report trends in flow, BOD, and TSS. (8/01 & 6/01 Target: At least 80% compliance rate with conventional effluent limitations (FY00) • Percentage of major facilities inspected. Target: 100%/year • Number/percent of bypasses that result in use restrictions in surface waters. • Reduce number of by-pass events due to insufficient system capacity. Target: 10% reduction • Report number of POTWs beneficially reusing all or part of their biosolids; and percentage reused. Target: 8% of biosolids. Target: Train 200 WWTF personnel/year. • Revised operation and maintenance regulations (03/02) incorporating stronger requirements for odor control, reflect up-to-date technologies, and achieve consistency with other federal/state rules. • Implementation of Phase I of CSO Control Program will reduce: Annual CSO volume by 39% TSS + BOD loading by 30% Fecal Coliform loading by 40% Days Conditional Areas A and B are closed to shellfishing by 50% and 78% respectively (Scheduled Completion 2006)
--	--	--

	<p>3d. Review and approve I/I and SSES reports and project designs to reduce system overflows. Require schedules for implementing corrective actions.</p> <p>East Providence; Interim I/I Remediation Reports due 8/1/2001 and 2002. Final Remediation Report due 8/1/2003. Review & comment on Interim Reports by 12/01 and 12/02. Review Final Remediation Report (01/04) and approve (03/04)</p> <p>Town of Warren: SSES for Infiltration received 1/13/2001. Complete review by 09/01 and approve by 01/02.</p> <p>Bristol: RIPDES Program received I/I and SSES on 1/19/2001. Complete review by 01/02 and approve by 06/02.</p> <p>Cranston - require resubmittal of SOW and schedule in response to previous comments (07/01).</p> <p>East Greenwich, Jamestown; review SOW and schedule for I/I and SSES - approve as req'd within 3 months of receipt from communities.</p> <p>3e. Review and approve updates/changes to WWTF operation and maintenance manuals (Approximately 10/yr)</p> <p>3f. Review and final decision on 8 existing sludge handling applications- Netco & Cranston by 01/02, 2 by 10/01, 2 by 1/1/02, 2 by 4/1/02 and others as they are received.</p> <p>3g. Revise sludge regulations to allow more beneficial re-use of biosolids. Promulgate revisions by 12/02.</p> <hr/> <p>3h. Conduct sludge handling facility inspections. (35 by 07/02 and 35 additional by (07/03).</p> <p>3i. Continue WWTF Operator Training focusing on biological treatment of ammonia and total nitrogen . NEIWPC has retained a special consultant to provide operation and design assistance to communities that are participating. Facilities are working directly with the consultant with oversight from this office. Warwick and Burrillville are using this resource to make process and physical changes to reduce nitrogen. East Greenwich is expected to start soon. Continue training both in the classroom and onsite, in other areas of operation. Extent of training is dependent upon amount of grant money available from EPA.</p>	
--	---	--

	<p>3j. Conduct a second survey to determine what other states have for O&M Program requirements/regulations (08/01). Draft revisions to the Operation & Maintenance regulations originally written in 1979 incorporating incentives for pollution prevention as feasible (09/01). Promulgate regulations, including Stakeholder Workshop, Public Hearing and filing with Secretary of State (03/02).</p> <p>3k. Review and approve the planning and design for major projects required through enforcement actions, more restrictive permits and CSO control program. Review & approve the final design for nutrient removal at 4 WWTFs by 07/03. (Cranston (04/02), West Warwick (10/01), Westerly (10/02) & East Greenwich (04/03) Review & approve Facilities Planning & preliminary design for New Shoreham, Burrillville, Smithfield, NBC Fields Point, East Providence, Jamestown. Review other new projects as they are submitted.</p> <p>3l. Continue review and approval of NBC CSO Control Program, Phase I (includes tunnel along the Woonasquatucket River) Majority of Phase I CSO Project was approved 04/01. Remainder will be reviewed & approved by 01/02. Approval of improvements at Bucklin Point WWTF will be issued by (08/01)</p> <p>3m. Complete research to develop an interim policy for reuse of treated wastewater and outline, as necessary, the steps required to implement the policy. This effort will be coordinated with the Department of Health. Draft policy and outline of steps needed to implement by (09/01).</p>	
	<p>3n. Manage, administer and oversee the Board of Certification of Operators of Wastewater Treatment Facilities. This task involves exam development, administration, web-site coordination, exam reviews, certificate issuance, meeting administration, minute development, and task tracking, etc. The Board's regulations (depending on Board member decisions) may be revised during the first half of calendar year 2002. New Board initiatives may require additional work, depending on member input and voting.</p>	

<p>Non Point Source Pollution Control</p> <p>4. Implement the RI Non-point Source Pollution Management Plan and RI Coastal Non-point Pollution Control Program.</p> <p><i>Septic systems and stormwater discharges continue as Rhode Island's leading non-point sources of pollution. Many of the recommendations in the 1995 NPS management plan have been implemented to strengthen programs to prevent and abate NPS pollution. Updating the plan is now appropriate to provide incentives for pollution prevention and reflect new priorities including watershed restoration..</i></p>	<p>4a. Draft and coordinate review of RI Non-Point Source Pollution Management Plan. Complete a review of plan recommendations and compile topics for further research/investigation (09/02). In coordination with stakeholders, initiating review and drafting of plan update (10/02). Finalize updated NPS plan (09/03).</p> <p>4b. Continue efforts with the PRP storm water committee to review inter-relationships, make recommendations to ensure consistency regarding stormwater management under Phase II RIPDES requirements, TMDLS as they are developed, local Watershed Action Plans and NPS program. Focus particularly on municipal storm water management issues. (Initiate 09/01). Summary report of recommendations (09/03)</p> <p>4c. Use Septic System Maintenance Policy Forum (SSMPF) to assist in updating the NPS management plan and implementing recommendations of the Director's ISDS Task Force. The SSMPF has met 20 times since its inception in 1995. Conduct 4 more meetings to provide a vehicle for community outreach and transfer of technical information.</p> <p>4d. Host a statewide meeting for local wastewater management officials to exchange information. (09/02)</p> <p>4e. Continue to investigate mechanisms to facilitate BMP designs, such as Master Price Agreements, etc., and initiate steps to implement recommended approach as feasible (09/02).</p> <p>4f. Develop and implement a BMP monitoring/evaluation project to assess the effectiveness of stormwater BMPs. Use the results to begin to establish BMP pollutant load reduction ranges for nutrients, pathogens and other pollutants as appropriate. (06/02, 06/03).</p> <p>4g. Prepare annual non-point source program report. (12/02/12/03)</p> <p>4h. Continue to participate in regional and national policy-making committees (Capacity Building - co-chair); BMP Effectiveness; Urban NPS Challenges.</p>	<ul style="list-style-type: none"> ● Updated RI NPS management plan to guide future program development. (09/03) ● A strategy for improving stormwater management especially at the local level (09/03). ● 80% of Rhode Island's ISDS dependent communities are in the process of developing OWMPs. Increase program approvals to 50%. (09/03) ● A report, which discusses progress and recommends actions to foster implementation of local wastewater management programs (FY02 & 03).
--	---	--

	<p>4i. Also see discussion on septic systems, watershed restoration, financial and technical assistance for water pollution control and water-quality improvement project sand groundwater protection for additional NPS related activities.</p>	
<p>5. Ensure the projects planned in and near state waters will not degrade water quality.</p> <p><i>The Water Quality Certification Program, in accordance with the Clean Water Act, utilizes state water quality criteria to review proposed activities, including but not limited to, dredging and discharge in state waters, wetland fills, and certain land-based site disturbances including stormwater quality treatment systems associated with such disturbances. Currently, the WQC Program is focusing much effort on streamlining the dredging application process and coordinating reviews with other regulatory and non-regulatory programs within the department.</i></p>	<p>5a. Review and determine if projects (other than RIPDES discharges) comply with State water quality standards. Process approximately 125 WQC Applications per year.</p> <p>5b. Promote use of BMPs to prevent pollution through distribution of guidance manuals, environmental land use planning and other activities. Also see non-point activities (prior section).</p> <p>5c. Continue to provide technical reviews of the Providence River dredge project and coordinate with CRMC on all RI dredge projects.</p> <p>5d. Continue to assist CRMC on development of a viable long-term dredge disposal plan.</p> <p>5e. Continue to coordinate with OTCA/OWM on development and implementation of dredge disposal guidance, policy and regulations as needed (e.g. Appendix B, SW Regulations). See task IV 1a and 1d for other dredge management tasks.</p> <p>5f. Develop guidance for water withdrawal applications including application review requirements(06/02)</p>	<p>Prevent degradation of water quality due to construction projects and various other activities.</p>

<p>Targeted Watershed Activities</p> <p>6. Protect and restore watersheds by working in partnership with other agencies and local stakeholders to resolve environmental concerns, including conducting studies of polluted water bodies and identifying strategies to abate pollution (TMDLs).</p> <p>116 lakes, ponds, rivers, and estuaries are identified on RI's list of impaired surface waters with over 250 impairments identified. OWR has an aggressive schedule to develop water quality restoration plans (TMDLs) for these waterbodies within the next 15 years. The TMDLs have been prioritized considering drinking water supply, closed shellfishing areas and priority watersheds. OWR will be active developing and implementing TMDLs in 43 waterbodies over the next two years. Also,, OWR will continue to play a prominent role in DEM's efforts to promote and enhance watershed based initiatives.</p>	<p>6a. Oversee implementation of pollution abatement strategies for the following: Stafford Pond, Runnins/Barrington Rivers, Hunt River, Scrabbletown Brook, Fry Brook, Narrow River, Gilbert Stuart Brook, Mumford Brook, Palmer River and other targeted watersheds as TMDL are approved and projects are developed.</p>	<ul style="list-style-type: none"> ● Report the number of impaired waterbodies covered by a Watershed Restoration Action Strategy. (Completed TMDL or comparable document) Target FY02-03 Work plan: 42 ● Report on status of TMDL implementation (specific measure to be developed). ● Complete Phase I of Habitat Assessment study (understanding of stream habitat types and relationship with changes in stream flow by 2001).
--	--	---

	<p>6b. Undertake necessary tasks to develop TMDL reports including but not limited to compilation of existing data, design of supplemental monitoring plan, preparation of Quality Assurance Project Plans (QAPP), collection and analysis of supplemental data, model development as applicable, report writing, identification and involvement of key stakeholders, and submittal of final TMDL to EPA for approval by scheduled date for the following impaired waterbodies:</p> <ul style="list-style-type: none"> • Sakonnet River and Island Park Cove (pathogens) - 12/31/01 • Kickemuit Reservoir (pathogens, nutrients/excess algae, turbidity) - 12/31/01 • Saugatucket River (pathogen), Mitchell Brook (pathogens), Indian Run, Rocky Brook (pathogens) - 12/31/01 • Saugatucket Pond (nutrients/noxious aquatic plants) - 12/31/01 • Palmer River (nutrients) - 12/31/01 • Ninigret and Green Hill Ponds and Teal Brook, Factory Pond Brook (pathogens) - 06/30/02 • Providence River (hypoxia/nutrients), Seekonk River (hypoxia) - 06/30/02 • Indian Run (metals) - 06/30/02 • Greenwich Bay, Buttonwoods Cove, Brushneck Cove, Hardig Brook (pathogens, nutrients/hypoxia), Greenwich cove, Warwick Cove, Apponaug cove (nutrients/hypoxia) - 06/30/02 • Sands Pond (Block Island) (excess algae/taste & odor, turbidity) - 06/30/02 • Mashapaug Pond (hypoxia/nutrients) - 12/31/02 • Crooked Brook (pathogens) - 12/31/02 • Woonasquatucket River (metals, pathogens) - 12/31/02 • Blackstone River (pathogens, metals), Mill River (metals), Peters River (pathogens, metals), Valley Falls Pond (biodiversity, metals, pathogens, nutrients/hypoxia/excess algae growth) - 12/31/03 	
--	---	--

	<p>6c. For TMDLs scheduled for completion beyond 06/30/04, interim milestones for the FY 02-03 time period are the compilation of existing data, design of supplemental monitoring plan, and preparation of the QAPP (final TMDL completion date noted in parentheses):</p> <ul style="list-style-type: none"> • Ten Mile River (Pb, biodiversity), Turner Reservoir (nutrients, metals), Slater Park Pond (pathogens, nutrients) - 06/30/05 • Upper Narragansett Bay (hypoxia) - 06/30/05 • Pawcatuck River (hypoxia, pathogens), Little Narragansett Bay (pathogens) - 06/30/05* • Pt. Judith Pond (pathogens) - 06/30/05* • Long Brook (pathogens), Burnt Swamp Brook (pathogens), Catamint Brook (pathogens), Ash Swamp Brook (pathogens) - 06/30/04* <p>* Work on these TMDLs during the FY02-03 time period is pending funding availability</p> <p>6d. Continue participation in water use subcommittee of Pawcatuck Partnership initiative. Work with the subcommittee to disseminate the results of the Queens-Usquepaug habitat assessment to relevant agencies and organizations.</p> <p>6e. Continue participation in Urban Rivers Team including expanding outreach on Urban Rivers and Upper Bay water quality concerns.</p> <p>6f. Continue to participate with Partners in Resource Protection (PRP)</p> <p>6g. Coordinate development of draft policy on water withdrawals, including jurisdictional issues, review requirements, and compliance with water quality criteria.</p>	
<p>7. Manage the shellfish growing areas consistent with National Shellfish Sanitation Program.</p> <p><i>Management of shellfish growing areas is expected to benefit from the eventual implementation of water quality restoration strategies identified via TMDL projects. 25% of shellfishing grounds are closed either permanently or conditionally. Over the next 2 years DEM will be involved in 15 water quality restoration projects addressing bacterial contamination of coastal waters.</i></p>	<p>7a. Conduct the following shoreline surveys: Upper Bay 05/30/01, Greenwich Bay 07/01, E. Middle Bay 09/01, W. Middle Bay 11/01, Mt. Hope Kickamuit 04/02 (12 yr. Survey), Point Judith/Potters 06/02, Quonochontaug and Winnapaug Ponds 08/02, E. Passage & W. Passage: Tri Annual Surveys 12/02.</p> <p>7b. Assist TMDL section with the following fieldwork until a change in classification from prohibited to approve occurs. Little Narragansett Bay, Warren & Barrington Rivers Ninigret and Green Hill .</p> <p>7c. Collect water samples from 17 shellfish growing areas – 2000 samples from 300 stations per year. Approved waters are to be sampled a minimum of six times each year representing spatial seasonality Conditional approved waters are to be sampled at least once a month when the area is open for harvesting .</p> <p>7d. Administer Bay Closures coordinating with DOH, DEM, Fish & Wildlife and Enforcement as necessary.</p> <p>7e. Continue phytoplankton sampling along with shellfish sections routine systematic random sampling for fecal Coliform.</p> <p>7f. Coordinate, as needed, with DOH, DEM Fish & Wildlife, and Enforcement to update MOUs to reflect changes in NSSP Model Ordinance.</p>	<ul style="list-style-type: none"> • Maintain RI's Interstate Shellfish Certificate. • Percent of shellfish grounds closed (permanently/conditionally) • Annual net increase/decrease in closed areas. • Percent of assessed SA waters supporting shellfish harvest

<p>Statewide Support</p> <p>8. Administer a statewide system of classifying surface waters for water quality purposes, which includes standards/criteria to define protection/restoration goals, monitoring baseline conditions, evaluating and reporting water quality status and prioritizing water quality restoration activities.</p> <p>The percentage of surface waters currently not assessed due to a lack of data includes 53% of river miles and 24% of lake acres.</p>	<p>8a. Continue working on indexing and georeferencing RI's waters for mapping (06/02).</p> <p>8b. Complete development of a statewide monitoring strategy with assistance from EPA Narragansett Lab aimed at reducing the percentage of unassessed waters (Draft 07/01,Final 09/01). Seek additional state funds or public/private funding partnerships to address gaps, including providing support to partners (URI) which train and deploy volunteer monitoring.</p> <p>8c. Coordinate with DOH on development of plans to assess fish tissues</p> <p>8d. Finalize triennial review of Water Quality Regulations 10/01</p> <p>8e. Work with NEIWPC and other New England states to develop regional nutrient criteria in all waterbody types. On-going</p> <p>8f. With EPA-NE's assistance, develop a plan by 12/31/01 to adopt numeric nutrient criteria for lakes and rivers into the state's water quality standards by 2004.</p>	<ul style="list-style-type: none"> ● Improved reporting capability in characterizing water quality conditions for all audiences. ● Reduction in data gaps as reflected by increase in percentage of water assessment. ● Percent of assessed surface waters that support safe recreation (swimming). ● Percent of assessed river miles and lake acres subject to fish consumption advisories or restriction (Data not readily available). ● Number of fish kills due to (a) toxic releases (b) other conditions. ● Updated surface water quality regulations consistent with federal requirements. ● Baseline monitoring data collected for portions of the state. ● Number of waterbodies restored to designated uses. ● Percentage of assessed surface waters with healthy aquatic communities. ● Submit YR. 2002 305(b) report to EPA (04/02). ● Submit 2002 list of Impaired Waterbodies (303(d)). (04/02) ● New computerized macroinvertebrate database to assist assessment process.
--	--	---

	<p>8g. Oversee grant to USGS for collection of water quality data on a quarterly basis at 7 river stations. Oversee grant to URI for collection and analysis of water quality data at 25 river stations on quarterly basis. Oversee URI Watershed Watch Program contract to monitor lakes in the state.. Initiate new monitoring activities working with other agency partners and volunteer monitoring programs to eliminate data gaps as resources allow. On-going (YR. 02, 03)</p> <p>8h. Develop RFP and secure contract for statewide baseline Rapid Bioassessment Protocol project. (02/02)</p> <p>8i. Compile, review and assess water quality data. Coordinate with state, federal and municipal agencies and volunteer monitors. Develop and submit 2002 305B electronic update and written Report. (04/02)</p> <p>Develop Appendix to 2002 305(b) Report (12/02)</p> <p>8j. Develop RI's Assessment and Listing Methodology. (04/02)</p> <p>8k. Develop draft 2002 List of Impaired Waterbodies (303(d) List) and conduct public workshops and public notice. (04/02)</p> <p>Enter final 2002 303(d) list into Access database for mapping. (06/02)</p> <p>8l. Develop and submit odd-year 305(b) electronic update to EPA. (04/03)</p> <p>8m. Enter/coordinate entry of summer 2000 RSD data into WQUAL and EDAS databases. (06/02)</p> <p>8n. Get EDAS database up and running for data entry. (07/01)</p> <p>8o. Initiate discussions with Fish & Wildlife on methodologies for applying fisheries and fish population data in assessing water quality.</p> <p>8p. Review and provide comments to the R.I. Water Resources Board regarding Water Supply Management Plans produced by all major water suppliers.</p>	
<p>9. Provide financial and technical assistance for water pollution control and water-quality improvement projects.</p>	<p>9a. Carry out baseline activities including solicitation and ranking of projects for the Project Priority List (PPL). (03/02-04/02)</p>	<ul style="list-style-type: none"> ● Annual revised PPL identifies projects needing funding. ● Ensure SRF funded projects meet environmental standards.

<p><i>Over the next 12 months, DEM expects to fully obligate or exhaust bond funding in most of its water pollution assistance programs including: Non-governmental Bond Fund, Aqua Fund, Non Point Source, and Sewer Water Supply Failure Fund. OWR has put forward a proposal for new bond money for water pollution abatement. The proposed funding provides an integrated source of funding to support local activities to address water-quality improvements.</i></p> <p><i>Note: DEM will continue to pursue renewal of funding for a targeted grant program to implement watershed restoration actions, including habitat restoration. In the November 2000 election the Rhode Island voters overwhelmingly approved a \$60 million bond to provide zero interest State Revolving Fund loans from the RI Clean Water Finance Agency.</i></p>	<p>9b. Provide technical assistance and review of projects submitted for SRF funding via the PPL process. Conduct inspections to monitor construction progress of SRF funded projects. Including environmental reviews for DOH DWSRF projects.</p> <p>9c. Develop fact sheet for Clean Water State Revolving Fund program. (12/01)</p> <p>9d. Compile and submit data for 2002 Clean Water Needs Survey. (08/01)</p> <p>9e. Administer the remaining 19 grants in the Aqua Fund (majority to be completed by 12/04).</p> <p>9f. Award and administer remaining Non-Governmental Water Pollution Control Facilities Fund monies. (01/02) Develop final status report on Non-Governmental Water Pollution Facilities Fund . (03/02)</p> <p>9g. Utilizing 319 and CWAP funds, administer grants for 9 watershed restoration projects awarded in FY99, 6 projects awarded in FY00 and projects (# TBD) to be awarded in FY01 via RFP process. With continued CWAP funding (approx. \$450,000/year) solicit via RFP process and issue additional grant awards (08/02).</p> <p>9h. Utilizing state NPS Bond Fund and Clean Water Trust Fund monies, administer 22 grants to municipalities to develop local on-site wastewater management programs and storm water management plans. Solicit for new grants in Fall 2001. Process final awards (03/02).</p> <p>9i. Request approval for a new bond issue subject to referendum in 2002 to allow continuation of pollution abatement and support watershed and habitat restoration.</p> <p>9j. Award and administer the \$ 9 M Pawtuxet River Authority Fund the remaining funds in the \$10 Pawtuxet River Water Quality Fund.</p> <p>9k. In coordination with CWFA, Administer the Rural Hardship Communities grant to the town of New Shoreham. Dependent on local action</p>	<ul style="list-style-type: none"> • Award \$600,000 in state financial assistance to support water resource protection and pollution abatement. • Integrated funding source available to address water quality impairments. (Requires approval of new bond authority). • Revised fee system in Freshwater Wetlands Program. • Increase the use of pollution prevention to meet industrial pretreatment limits. • Number watershed projects provided financial assistance: Target: FY00-01: 5-10/yr.
---	---	---

<p>OBJECTIVE II: Prevent or reduce pollutant loadings to achieve groundwater quality standards.</p>	<p>Environmental Indicators: Number of public wells with detection of selected pollutants in raw water (VOC, SOC, elevated nitrates) Long-term goal: The number of public wells with detections of contaminants in raw water will decrease.</p>	
STRATEGIES	ACTIVITIES	Performance Measures*
<p>1. Prevent the contamination of aquifers that supply existing and future public drinking water wells.</p> <p><i>DEM has designated WHPAs for all public wells. 38 of 46 pollution source inventories are complete. 13 of 41 required local protection plans have been approved.(07/00)</i></p>	<p>1a. Implement the state wellhead protection program: - Update the Wellhead Protection Area (WHPA) map (09/01 and 09/03). - Evaluate the DEM WHPA delineation methodology for stratified drift wells(09/01) and bedrock wells (06/03) - Prepare WHP Biennial Report – which reports on the status of refined delineations, pollution source inventories, local WHPA plans, and implementation activities (10/01). - Review local protection plans, as submitted by local entities.</p> <p>1b. Provide financial incentives to foster local WHP implementation, including public outreach projects. This will include the following: <ul style="list-style-type: none"> ● Ensure completion of agreements between DEM and communities or water suppliers. Current projects to be completed by 06/02. ● Utilizing existing federal funds, solicit for new wellhead implementation projects targeting South County with \$30,000 (06/03). </p> <p>1c. Coordinate with the Department of Health on the development and implementation of the State’s Source Water Assessment Program, including participation on the Technical Advisory Committee.</p> <p>For FY01, activities include: <ul style="list-style-type: none"> - Member of Technical Advisory Committee - Participate in initial source waters assessment meetings with individual municipalities/suppliers. - Provide technical assistance to municipalities/suppliers or protection strategies when source waters assessment is completed. </p> <p>1d. Coordinate, as needed, on watershed projects that address groundwater concerns including interaction between groundwater and surface waters, including a water withdrawal guidance document. (See task I 5g)</p>	<p>In coordination with the RI Water Resources Board, all 15 large water suppliers will have approved WHP Plans (currently 8 are approved).</p>

<p>2. Prevent groundwater contamination due to subsurface discharges of pollutants.</p> <p><i>To date, the UIC program reflects 617sites. These include 273 active discharges, 326 discharges permanently eliminated. The program is proposing to streamline its regulation of stormwater discharges via a general permit mechanism, which will allow staff to devote more attention to discharges with greater pollution potential.</i></p>	<p>2a. Implement Underground Injection Control (UIC) Program approval and closure activities and continue compliance efforts at unauthorized facilities.</p> <p>2b. Review and determine if proposed activities, including upland dredge disposal projects, comply with state groundwater quality standards. Issue certifications: ±6/yr..</p> <p>2c. Complete inspections of potential UIC sites in priority resources areas, as resources allow. (community and non-community WHPAs, drinking water reservoir watersheds, etc.) Target: 100 inspections.</p> <p>2d. Coordinate UIC Program consistency review for RIDEM maintenance garages in association with Class V Rule requirements.</p>	<ul style="list-style-type: none"> ● Number of Class V wells brought under specific control through permits (Expected: 25/yr). ● Number of abandoned or unauthorized wells closed (Expected: 25/year). ● Maintain high compliance rate for active discharges with reporting requirements (Target: >100%).
<p>3. Prevent groundwater contamination due to the application of pesticides and fertilizers.</p>	<p>3a. Participate with Division of Agriculture on evaluation of nitrate concentration in groundwater in selected areas of Southern Rhode Island.</p> <p>3b. Coordinate with Agriculture and Conservation Districts, as needed, to implement state strategy regarding pesticides and fertilizer use.</p>	<p>Complete groundwater-monitoring assessment</p>
<p>4. Maintain statewide groundwater classification system and enforce ambient groundwater quality standards.</p>	<p>4a. Revise the Groundwater Protection Strategy. - Prepare assessment of what has been accomplished from existing strategy and identify issues and potential program changes for future discussion with stakeholder groups. (09/01) -Complete Groundwater Protection Strategy report (06/03)</p> <p>4b. Update the groundwater classification map (09/01 and 09/03). Update Groundwater Section of 305 B report (02/02)</p> <p>4c. Coordinating with DEM Waste Management, update the non-attainment map. Distribute to well drillers and municipal officials. (06/02)</p>	<ul style="list-style-type: none"> ● Updated groundwater protection strategy to guide future program development. ● Number of non-attainment sites. ● Number of non-attainment sites restored to compliance with groundwater standards. ● Performance measures on status of non-attainment sites to be developed.
<p>5. Promote restoration of groundwater quality where feasible.</p>	<p>5a. Continue coordination with theOffice of Waste Management on remediation.</p>	<ul style="list-style-type: none"> ● Groundwater remediation projects handled consistent with groundwater quality standards. ● Revised groundwater regulations (FY 09/01).

<p><u>6.</u> Ensure that new ISDS systems meet standards established to protect public health and the environment.</p>	<p>6a. Implement ISDS regulatory program:</p> <p>Permitting workload includes 2,300 site suitability assessments, 4,000 permit reviews and over 10,000 inspections per year.</p> <p>6b. Administer the ISDS Licensing Program. Continue to work with ISDS Designer Licensing Review Panel (FY02 & FY03)</p> <ul style="list-style-type: none"> - Continue to develop oversight procedures for Class I-IV (FY02 & FY03). - Schedule and administer Installer pre-examination information session and licensing exam, by 12/01 & 12/02 - Schedule and administer Class I-III designer exams, and Class IV Soil Evaluator information sessions, and licensing seminars, by 12/01 & 12/02. - Complete the Installer/Designer Database and link to PPTIS (06/02) - Administer five ISDS Licensing Examinations annually: Installers (1 exam) Class I-III Designers (3 exams) Class IV - Soil Evaluator (1 exam) <p>6c. Continue to review and approve innovative and alternative septic system technologies. Develop systems to track and assess their performance . (Funding required)</p> <p>6d. Refine and implement automated performance tracking system for licensed designers and soil evaluators (6/02).</p>	<ul style="list-style-type: none"> • Improved technical basis for septic system siting and design implemented via a soil-based approach. • Number of ISDS' that prematurely fail remains very low. <p>Number of substandard systems upgraded/year.</p>
<p>7. Facilitate the repair and replacement of failed and substandard septic systems.</p> <p><i>DEM estimates that 70,000 of the 140,000 existing septic systems in the state are substandard, e.g. cesspools.</i></p>	<p>7a. Continue to prioritize ISDS repair applications and issue prompt approvals.</p> <p>7b. As resources allow, target compliance inspections in coordination with TMDL projects.</p> <p>7c. Assist local wastewater programs, as resources allow, and encourage replacement of substandard septic system.</p>	

OBJECTIVE III: Wetlands will be protected and restored to provide wildlife habitat, reduce floods, improve water quality and provide recreational opportunities.		Environmental Indicators*
STRATEGIES	ACTIVITIES	Performance Measures*
<p>1. Ensure impacts to wetlands are avoided, minimized or otherwise mitigated via administration and enforcement of freshwater wetlands regulatory program.</p> <p>Computerize tracking of wetlands loss/gain was instituted in January 1998. Losses authorized by permitting are generally minimal. However, actual losses, due to non-compliance, are presumed higher.</p>	<p>1a. Continue to review and process freshwater wetland applications estimated at 450/yr for preliminary determinations and over 225 for all other types.</p> <p>1b. Implement recommendations of Wetland Task Force Final Report dated 03/01 as follows: Regulatory reforms: Develop, promulgate, implement phased rule changes to accomplish rule reorganization, fee revisions, and application tiers. See task IV 1a. Outreach: See task IV 3m. Administrative tasks: See task IV 1d. Policies: Develop policies to encourage habitat and water quality projects (07/01), for ISDS/wetlands coordinated review (04/02, to promote planting projects, to facilitate preapplication meetings (09/01).</p> <p>1c. Status and Trends report. See task IV 3a.</p> <p>1d. Conduct wetland permit compliance inspections. Increase number of inspections.</p>	<ul style="list-style-type: none"> ● Limit the number of acres of wetlands alterations authorized via permitting to 5 or less. ● Track the number of acres of unauthorized loss of wetlands identified via compliance/enforcement activities. ● Initially conduct 10 inspections per month
<p>2. Increase wetland protection program capacity.</p> <p><i>While Rhode Island has been recognized for its strong wetlands protection law and corresponding rules, there are practical limits to the level of protection provided through a regulatory approach. A more comprehensive strategy is needed to foster and improve the non-regulatory approaches utilized to protect and restore wetlands, including adding wetlands projects and development restoration projects via watershed approach</i></p>	<p>2a. Continue background research and develop framework of issues to be addressed in a statewide Wetland Conservation Plan (09/01). With stakeholder input, draft the Conservation Plan. (09/02)</p> <p>2b. Initiate actions to implement Wetland Conservation Plan. Key components to be defined (06/03)</p> <p>2c. Participate with EPA and states in New England Bioassessment Wetland Working Group</p> <p>2d. Coordinate with EPA and local partners on wetland protection grants issued in FY99 including URI/vernal pools, TNC, Coventry. (12/01)</p> <p>2e. Initiate actions to implement wetland-mapping recommendations. (Purchase aerial photographs as phase 1 of multi year wetland mapping project to enhance watershed-based protection pending EPA funding approval). (06/02 and 06/03)</p>	<ul style="list-style-type: none"> ● New statewide wetlands conservation plan. (12/02) ● 200 acres per year of wetlands permanently protected via acquisition (land purchase, easements, etc.).

<p>3. Build capacity and tools to promote both coastal and freshwater wetland habitat restoration.</p>	<p>3a. Continue with Phase II Wetland Restoration Plan in Woonasquatucket watershed with URI. (12/01) 3b. Participate in monthly meeting with URI, and other meetings with RI Habitat Restoration Team. Technical assistance freshwater projects (Ongoing) 3c. Develop freshwater wetland restoration project in Woonasquatucket watershed building on the Phase II Plan (09/02) 3d. Update Wetlands section of 305b Report (02/02)</p>	<ul style="list-style-type: none"> ● Number of acres/stream miles of wetland restoration initiated. ● Number of acres/stream miles of wetland habitat successfully restored
--	--	---

OBJECTIVE IV: Improved effectiveness and integration of water protection programs.		Environmental Indicators:
STRATEGIES*	ACTIVITIES	PERFORMANCE MEASURES
<p>1. Revise regulations to support permit streamlining objective and enhance effectiveness. Continue to implement permit-streamlining recommendations. .</p>	<p>1a. Planned rule changes include:</p> <ul style="list-style-type: none"> • Development, promulgation and implementation of new ISDS regulations to achieve further streamlining and address technical, procedural, and administrative issues. Workshop target: 09/01, Public Notice: 12/01, Promulgation: 03/02. • Develop, promulgate, and implement wetland Rule revisions per the Wetland Task Force Final Report Table 3. Phase 2: Fee schedule and reorganization of Rules, plus provisions for dams, and NRCS coord. (09/01 for review) Phase 3: Application tiering, timelines, projects outside jurisdiction, and buffer zone & setback rules(12/01 for review) Phase 4: Facilitate habitat and water quality projects • Revise groundwater rules to streamline procedures by eliminating routine groundwater certifications, address groundwater remediation issues in coordination with OWM and other administrative issues. (01/02) • Revise the UIC regulations, originally developed in 1984, including: <ul style="list-style-type: none"> -Incorporation of a comprehensive groundwater discharge program that includes groundwater certification activities (09/02) -Draft changes needed to support preparation of the UIC Primacy Revision Application for EPA approval (09/02) -Institute a general permits system for stormwater discharges. (09/02) Assist in the development of integrated dredge material management regulations, specifically as they relate to Water Quality and GW quality requirements. (01/02) <p>1b. Implement Kyran computerization project.</p> <p>1c. Improve wetland permit review timeframes</p> <p>1d. Continue to develop and implement program reforms to support permit streamlining specific strategies include:</p> <ul style="list-style-type: none"> • Modify Wetlands application to request ISDS file number were an ISDS application has been submitted for the property. (06/03) • Work toward enhanced coordination of ISDS/Wetland applications to reduce unnecessary submittals (non-jurisdictional) to wetlands programs. Modify ISDS Rules to require that plans indicate the limit of disturbance and hay bales. Site conditions verified by Wetlands, submission of Wetlands Application if field inspection warrants.(04/02) • Develop method for better coordination between ISDS and Wetlands staff, when ISDS application has been submitted, for verification that site conditions are consistent on both ISDS and Wetlands submissions. (06/03) 	

	<ul style="list-style-type: none"> • Assist in the Development of protocols & guidelines for the coordinated review/decision on dredging projects, (01/02) • Develop procedure to improve coordination on WQC, FWW and ISDS application reviews, where needed, including consideration of 303(d)impacts. Revise wetland application form for applicants address and CEC projects (07/01) • Redesign wetlands application package (with Rules 3) <p>Also see Raising Public Awareness for descriptions of outreach and training activities.</p> <p>1e. The Department will continue to seek ways to consolidate private well drilling requirements with HEALTH and RI Contractors Registration Board.</p>	
<p>2. Improve data management system to support water resource protection programs and facilitate data access.</p>	<p>2a. Computerize legacy data (1969-1989) in ISDS program as part of the new database system. Complete programming needed to reflect program changes, e.g. licensing of ISDS designers (06/02).</p> <p>2b. Develop a TMDL implementation action tracking database or an effective methodology with PPTIS (06/02).</p> <p>2c. Develop a database for tracking and reporting grant/bond fund program activities. (06/02)</p> <p>2d. Develop a financial tracking system for all expenditures (06/03).</p> <p>2e. Make enhancements to the Water Quality Data Systems to:</p> <ul style="list-style-type: none"> • Initiate use of SQL server for WQUAL and other Access databases. • Potential initiation of migration of water quality data into EQUIS or some ORACLE database. • Work with NRCS and USGS toward developing standardized basin and watershed boundary identification and hydrologic unit numbers. • Renumber RI waterbodies in accordance with the standardized basin identification system. • Enter and maintain biological, chemical and assessment data into various Access databases. Update and upgrade databases as needed. (YR. 02, 03) <p>2f. Complete entry of approved pretreatment program elements into Access Database for all approved programs. Warwick, NBC Bucklin Pt., NBC Fields Pt., Bristol, So. Kingstown by 07/00; RIEDC 09/00; E. Greenwich 12/00; Cranston 03/01; Westerly 06/01; Warren, West Warwick, Smithfield, Newport, E. Providence, Woonsocket by 09/01.</p>	<p>Improved computerized data management for evaluation and data distribution.</p>
<p>3. Raise public awareness of DEM water resource protection and restoration activities and the importance of water resources.</p>	<p>3a. Expand public outreach utilizing fact sheets, folders, etc.. Distribute with partners. Targeted topics: ISDS, Wellhead Protection. (FY 03)</p> <p>3b. Continue to distribute septic system inspection maintenance handbook. Sponsor workshops to promote its use. Partners include Realtors, RIBA and URI among others.</p> <p>3c. Also see wellhead protection and non-point source sections.</p> <p>3d. Maintain Water Resources web site and add more information and graphics for, watersheds, wetlands outreach, TMDL's, groundwater programs, Partners in Resource Protection Activities, Phase II stormwater, Operator Certification Program and Permit Status for ISDS and Wetlands.</p>	<ul style="list-style-type: none"> • Outreach material developed an in-use by Department and partners. • Reduce initial application deficiencies

	<p>3e. Create a manual providing standard graphic and format for developing and disseminating information to the media and public.</p> <p>3f. Compile information in formats suitable for the public including poster presentations, brochures, power point presentations, fact sheets, guides, signage, and banners. Topics to include descriptions of OWR programs, summary of 305(b), TMDL project, WQC/UIC, wetlands, groundwater, RIPDES, WWTFs, and SRF/Aqua Fund.</p> <p>3g. Continue education campaign to promote use of marina pump-out stations (YR00-01).</p> <p>3h. Develop and issue Public Outreach and guidance regarding Phase II Storm Water requirements. (03/02) See task I 1g.</p> <p>3i. Develop public outreach materials for the TMDL program and for individual TMDL projects - to include displays and/or posters (10/01), and fact sheets and/or brochures (ongoing)</p> <p>3j. Develop and Implement recommendations of Wetland Task Force and expand public education and outreach with assistance of outreach contractor. In collaboration with OTCA, develop and distribute new outreach and guidance materials:</p> <ul style="list-style-type: none"> • update the permit guide (after Phase 3 Rules) • produce more fact sheets Ongoing for workshops • complete 2 poster presentations (05/02) • continue to update wetlands web site including vernal pool information • assist with collaborative project to develop wetland education center at Roger William Park Zoo(Ongoing). • Conduct workshop for loggers w/DEM Forestry and OCI (09/01) • develop sample site plans and applications for workshops, display, and web (10/01) • develop drainage methodology (10/01) • develop format for engineering calculations (10/01) • update brochure for realtors (09/02) • develop BMP manual (pending funding) • develop photographic guide to wetland types (pending funding) <p>3k. With OTCA, conduct training workshop for municipal officials. Target: 20 officials trained/yr. (11/01)</p> <p>3l. With OTCA, conduct a training workshop for wetland consultants. Target: 20 consultants trained/yr. (11/01)</p> <p>3n. With OTCA conduct an annual wetlands open house for applicants. (05/02 and 05/03)</p> <p>3o. Research and write Status and Trends report summarizing loss/gain and regulatory and program initiatives. (03/03)</p>	<ul style="list-style-type: none"> • Improved public information. Entire web site outlined. • Coordination with Warren on DEM site. Rolled out – maintaining and providing improvements
--	--	---