



The Department of Environmental Management's
Annual Report

1998

CREATING NEW SOLUTIONS

FOR A GREENER RHODE ISLAND

NG * PROTECTING * PRESERVING * RESTORING * MANAGING * RESEARCHING * SUSTAINING * EDUCATING * REVITALIZING *



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A MESSAGE FROM THE DIRECTOR

DEAR GOVERNOR ALMOND,
MEMBERS OF THE GENERAL ASSEMBLY
AND OTHERS INTERESTED IN THE
WORK OF THE DEPARTMENT
OF ENVIRONMENTAL MANAGEMENT,



It is my pleasure to present DEM's Annual Report for the year 1998.

I hope you will find it interesting reading and invite your feedback. As a

newly appointed Director I am not in a good position to comment much on last year's performance but I and DEM can certainly benefit from your comments and suggestions.

It is exciting to be back in Rhode Island and to have the opportunity to lead the Department in this time of challenge and opportunity. I sense much commitment both within and outside the Department to move forward and to apply ourselves with renewed energy to what is, after all, a great job: Protecting and enhancing the quality of our environment, ensuring that we *all* can enjoy that quality and preserving the character of our communities which is defined in large measure by the beauty and bounty of our natural resources.

The challenge is how to make sure we apply our energy effectively. We must develop clear goals and strategies that focus on the current state of environmental affairs. After 30 years of environmental regulation, our air and waters are measurably cleaner. We have been successful in bringing larger sources

CONTENTS

2	A Day in the Life of DEM
5	Getting Cleaner
5	Water quality
9	Waste management
11	Air quality
13	Compliance
16	Helping our Customers
19	Staying Green
19	Public recreation and greenways
20	Land preservation
22	Farming
24	Forestry
26	Fishing, hunting and boating
29	Working for sustainable communities
33	Thank You to DEM's Partners in Environmental Action
36	DEM's Organizational Table

of pollution under control so they generally meet or even exceed our environmental standards. This brings into sharper focus, however, the still largely unresolved problems associated with nonpoint and smaller sources and the consequences of poorly planned development that unnecessarily threatens our remaining open spaces, our water supplies and the diversity of our biological resources.

LOOKING AHEAD, I BELIEVE OUR TOP PRIORITIES SHOULD INCLUDE:

- **Pollution prevention.** Rather than writing more regulations and issuing new types of permits that allow more pollution, let's focus on incentives to change industrial processes, product designs and development patterns so that they avoid instead of add to the degradation of our air, waters and landscapes and require less permitting.

- **Prioritize public health risks.** For example, let's develop once and for all an effective, interagency strategy to deal with the urgent problem of lead in our environment, especially in our older urban communities. We should also acknowledge that pollution, and in particular cumulative environmental impacts, can affect certain communities more than others, and target our efforts accordingly.

- **Protect and restore critical resources while we still can.** We need to step up our efforts to protect open space, farmland, forests, water supplies and critical habitat areas before they are paved over, carved up or priced out of our range.

- **Provide a level playing field.** Make it as easy as possible to

understand and comply with environmental regulations. Reward good performance. Put violators on notice quickly and take decisive enforcement action against those who refuse to respond.

SOME OF THE STRATEGIES WE SHOULD USE:

- **Providing incentives for proactive planning.** For example, develop grants and technical assistance programs for communities which want to plan for growth in areas where it does not degrade natural resources and want to balance that growth with permanent protection of key open spaces, water resources, etc. Also, provide technical assistance and regulatory relief for companies that want to employ cleaner technologies or processes.

- **Focusing on ecosystem management, in particular watershed management, instead of source-by-source or site-by-site regulation.** This is one example of proactive planning that can help us set priorities, improve the scientific basis for our decisions, improve internal coordination among our many programs, as well as coordination with other state agencies and mobilize local stewardship (landowners, local businesses, watershed associations, land trusts, etc.).

- **Promoting partnerships.** Allow and encourage others to take or share the lead on projects from watershed planning to open space acquisitions, from water quality monitoring to habitat restoration, from voluntary compliance to pollution prevention. Actively pursue partnerships with business leaders and organizations, academic

institutions, nonprofits, federal agencies, etc. Use partnerships to leverage our limited resources and expertise.

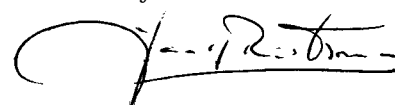
- **Permit streamlining.**

Eliminate those processes that do not produce environmental benefit. Provide better guidance and assistance up-front. Improve internal coordination and processing of information. Shorten timelines, provide for easy tracking and meet deadlines. Focus agency resources on truly significant cases, reduce regulatory process for less significant categories, for example, through the use of best management practices, self-certification, general permits, etc.

I have asked my staff to apply these general goals and strategies to DEM's various programs and to translate them into work plans for each division for the next fiscal year. Each work plan will outline specific goals, priorities, projects, milestones and environmental results the division will be expected to attain.

We welcome your input. It is my hope that these goals, priorities and work plans will help us do our job with more energy and focus, and at the same time be more accountable to all of you. I look forward to reporting the results next year and to working with you towards those results.

Sincerely,



Jan H. Reitsma
Director

A DAY IN THE LIFE OF DEM

7 AM Arcadia hatchery manager loads mature trout into truck so they can be stocked into streams and ponds in time for opening day.

7:30 AM DEM Director has breakfast with Department of Health Director to review staff recommendations for lead abatement policy and other joint projects.

7:45 AM Air Quality Specialist climbs a smoke stack in Providence to oversee emissions testing.

8 AM Laborers clean out restrooms in World War II Memorial Park in Woonsocket.

8:30 AM Manager checks pilings on a commercial fishing dock in Newport for rot as he prepares maintenance plan.

9 AM Worker joins students from Davies Career and Technical High School at an autobody shop in Pawtucket to observe state-of-the-art pollution prevention equipment in use.

9:30 AM Engineer inspects a landfill in North Kingstown.

10 AM Forester helps landowner develop management plan for five-acre woodlot in West Greenwich.

10:30 AM State Veterinarian wades into mud on a farm in Portsmouth to vaccinate a farmers' pigs against swine pseudorabies.

11 AM Marine biologist tabulates catch data from fishing docks in Galilee to determine if it's time to set lower limits for closely-managed winter flounder.

11:30 AM Biologist determines that a rare plant is growing on a small part of an area slated for development in Cumberland. The development will go on, but the developer will be asked to set aside and protect the area where the rare plant is growing.

NOON Planner advises town officials from East Providence what kinds of projects qualify for open space and recreation grants.

12:30 PM Engineer reviews activity in wellhead protection area in Smithfield to ensure residents can get drinkable water from wells.

12:45 PM Secretary takes reservations from residents who want to bring household hazardous waste to the Eco-Depot for recycling or disposal. She also answers informational phone calls and prepares a mailing for Earth Day.

1 PM Lawyer negotiates a consent decree with a resident accused of unlawfully altering a wetland in Coventry.

1:30 PM Forester helps volunteer fire chief in Foster train fire-fighters to fight forest fires.



2 PM Hearing officer convenes a hearing to determine if an applicant from North Providence will meet all regulations necessary to issue an effluent discharge permit.

2:30 PM Mosquito biologist inspects sites on Block Island where mosquito traps will be set later in season to test whether mosquitoes that are trapped are carrying contagious diseases such as eastern equine encephalitis.

3 PM Staff meets with officials from a company planning a large project in Middletown that will require

a variety of permits and gives them the information they need to proceed with the next steps in the permitting process.

3:30 PM Engineer reviews plan to clean up an industrial property in Central Falls contaminated with petroleum products. Engineer approves the plan and schedules follow-up inspection to review progress on cleanup at the site so the property can be returned to industrial use.

4 PM Secretary reserves picnic areas at Colt State Park in Bristol for a family reunion, an office picnic and a kindergarten party, and mails brochures on state-operated campgrounds.

4:30 PM Inspectors respond to a complaint from neighbors in West Warwick, collect wastewater samples that will later determine that a company has violated environmental regulations.

5 PM Engineers review data from air monitoring stations and determine that ground-level ozone continues to be a problem statewide and throughout the northeast.

5:30 PM Environmental Police Officers respond to a call in Barrington complaining of a skunk wandering through a neighborhood in the daytime. Investigation indicates that the skunk has a yogurt container stuck on its nose and shows no sign of being rabid. Officers gingerly remove the yogurt container and the skunk continues about its business.

6 PM Workers set up display at Rhode Island Mall in Warwick to promote locally-grown farm products.

6:30 PM Investigators execute 5 search warrants in Johnston to gather evidence for a criminal investigation.

7 PM A high school science teacher who works in the summer as a park naturalist at Beavertail State Park in Jamestown begins to prepare her presentations.

7:30 PM Environmental Police Officer makes a presentation to a hunters' dinner in Exeter—advises them to use personal flotation devices while fishing or hunting from a boat and take precautions against hypothermia in fall and early spring.

8 PM Staff meets with municipal officials from towns in northern RI and southern Massachusetts to review progress in cleaning up Blackstone River and consider next steps to take.

8:30 PM Planner meets with Burrillville town council to explain new zoning techniques that can help town preserve rural ambiance and protect the environment.

9 PM DEM Director meets with an environmental advocacy group to discuss the Department's priorities for the coming year.

9:30 PM South Kingstown official reports to town council that town will receive a Youth Litter Corps grant.

10 PM Little Compton resident calls up DEM's website

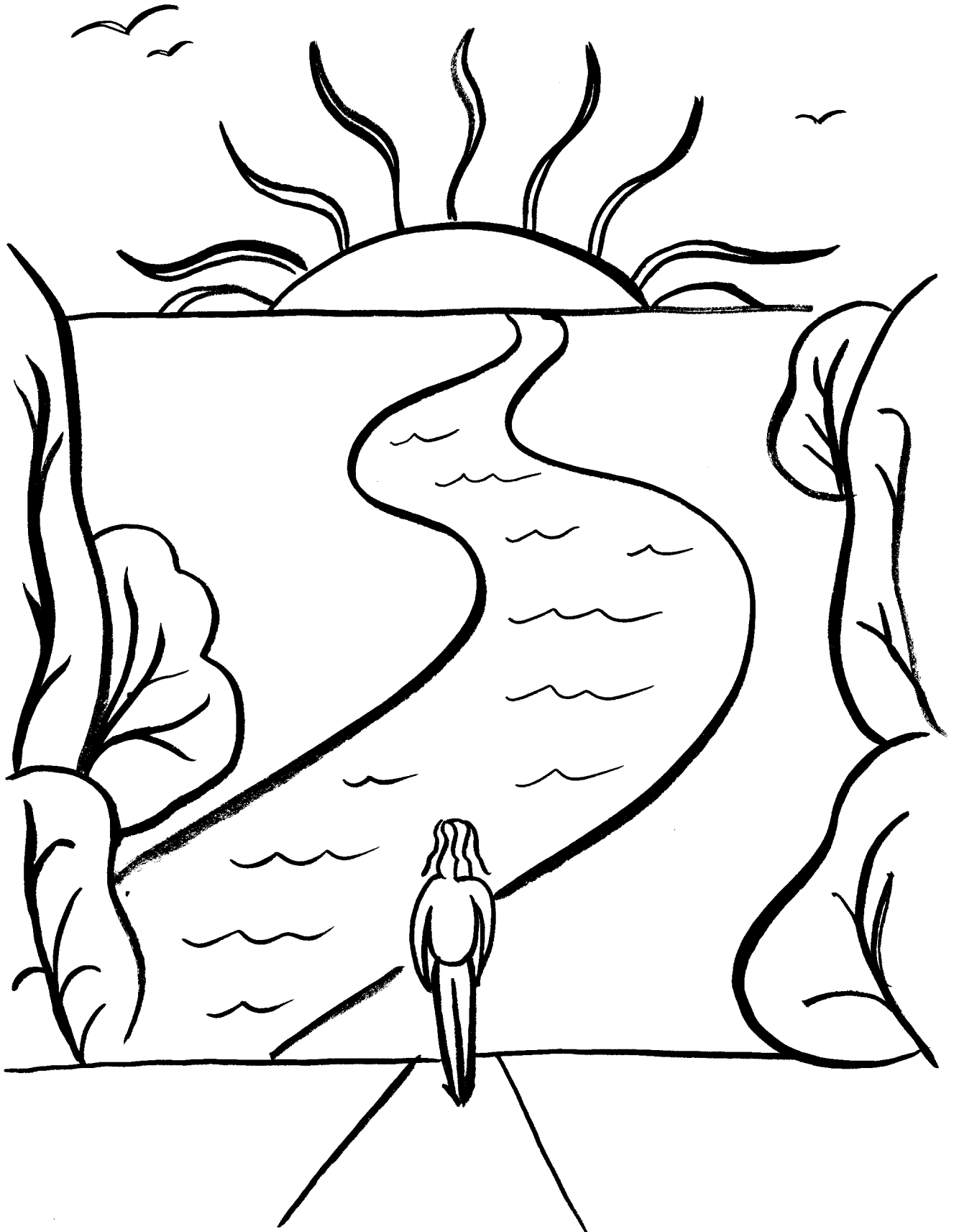
from his house, finds information on how to register a boat. Won't have to spend his morning coffee break making a call from work.

10:30 PM An oil truck turns over in the Scituate Reservoir watershed. DEM's Emergency Response team calls in a cleanup contractor, makes sure the watershed is protected.

11PM Conservation Officers using night vision goggles stake out a polluted area in Warren reported to be shellfished. At 3 am they will make an arrest.



DEM worker monitors wastewater treatment facility.





GETTING CLEANER

WATER QUALITY

As a result of public and private investment in water pollution control, many of Rhode Island's waters are cleaner than they were twenty years ago. ★ The good performance records of most major wastewater treatment facilities and the return of recreational use of waters such as the Blackstone River exemplify the progress that has been made. ★ A significant step forward in protection was achieved when the federal Environmental Protection Agency (EPA) designated all Rhode Island coastal waters a no-discharge zone for boaters in August 1998 following the construction of a number of pump-out stations. ★ Despite such positive steps, substantial challenges remain to the management of the state's waters. ★ The largest shellfishing closure of Narragansett Bay in nine years that occurred after heavy rains in June 1998 reflects the continuing threat of untreated combined sewer overflows (CSOs). ★ The 1998 assessment of surface water quality found many waters impaired, with bacteria, nutrients and metals being the most prevalent pollutants.

Water resource protection is crucial to the viability of drinking water supplies, the state's multi-million dollar shellfish industry and recreational uses such as the saltwater beaches that are a magnet for residents and the tourism industry, valued at \$1.5 billion. It is estimated



that about two-thirds of Rhode Islanders spend eight days per year visiting state beaches. The Department of Environmental Management (DEM) administers programs to protect and restore the state's surface waters, groundwaters and wetlands.

As a major shift in water protection, DEM is changing to a more holistic approach to protecting Rhode Island's water resources. The Department worked in partnership with the University of Rhode Island (URI) Coastal Resources Center and with input from stakeholders to develop a collaborative watershed approach to accomplish shared resource protection goals. Pilot demonstration of the approach is scheduled to start in 1999. Also in 1998, the Department organized to restore degraded water resources on a watershed basis and began using a new process to evaluate pollution problems, identify pollution sources and recommend strategies to restore water quality with public involvement. The Department is also continuing efforts to streamline permitting to provide quicker response and effective protection.

In 1998, the Department:

CONTINUED BASELINE MONITORING of rivers and streams in partnership with URI, Roger Williams University and the U.S. Geological Survey and began to reduce data gaps on selected streams and lakes with help from the EPA Lexington Laboratory.

REBUILT THE RHODE ISLAND POLLUTION DISCHARGE ELIMINATION SYSTEM PROGRAM (RIPDES), which regulates the discharge of wastewater into surface waters, with support from the Governor. The Department increased staff from three to 11 full-time positions and averted losing federal delegation. The Department is training new staff and has resumed updating, reissuing and maintaining oversight of discharge permits.

RELEASED AN UPDATED LIST of impaired surface waters and a schedule for assessing pollution problems in at least 40 river segments, 36 lakes and 27 coastal water areas in accordance with the federal Clean Water Act. The assessments will form the basis for strategies to eliminate violations of water quality standards.

COLLECTED 2000 ROUTINE BACTERIOLOGICAL SAMPLES from 300 stations in coastal waters to support management of 17 shellfish growing areas. Collected about 800 additional samples in response to June rains. Completed a joint initiative with the Narragansett Bay Commission (NBC) to collect data from the Providence and Seekonk Rivers to better assess the effects of CSOs.

COMPLETED A STATEWIDE ASSESSMENT of water quality conditions, the "State of the State's Waters Report," that identified impaired surface waters including 276 miles of rivers, 2,217 acres of lakes and 104 square miles of coastal waters. The assessment noted significant gaps in data and highlighted the need to expand baseline monitoring.

PRODUCED A SCHEDULE for assessing water impairments using Total Maximum Daily Load (TMDL) analysis. Continued TMDL work in nine watersheds and received EPA approval for the Stafford Pond TMDL.

AS PART OF THE URBAN RIVERS TEAM, which includes the EPA, the state Department

of Health (DOH), NBC and others, began:

- Sampling water quality to document excess algae growth and low dissolved oxygen downstream of the Smithfield wastewater treatment facility and hold a nutrient reduction workshop for the plant;
- Sampling fish tissue for dioxin;
- Expanding an assessment of dioxin contamination in the Woonasquatucket River watershed targeting the North Providence area;
- Performing water quality sampling at 25 river locations.

PROVIDED TECHNICAL ASSISTANCE to the EPA on the Pawcatuck Watershed Report and coordinated the Water Use Subcommittee of the Pawcatuck Partnership which is pursuing voluntary means to assess and manage the potential impacts of water withdrawals in the Usquepaug Watershed.



COLLABORATED WITH THE NATURAL RESOURCES CONSERVATION SERVICE to produce a Unified Watershed Assessment report for funding under the new EPA Clean Water Action Plan. DEM expects to receive over \$600,000 in 1999 for watershed restoration projects.

SPONSORED A SYMPOSIUM on Nutrient Reduction Technologies at URI.

BROUGHT TOGETHER OVER 100 PERSONS in a Coastal Habitat Restoration Charrette to identify collaborative projects and outline further needs.

STREAMLINED PERMITTING in the septic system and freshwater wetlands programs.

CHANGED WETLANDS REGULATIONS to expand the list of exempted wetland activities, eliminating the need to seek permits for many activities with little or no impact on wetlands.

EXPANDED THE USE OF PRE-APPLICATION MEETINGS for applicants to learn about permitting and which approaches are most likely to be approved.

PROVIDED TRAINING AND EXAMS AND ISSUED the first 135 licenses in October 1998 to implement the state mandate to license septic system designers. Use of a licensed designer to prepare permit applications will be mandatory after October 1, 1999. The aim is to increase accountability for septic system design and installation while allowing DEM to redirect staff to conducting site evaluations, improving permit response and coordination, and correcting failed systems. Soils-based siting to improve the technical basis for system design will begin in 1999.

UPGRADED COMPUTER HARDWARE AND SOFTWARE, bought over 50 new desktop computers, implemented an e-mail system, made significant changes to databases and improved the network to provide improved computer capabilities that are year 2000 compliant.

BECAME THE FIRST STATE TO RECEIVE CONDITIONAL APPROVAL of its Coastal Non-



point Source Management Plan prepared in collaboration with other agencies including the Coastal Resources Management Commission (CRMC).

CONTINUED TO COORDINATE the Septic System Policy Forum and completed the draft Individual Sewage Disposal System (ISDS) Inspection Handbook. Contracted with URI to field test the handbook prior to publication in 1999.

PROVIDED \$168,420 TO THE CITY OF WARWICK to complete sewer tie-ins in Oakland Beach increasing connections from 68 percent to over 92 percent, curbing releases of pathogens from failing septic systems into Greenwich Bay.

PROVIDED CERTIFICATES OF APPROVAL for two Clean Water Finance Agency loans totaling \$10.2 million and awarded \$650,000 in grants from state bond funds for water pollution and related projects. Continued oversight of 24 grant projects funded via the state Aquafund, Non-governmental assistance and Non-point Source bond funds.

UTILIZING FEDERAL NON-POINT SOURCE FUNDS (SECTION 319), made awards for seven new projects bringing the number of projects in progress to 21 with a value of over \$1 million.

FOLLOWING PROMULGATION IN 1998, used a new rating system to allow nonpoint pollution abatement and estuarine restoration projects to receive more equitable rankings with other water pollution control projects on

the state Priority Project List (PPL).

APPROVED WELLHEAD PROTECTION PLANS for the Towns of Charlestown, Jamestown and South Kingstown and the Pascoag Water District in Burrillville bringing the total of approved plans up to 8 or 20% of the total mandated.

PARTICIPATED IN ADVISORY COMMITTEES to develop the Source Water Protection Program being coordinated by the Department of Health Office of Drinking Water Quality.

CONDUCTED 5,600 PERMIT REVIEWS, and almost 8,000 inspections.

BEGAN PROCESSING 472 wetland permit applications.



WORKING WITH A TECHNICAL REVIEW COMMITTEE, approved five innovative and alternative on-site wastewater technologies, bringing the total approved for use in Rhode Island to nine. These technologies are particularly useful for advanced treatment near nutrient sensitive waters, such as coastal ponds, or to remedy failures on sites not amenable to conventional systems.

PARTICIPATED IN THE CSO STAKEHOLDER COMMITTEE PROCESS that culminated in recommendations to the NBC on revising its CSO abatement strategy.

ISSUED A GENERAL PERMIT via the RIPDES Program for the release of groundwater treated to remove gasoline contamination that will speed remediation response. The general permit sets effluent limits for pollutants in gasoline; sets monitoring standards and eliminates separate public notice and waiting periods for each discharge site.

RE-ISSUED THE GENERAL STORMWATER PERMITS which affect certain construction activities and industrial sites, requiring measures to reduce pollutant loadings due to runoff.

REISSUED ONE MAJOR, AND THREE MINOR INDUSTRIAL RIPDES PERMITS, and 16 orders of approval for discharges. Issued 22 approvals for facility plan updates, design plans or sewer extensions.

REGULARLY INSPECTED MAJOR WASTEWATER FACILITIES (WWTFs) and collected about 170 effluent samples. Conducted ten training sessions for wastewater facility personnel. Compiled the

annual operation and maintenance report for the 19 publicly owned WWTFs that indicated almost 80 percent operated without violation of effluent limitations.

CONTINUED TO IMPLEMENT THE USER FEE PROGRAM that allows DEM to evaluate the toxicity and pollutant loadings from WWTF discharges.

PROVIDED OVERSIGHT OF THE CLOSURE of 26 former subsurface wastewater discharges under the Underground Injection Control (UIC) Program. Conducted compliance reviews showing 96 percent compliance with permit conditions.

ISSUED 90 WATER QUALITY CERTIFICATIONS to insure that projects are designed to preserve water quality.

HOSTED THE FIRST NATIONAL ESTUARIES DAY CELEBRATION in October at the Rhode Island Mall.

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WASTE MANAGEMENT

The Department administers state and federal regulations to ensure safe handling, disposal and cleanup of solid and hazardous waste. ★ There are 43 facilities in Rhode Island that manage solid or hazardous waste materials; 2,300 facilities that store oil or hazardous materials in underground storage tanks (USTs) and over 980 properties contaminated with oil or chemicals. ★ Many sites lie in areas where problems could threaten Narragansett Bay, rivers and ponds.

More than 35 percent of regulated sites lie within 500 feet of a surface water body. Spills and leaks also threaten groundwater sources, over 89 percent of which are classified as usable for drinking water. Over 67 percent of regulated sites are in densely-populated urban and suburban neighborhoods.

The Department investigates and oversees remediation of releases of hazardous wastes or materials to protect human health and the environment. The Brownfields Program promotes cleanup, reuse and redevelopment of contaminated sites to protect the environment and return property to the tax rolls. The Department

evaluates and prioritizes suspected hazardous waste sites to ensure that sites are remediated to protect human health and the environment.

The Department also regulates Underground Storage Tanks (USTs) to protect groundwater resources by preventing or promptly detecting releases of petroleum or other hazardous substances and directing cleanup of Leaking Underground Storage Tanks (LUSTs). The Department licenses and inspects hazardous and solid/medical waste management facilities and transport to protect human health and the environment.

In 1998, the Department:

OVERSAW REMOVAL OF TWO MILLION TIRES from a used tire pile in Smithfield to create fire lanes. An additional million tires are to be removed in 1999.

INITIATED STAKEHOLDER ADVISORY COMMITTEES for Site Remediation, Underground Storage Tanks, and Waste Facility Management.

CONDUCTED 1,167 INSPECTIONS of Underground Storage Tank sites to ensure compliance with EPA's December 1998 deadline for up-to-date corrosion protection, with emphasis on sites in sensitive ground or surface water supply areas. Only three stations were not in compliance by the deadline.

UPGRADED THE UNDERGROUND STORAGE TANK REGISTRATION DATABASE to conform with the EPA national model to expedite the registration and permit process.

ISSUED OR RENEWED 54 LICENSES for underground storage tank testers.

COMPLETED 44 INVESTIGATIONS OF CONTAMINATED SITES and



The Brownfields Program opens the way to reuse of contaminated industrial sites.

15 investigations at abandoned or underused contamination sites.

THE BROWNFIELDS PROGRAM ENTERED INTO 36 SETTLEMENT AGREEMENTS with prospective purchasers of contaminated properties who agree to clean up the properties for reuse in return for DEM assurances that they would be held harmless for past environmental practices resulting in:

- Over 350 acres worth over \$47 million returned to use.
- Approximately \$1.3 million in assessed taxes generated for communities.
- 965 jobs paying estimated annual state income tax of \$3.3 million created or kept in the state.

THE BROWNFIELDS PROGRAM INITIATED TEN STUDIES to investigate and market abandoned and contaminated properties that were not attractive to investors. Five of these sites have already generated redevelopment interest.

PARTICIPATED IN EPA'S COMMON SENSE INITIATIVE with the New

England Waste Management Officials Association to develop an information package for metal finishers.

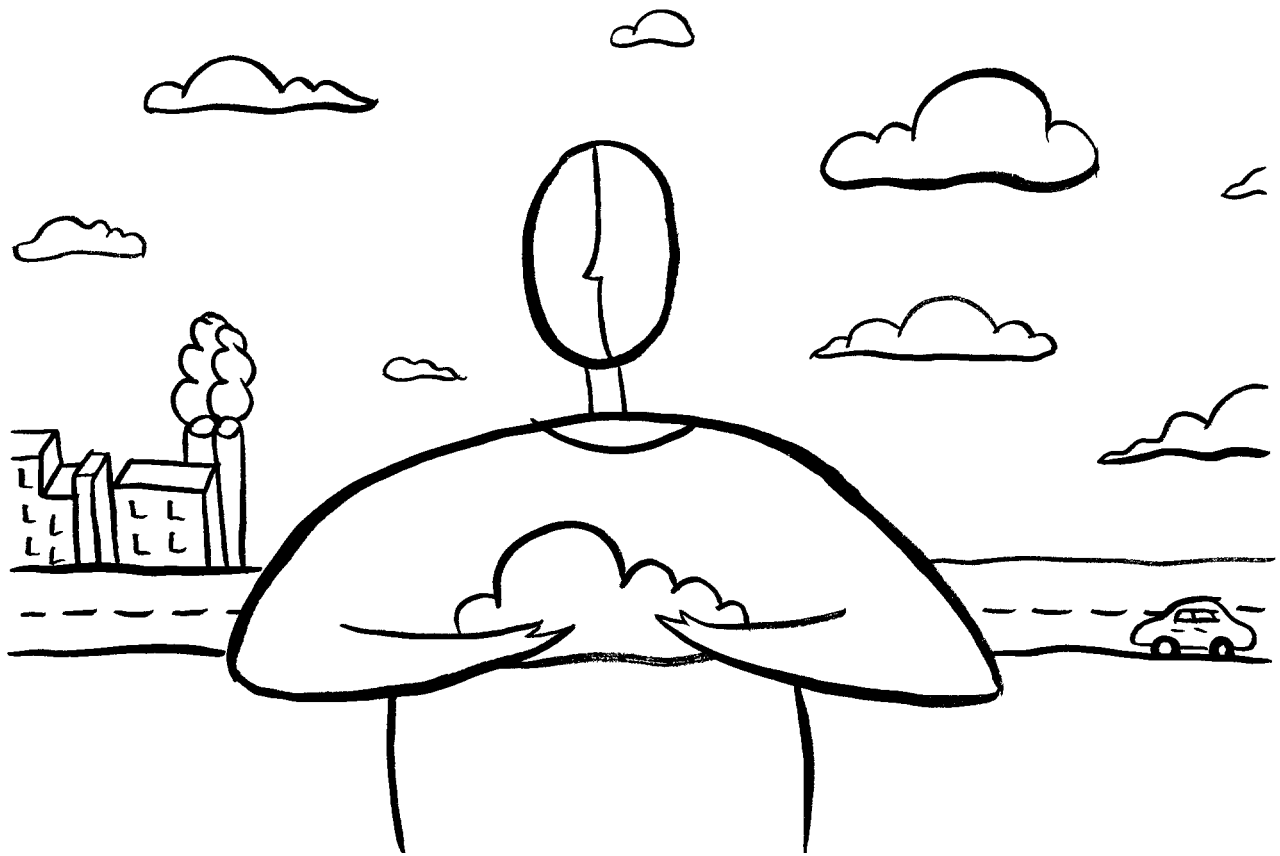
REPORTED THAT SITE REMEDIATION INVESTIGATIONS were complete for 10 of the state's 12 National Priorities List sites.

COMPLETED EIGHT REMEDIAL INVESTIGATIONS at petroleum-contaminated sites at the Mobil terminal in East Providence.

CLOSED LANDFILLS in Hopkinton and Bristol, and closed portions of the Hometown Properties landfill in North Kingstown.

PROCESSED TWO LICENSES for temporary hazardous waste storage transfer facilities and five Transfer Station License Renewal Applications, issued 2,000 permits for hazardous waste transportation units (up from 1,500 in 1997), issued 150 permits for septic waste transportation units; and registered 12 municipal/ state compost facilities.

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AIR QUALITY

After thirty years of air quality regulation, the air is measurably cleaner. Of the six major air pollutants, four continue to be controlled well under National Ambient Air Quality Standards. ★ The other two – ozone and fine particulates – are being addressed under recently tightened federal air standards*. ★ Because recent research shows adverse health effects from short-term exposure to ground-level ozone, and to exposure to extremely fine particles, EPA standards for these two pollutants were recently revised. ★ The one-hour standard for ozone was revised to an eight-hour standard. ★ The particulate standard was changed from particles that are less than 10 microns in diameter to particles less than 2.5 microns in diameter.

Ozone continues to cause problems each summer when DEM and the Department of Health issue public health warnings advising children, the elderly and those with respiratory problems to stay indoors and avoid exertion, because breathing high concentrations of ozone can cause serious health problems. ★ Ground level ozone

* These standards have been remanded to the EPA by federal court to assure that they were properly promulgated.

forms in the atmosphere during warm weather from volatile organic compounds (VOCs) and nitrous oxides emitted from vehicle exhaust and industrial sources. When public health warnings are issued, RIPTA provides free bus transportation to reduce the number of cars on the road and to raise awareness of ozone air pollution.

Because ozone is transported across state boundaries in moving air masses, DEM works with other states in groups such as the Northeast States for Coordinated Air Use Management (NESCAUM), the Ozone Transport Commission (OTC) and the EPA. To reduce local ozone-producing emissions, the Department collaborated with the Division of Motor Vehicles to design and institute a Motor Vehicle Inspection/Maintenance system to ensure that vehicle pollution control systems are working properly. DEM conducted pilot programs to determine the most cost-effective and convenient methods to redesign the inspection/maintenance system to meet public concerns. DEM is also working to implement a program to require car manufacturers to market low-emission vehicles in this area and to encourage the use of alternatively fueled vehicles.

DEM is installing a new system to monitor fine particles. Results of this monitoring will be used to determine if the state meets the EPA's new air quality standard for particles and if further emission reduction programs are needed.

DEM regulates other air pollutant emissions from stationary and mobile sources, ranging from pollutants that are irritants or adversely effect health or the environment, such as carbon monoxide, to air toxics such as benzene and trichloroethylene, that can cause cancer or have other major and/or chronic health effects.

DEM works with the Department of Health to monitor air quality. We also inventory air emissions from approximately 600 sources to identify potential problems. The Department issues permits to major sources of emissions, and inspects facilities regularly for compliance with permit limits.

In 1998, the Department:

ISSUED THE FIRST OPERATING PERMIT under the federal Clean Air Act requirement that all existing air pollution permits at a major source of pollution be consolidated into a single operating permit.

ADDED TWO STAFF POSITIONS to facilitate pre-construction permit processing. By the end of 1999, time to review minor source pre-construction permits will be reduced from six to three months.

FINALIZED THE INSPECTION/ MAINTENANCE (I/M) PILOT PROGRAM, redesigned the I/M Program to meet concerns of legislators and the public and helped the Division of Motor Vehicles to prepare to hire a contractor to operate and equip the program.

COLLABORATED WITH THE STATE ENERGY OFFICE to create a Clean Cities/Clean State Program for alternatively-fueled vehicles. Through a stakeholder process, designated Providence as a Clean City and Warwick, Cranston, Pawtucket and East Providence as candidates.

CONDUCTED 152 INSPECTIONS at stationary sources of air pollution to determine compliance, 285 inspections of gasoline stations for vapor recovery requirements, issued 58 Letters of Deficiency or Noncompliance to sources with minor compliance problems and referred 11 enforcement

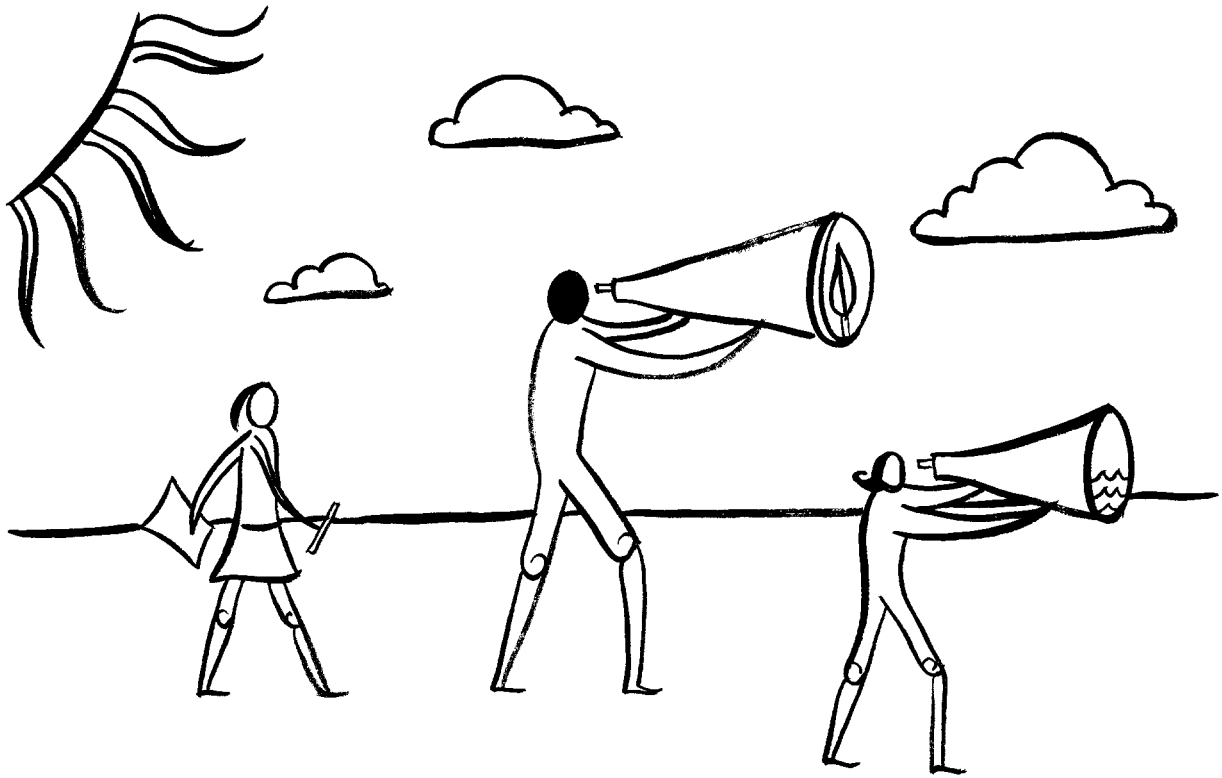
cases to the Office of Compliance and Inspection.

OBSERVED 38 STACK TESTS AT STATIONARY SOURCES to determine compliance, observed testing at approximately 75 gas stations, approved 14 open burning permits and 14 alternative lead paint removal projects, and negotiated Reasonably Available Control Technology agreements with four sources.

SUBMITTED A REVISED RATE OF PROGRESS ANALYSIS to the EPA showing the state meeting emissions reduction requirements by implementing air pollution control programs to reduce emissions of VOCs and oxides of nitrogen. Programs include limiting emissions from surface coating facilities and power plants, requiring Stage II vapor recovery systems at gas stations, and mandating the use of reformulated gas in motor vehicles.

DESIGNED A MONITORING NETWORK for fine particulates, installing samplers at six locations to help determine whether Rhode Island is in compliance with new federal standards and to identify probable sources of fine particulate matter.

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COMPLIANCE

Enforcement provides a level playing field, provides incentives to cooperation and deters those who intentionally ignore the law for profit.

★ Regulation and enforcement of environmental regulations is vital to preserve the environment for future generations and to protect public health.

The Department is responsible for a broad range of regulatory compliance and enforcement activities relating to air resources (visible emissions, fugitive dust, odors, lead paint removal and facility compliance), waste management (hazardous waste, solid waste, medical waste, underground and above-ground tanks) and water resources (discharges to surface waters and groundwater, septic systems, freshwater wetlands and dam safety), as well as emergency response operations for spills involving petroleum or hazardous materials and cost recovery associated with these incidents. ★ The Department

handles cases to be prosecuted as civil matters, investigates complaints under environmental regulations and inspects permitted facilities for compliance with permit limits. The Department also regulates and inspects the state's 510 dams to ensure proper maintenance and safety. The Department is phasing in coordinated (multi-media) inspections of facilities beginning with five companies in the chemical industry.

The Department investigates cases involving possible criminal activity pertaining to hazardous waste, solid waste, medical waste, water pollution, air pollution, submission of false documents to DEM regulatory programs and internal affairs. The Department also provides in-service training to state and municipal law enforcement agencies, fire departments and civic groups to improve their capacity to protect the environment. Since 1983, the Department has prepared about 300 criminal cases for prosecution in which about 2,500 felony charges were brought against individuals and corporations. Successful prosecutions generated approximately \$9,500,000 in fines and penalties, an annual average of nearly \$600,000. Deterrence of environmental crimes has reduced threats to public health and environmental degradation and costs of remediating contaminated sites.

The Department provides impartial hearing officers to hear appeals of adverse permitting decisions.

In 1998, the Department:

RECEIVED AND INVESTIGATED 3,800 COMPLAINTS pertaining to 2,246 sites or incidents and determined 803 to be unfounded.

COMPLETED 3,569 INSPECTIONS and 12 re-inspections.

RECEIVED AND INVESTIGATED 628 EMERGENCY RESPONSE complaints, 260 solid waste complaints and 128 lead paint complaints.

As a result:

- 420 warning letters were issued;
- 29 notices of violations were issued;
- 44 consent agreements were entered;
- 12 consent agreements were resolved;
- 2 cases were referred to Criminal Investigation;
- 21 cases were referred to Superior Court;
- 19 cases were resolved;
- \$644,837 in penalties was assessed; \$295,155 in penalties was collected; \$13,611 in costs recovered;
- 779 cases were closed.

RECEIVED 124 criminal complaints.

CONDUCTED 43 FELONY INVESTIGATIONS resulting in charges against 14 companies and individuals.

INVESTIGATED ENVIRONMENTAL CRIMES including oil spills, hazardous and solid waste violations, and water pollution violations.

COLLECTED \$9.5 MILLION IN FINES AND PENALTIES from joint state and federal investigation of environmental crimes including \$3.2 million from the North Cape oil spill case, which will be used to prevent and respond to oil spills.

PROVIDED TRAINING to local and state law enforcement agencies to help address environmental crimes.

REPORTED THAT A JUDGE'S DISMISSAL of a 1.7 million dollar judgment against DEM was upheld by the Supreme Court.

IN A DISPUTE OVER THE WATERS OF ECHO LAKE (PASCOAG RESERVOIR) in Glocester and Burrillville, obtained a preliminary injunction in Superior Court to prevent reservoir owners from rendering the DEM boat ramp on the reservoir unusable by lowering the water level.

SUCCESSFULLY DEFENDED AN APPEAL of a DEM denial of a septic system variance in Superior Court. Judges sustained the DEM decision, ruling that a variance would be contrary to public health and that substantial evidence of threat to public health rendered the amount of hardship to the applicant irrelevant. The Court did not accept the applicant's claim of takings but may have left the question open for further testing in court.

ACTED THROUGH COURT INJUNCTIONS to remediate leaking underground storage tanks at two gas stations.

OBTAINED COURT DECISIONS supporting DEM efforts to have untreated clam shells removed from a property.

OBTAINED A SUPERIOR COURT RULING affirming state ownership of a strip of land abutting the Weekapaug breachway, guaranteeing the public's right to access to the shore line.

OBTAINED AGREEMENT TO A PERMANENT INJUNCTION and payment of \$85,000 into DEM's emergency response fund by three transfer stations suspected of illegally accepting out-of-state solid waste. The case against a fourth transfer station is still in litigation.

OBTAINED A COURT DECISION affirming that DEM inspectors be allowed unhindered access to a waste facility.

FILED A SUCCESSFUL ACTION to have the U.S. Marshall seize and sell a boat that had been abandoned at a state-owned pier in the first use of the federal admiralty laws for this purpose.

OBTAINED THE LARGEST FINE YET for a violation of the state's marine fishing laws.

RESOLVED SEVERAL NOTICES OF VIOLATION against a North Kingstown landfill with a \$19,500 penalty and an agreement to close the facility in 1999.

RESOLVED OTHER ADMINISTRATIVE CASES with penalties totaling approximately \$150,000.



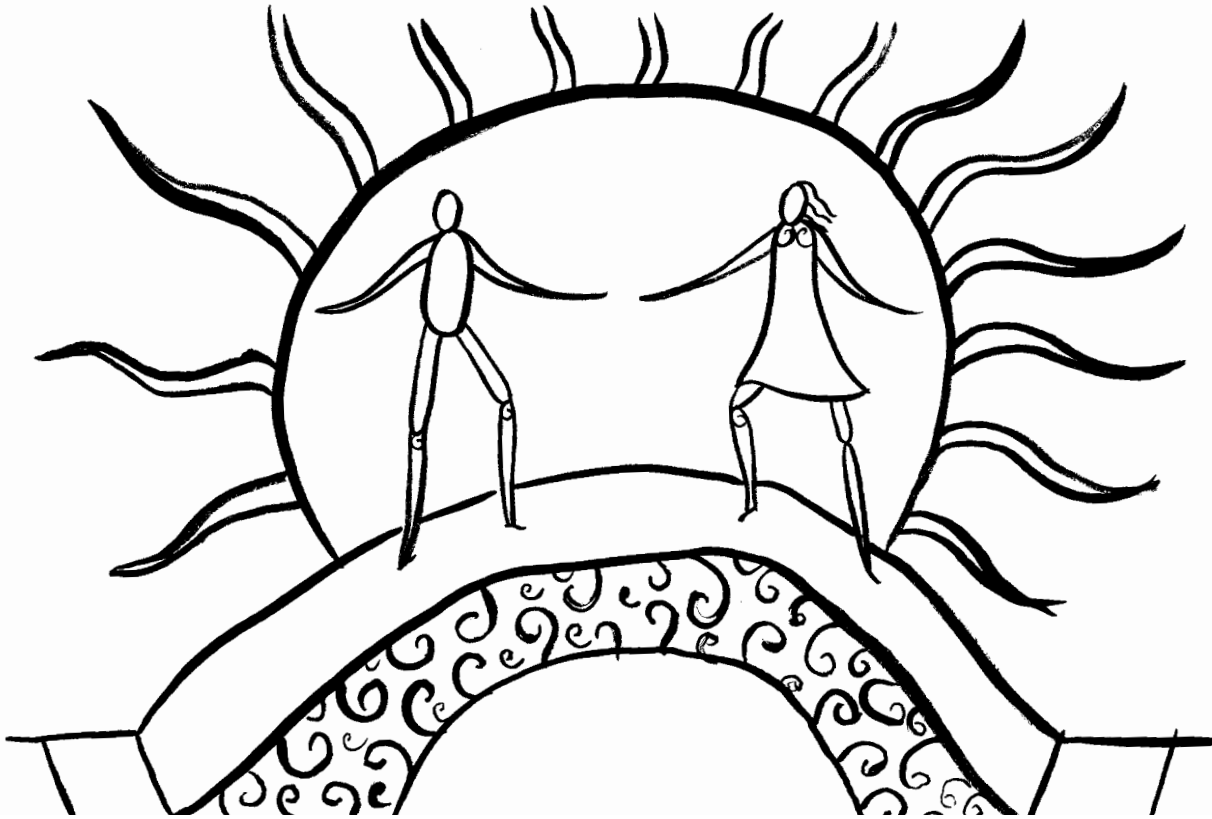
IN PARTNERSHIP WITH THE NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION, negotiated with responsible parties for the North Cape oil spill on a draft Restoration Plan and Environmental Assessment.

PLANNED TO RESUME THE PILOT MEDIATION PROGRAM, which will allow voluntary mediation of freshwater wetland enforcement cases where property-owners have not yet complied with DEM

orders. Alternate dispute resolution will speed resolution of disputed orders in a non-adversarial setting. It should avoid the need for court action and result in faster restoration of an altered site at less cost to both property-owners and DEM.

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HELPING OUR CUSTOMERS

In 1986, the Department launched an ongoing effort to help companies and individuals protect the environment and comply with environmental laws by offering free, voluntary technical assistance to prevent pollution. ★ More recently, DEM has expanded efforts to make DEM's regulatory programs more user-friendly. ★ DEM helps the public, state and local governments and businesses to comply with regulations, offers a single point of contact for permits for facilities where more than one type of environmental permit is required, provides an information repository for DEM regulations and policies and maintains a DEM website.

DEM works with businesses on a voluntary basis in partnership with the University of Rhode Island Pollution Prevention Center to help reduce the use of toxic materials to reduce pollution at the source and provides non-regulatory assistance to RI businesses and those looking to relocate to the Ocean State.

DEM coordinates and facilitates the review of the state's largest economic development projects which require a range of environmental permits.

The Department is working with a stakeholders group to develop a streamlined permitting process to serve permit applicants more quickly and efficiently.

In 1998, the Department:

ANSWERED OVER 500 GENERAL INFORMATION CALLS per week.

COORDINATED over 1,400 public records reviews.

RESPONDED TO OVER 400 REQUESTS for regulatory or permit assistance.

MADE PRESENTATIONS to 600 participants at forums and conferences.

PARTNERING WITH DUPONT AND DAVIES CAREER AND TECHNICAL SCHOOL, completed six environmental, health and safety assessments of autobody shops.

Environmental and personal air monitoring is continuing at the largest companies.

WORKED TO IDENTIFY REPLACEMENTS for highly toxic paint strippers used in autobody work and to characterize exposures to lead, cadmium, chromium, nickel and arsenic to reduce risks to workers as well as the environmental impacts on neighborhoods where autobody shops are located, often in the inner city.

BEGAN PLANNING OCCUPATIONAL HEALTH AND POLLUTION PREVENTION assessments in the health care industry in partnership with the Health Department, believed to be the first such



joint effort in this country.

PARTNERING WITH THE STATE HEALTH DEPARTMENT, developed and distributed a set of 400 fact sheets on environmental hazards in the health care industry.

WORKED WITH URI, THE EPA AND RHODE ISLAND'S HOSPITALS to reduce mercury in the medical waste stream, in response to the Mercury Action Plan of the New England Governor's Conference and the Eastern Canadian Premiers. Planned a conference to educate the RI health care industry on mercury reduction and pollution prevention.

ENCOURAGED RI HOSPITALS to participate in the EPA's Mercury Challenge.

WORKED WITH EPA/NEW ENGLAND, THE NARRAGANSETT BAY COMMISSION AND MEMBERS OF THE RHODE ISLAND COUNCIL OF ELECTROPLATERS to develop a policy to guide electroplaters and metal finishers to use evaporators with the least risk of detrimental impacts to the environment and worker health.

FACILITATED THE REVIEW of 15 of the state's largest economic development projects.

TRACKED THE ENVIRONMENTAL PERMITTING of 12 large construction projects and numerous smaller projects.

COORDINATED WITH THE ARMY CORPS OF ENGINEERS in developing, reviewing and responding to the Draft Environmental Impact Statement for the Providence River and Harbor Maintenance Dredging Project.

IN 1998, AS PART OF THE PERMIT STREAMLINING PROJECT, the Department:

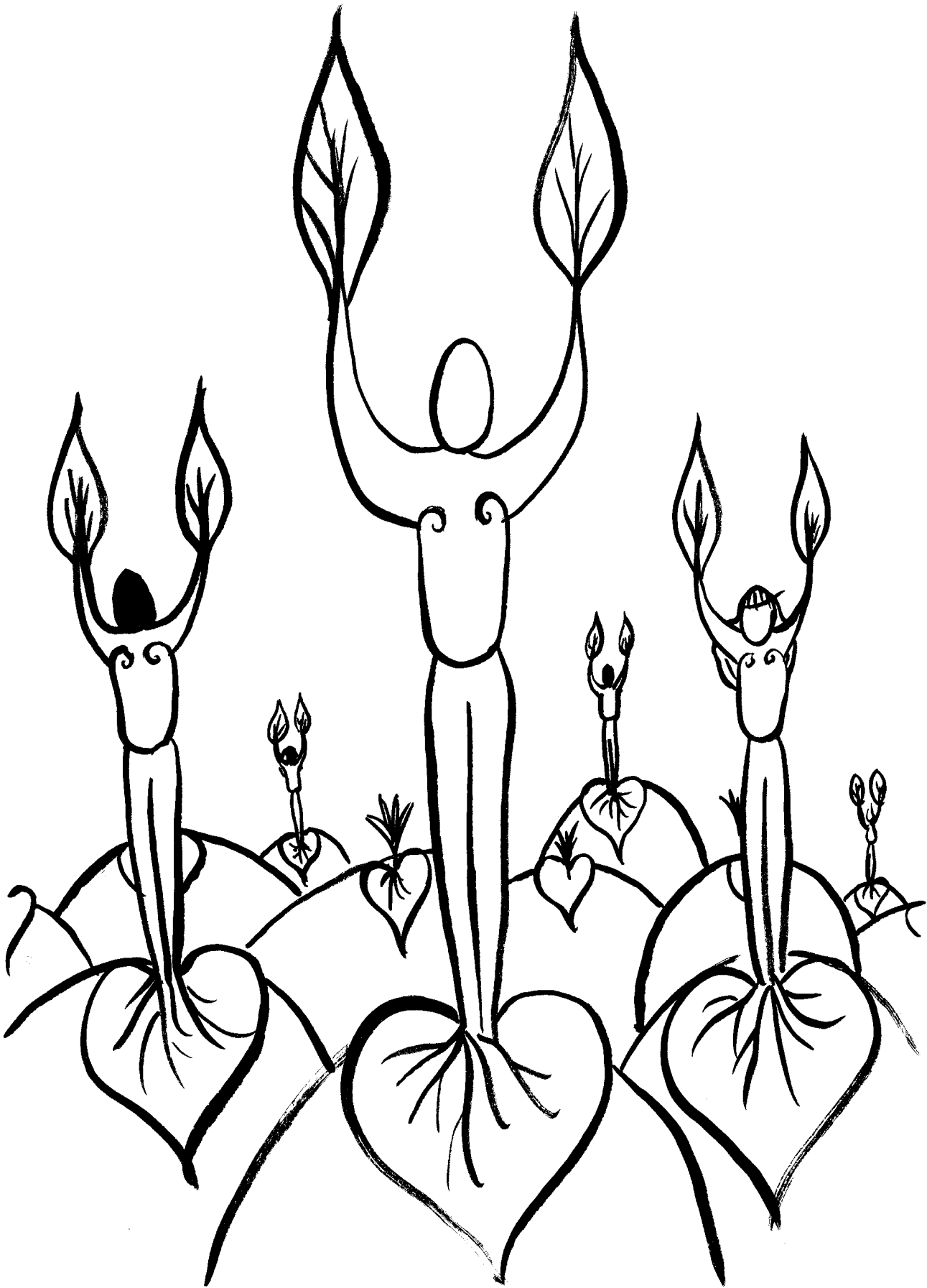
- Hired a consultant to



determine the hardware and develop the software to implement an integrated data management system for permitting.

- Implemented 49 of the 134 streamlining recommendations contained in the Peat Marwick report.

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STAYING GREEN

PUBLIC RECREATION AND GREENWAYS

DEM maintains Management Areas for hunting, fishing and hiking as well as parks, beaches and bikeways for public recreation. ★ Rhode Island's state park system consists of eight major state parks, seven state beaches, a golf course, the East Bay Bike Path, parkways, several secondary state parks, historical sites and monuments totaling approximately 14,000 acres or slightly more than two percent of Rhode Island's land area. ★ State parks and beaches are located to provide access for all residents and to offer a variety of environments, including fresh and salt water, urban and rural, picnic and hiking areas, horse trails and athletic fields.

These facilities attract two million visitors each year including 500,000 from outside Rhode Island. ★ Rhode Island's recreational facilities, shoreline access and other natural resource assets are a major element in the state's \$1.4 billion dollar tourist industry.

In 1998, the Department:

ELIMINATED ENTRANCE FEES for state parks as required by statute. Even so, the Department collected more revenue for most months due to warm weather and heavy use of state beaches.

BROKE GROUND FOR CONSTRUCTION of a new Beach Pavilion at Misquamicut State Beach in Westerly expected to open June 1999.

OPENED THE FIRST SEGMENT of the Blackstone River Bikeway in October, three and one half miles in Lincoln.

WORKED WITH RIDOT to develop plans for intermodal

transportation facilities at Fort Adams State Park in Newport.

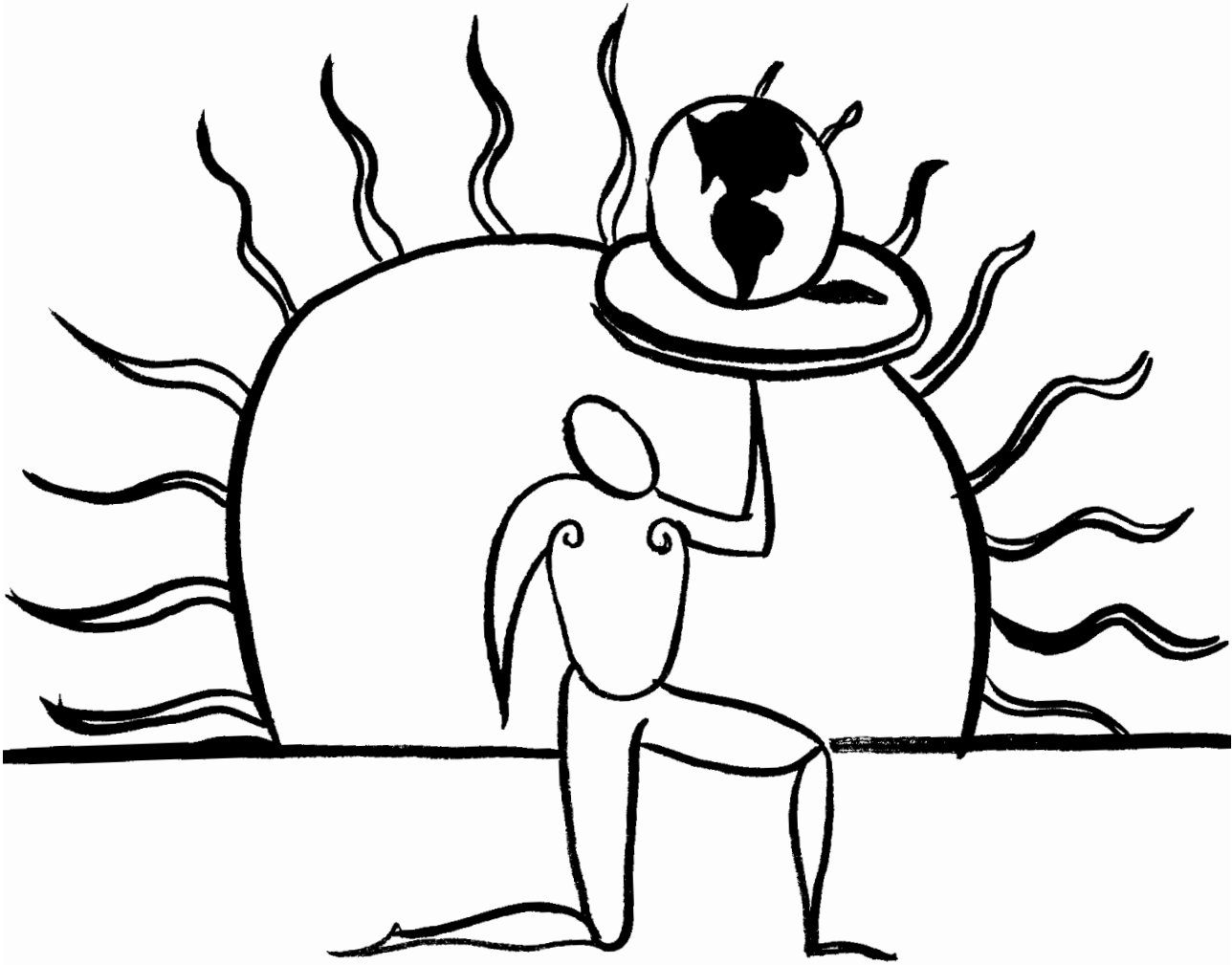
PLANNED AND BEGAN RECONSTRUCTION of the dam on Olney Pond in Lincoln Woods State Park in Lincoln, facility improvements at World War II State Park in Woonsocket, development of a new horse barn at Goddard Park in Warwick and continued development of the Blackstone River bikepath.

WORKED WITH AUDUBON SOCIETY of Rhode Island to promote environmental education programs through the Naturalist Program at Beavertail State Park in Jamestown that

attracted an estimated 25,000 people. Other Naturalist Programs were held at Lincoln Woods and Roger Wheeler State Beach in Narragansett.

HOSTED NUMEROUS SPECIAL EVENTS at state parks, including road races, charitable events, Governor's Bay Day, the Music Festivals at Fort Adams including the historic Jazz and Folk Festivals, an Irish Music Festival and a Presidential visit in December.

AWARDED 6.5 MILLION DOLLARS for 35 projects under the Recreation Area Development Fund.



LAND PRESERVATION

Encompassing 1,100 square miles, Rhode Island is the smallest state in the union and the second most densely populated after New Jersey. ★ As more people move to the suburbs, and as more rural areas become suburbs, there is less and less green space for recreation and plant and wildlife habitat. ★ DEM's programs to preserve land through acquisition and easements help protect this shrinking area.

The Department acquires land for state parks and management areas, plans development at those areas, develops new areas such as bikeways and issues grants to municipalities for open space acquisition and recreational development.

The Department maintains an inventory of the State's most significant biological features, the only centralized repository of data for Rhode Island's rare and vulnerable plants and animals and exemplary natural communities. Data are used by public and private agencies for environmental review, natural area acquisition planning, land management planning, and scientific study. Early consultation with staff is invaluable in avoiding land use conflicts, thus precluding unnecessary delay, expense and possible loss of significant sites.

The Department's Geographic Information System (GIS) maintains a computerized, geographic database of the State's environmental resources consisting of approximately seventy-five significant sets of information, such as watershed delineations, wellhead protection areas, marine habitats and locations of underground storage tanks. Using GIS software, the program provides all DEM staff with quantitative information and cartographic representation of resources, and advanced spatial analysis.

In 1998, the Department:

PURCHASED \$2,708,700 WORTH OF LAND with only \$415,000 of state money by using federal funds and matching funds from private nonprofits such as land trusts and The Nature Conservancy.

PARTNERED WITH THE FEDERAL GOVERNMENT, NONPROFITS AND LOCAL LAND TRUSTS to protect four farms in South Kingstown, Little Compton and Middletown totaling 208 acres, by acquiring development rights and assigning conservation easements to local land trusts.

PURCHASED THREE TRACTS IN SOUTH COUNTY totaling 149 acres, the state's first purchases under the North American Wetlands Conservation Act, a grant program from the US Fish and Wildlife Service to protect waterfowl habitat. State money paid for only \$250,000 of the total cost of \$1,600,000 to protect sensitive coastal land in Narragansett, South Kingstown and Westerly, areas subject to intense development pressure. The purchase of one property, a farmstand near Matunuck Beach, combined Fish and Wildlife money, land trust money and farmland preservation money, an example of how DEM leverages money by matching funding from many sources and programs.

ACQUIRED 80 ACRES OF FOREST IN SOUTH KINGSTOWN, the state's first purchase under the Forest Legacy Program, for hiking trails in cooperation with the South Kingstown Land Trust.

ACQUIRED ONE OF THE LAST PARCELS OF PRIVATELY-OWNED LAND within the boundaries of Lincoln Woods State Park and another small parcel in Little Compton.

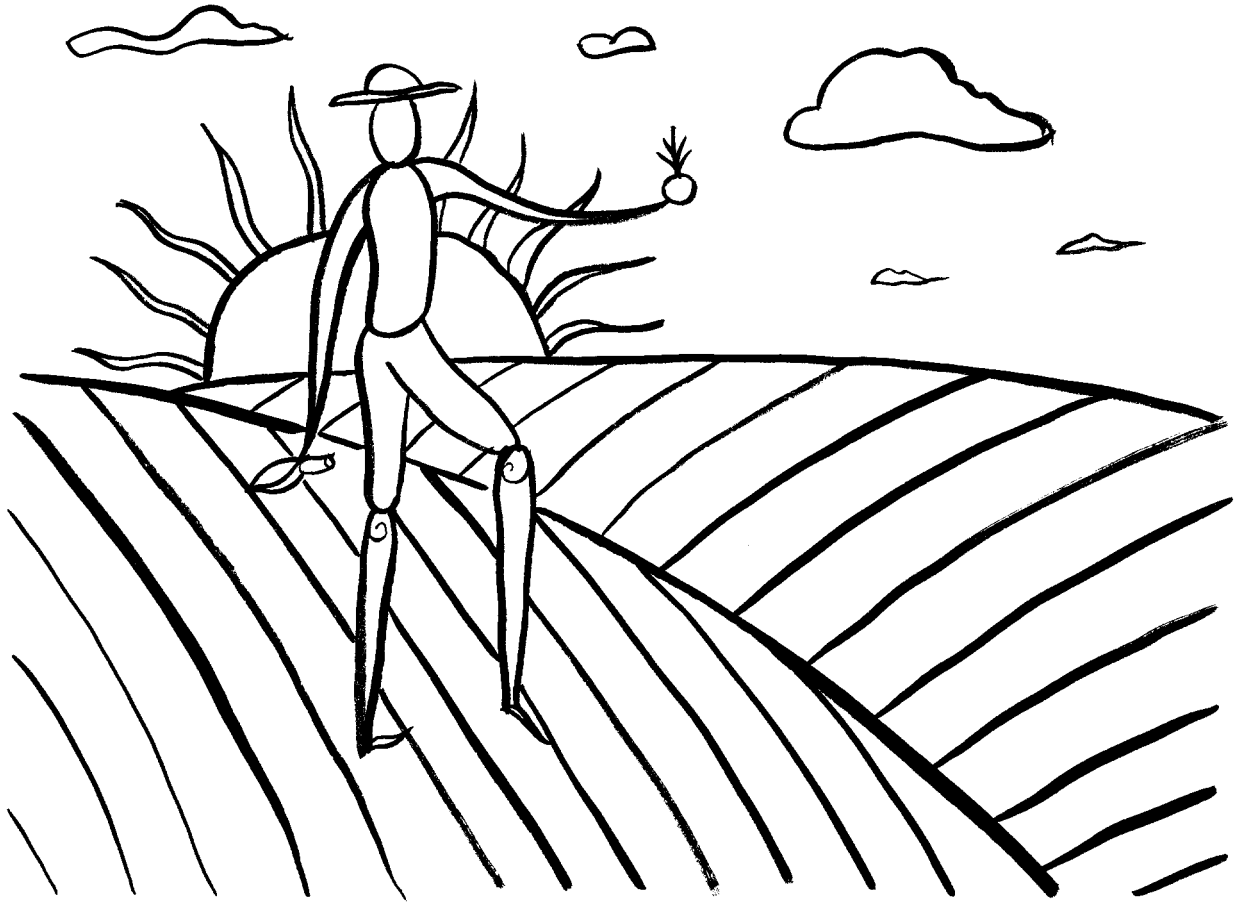
ACQUIRED TWO PROPERTIES totaling 87.5 acres in Exeter to be added to Arcadia Management Area as part of DEM's program to consolidate and expand this heavily used management area. Acquisitions planned for early 1999 will add nearly 300 more acres to Arcadia.

USED FUNDS FROM A SUPERFUND SETTLEMENT AND STATE BOND FUNDS to acquire 36 acres of wetland in Lincoln at the site of the former Lonsdale Drive-In. This site in the Lonsdale flats along the Blackstone River will be restored to provide passive recreation, boating access and a possible bikeway segment.

IN ADDITION, IN 1998: THE AGRICULTURAL LAND PRESERVATION COMMISSION WAS AWARDED \$700,000 in funding under the Farms for the Future Act to be used to match state and local funds for purchases of development rights.

GOVERNOR ALMOND ANNOUNCED AWARDS totaling nearly seven million dollars to fund 33 open space projects and protect almost 2,500 acres.





FARMING

Farming contributes about \$140 million a year to the state's economy with an additional \$48 million in value from secondary industries.

★ Because of development pressure in this densely populated state, combined with the high cost of property taxes, land under cultivation is in decline. ★ In 1850 over 80% of Rhode Island was farmland. ★ Today less than 10% of the state is farmed.

This change is part of a nationwide reorganization of the agriculture industry with centralization of the industry in massive factory farms in other parts of the country. ★ However, Rhode Islanders appreciate fresh, locally-grown products and feel it is an important part of quality of life to be able to see or visit local farms. ★ Farms provide green space and offer habitat for many songbirds and other species.

The Department is responsible for a broad range of functions that include: Providing technical and marketing assistance to farmers; elimination or control of pests and diseases that can infect farm products; preventing public health threats from animal-borne diseases such as eastern equine encephalitis or rabies; providing USDA inspections of local agricultural products for shipment and sales across state lines; certifying minimum standards of farm use products such as lime and fertilizer sold in Rhode Island; inspecting local products for compliance with grade standards and working with farmers to prevent or minimize negative impacts on the state's natural resources.

In addition to helping farmers, the Department monitors pet shops for animal health and safety, enforces laws and regulations regarding humane care and treatment of animals, provides information concerning animals and animal care; supports municipal mosquito control programs and monitors populations of the species that carry eastern equine encephalitis; works with URI to train pesticide applicators; enforces federal pesticide laws for safe use of pesticides; conducts programs to control spread of plant diseases and insect pests; awards Integrated Pest Management Grants for use of pest control methods that reduce or eliminate chemical pesticides; and certifies qualified local products as organically-grown.



In 1998, the Department:

WAS AWARDED \$60,000 from USDA to improve farmers' markets in Rhode Island and to establish a farmers' market in Goddard Park in Warwick. The new market, the first ever in a state park, was well received by farmers and consumers.

AWARDED \$66,000 IN MATCHING GRANT FUNDS to ten towns for mosquito abatement including a large scale saltmarsh water management project at the Sachuest National Wildlife Refuge.

FUNDED 12 INTEGRATED PEST MANAGEMENT GRANTS totaling \$191,000 to reduce use of chemical pesticides by developing alternate means of pest control.

HELD MEETINGS IN COOPERATION WITH THE U.S. DEPARTMENT OF AGRICULTURE at several different farms throughout the summer to educate farmers on proper use of pesticides to protect groundwater supplies and public health.

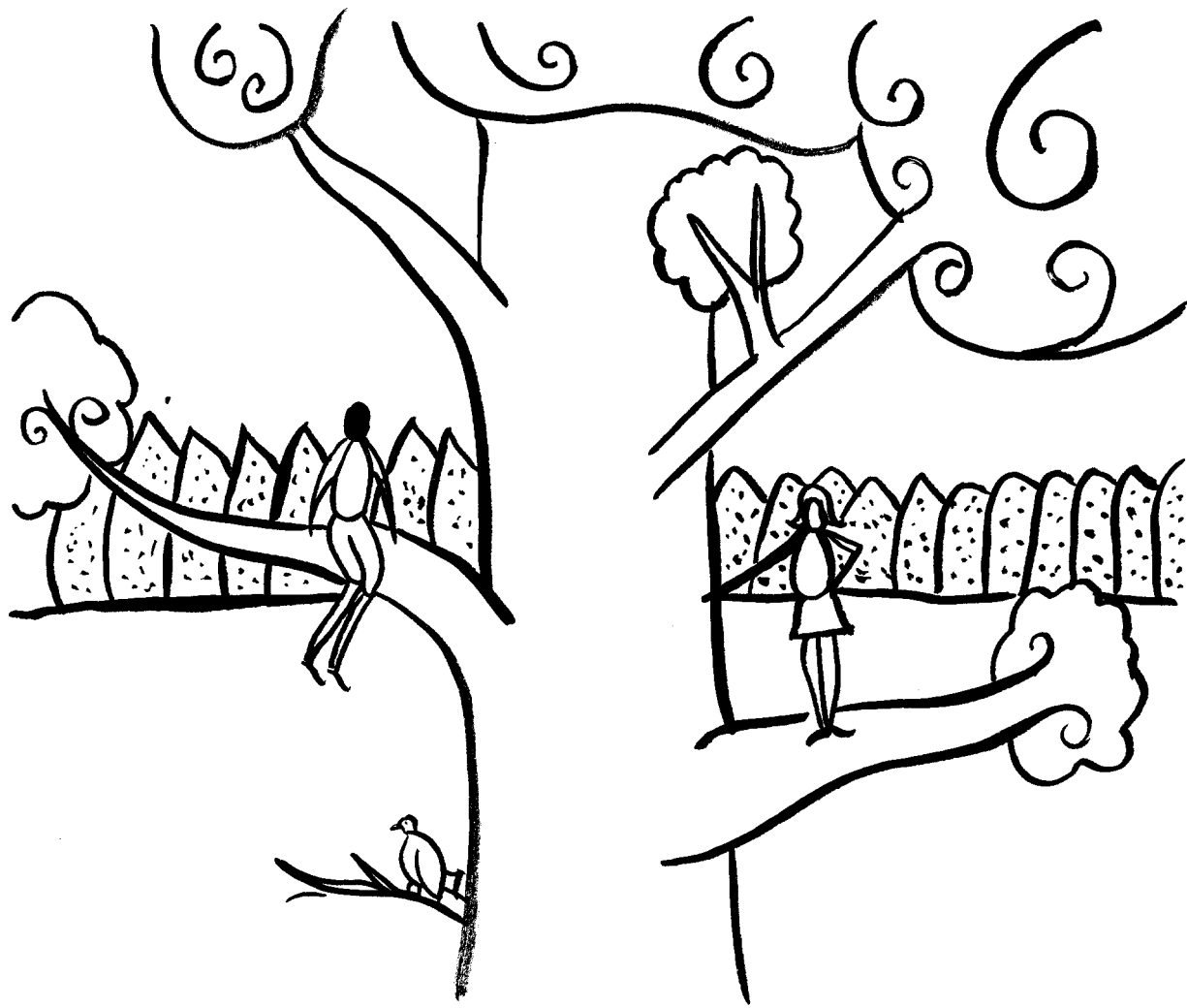
PROVIDED SERVICE TO NUMEROUS FARMERS to deal with environmental, human or animal health problems such as helping a farmer who had several animals injured in a barn fire, helping a farmer develop proper disposal of rinse water from a newly established baking operation and assisting several dairy farms with animal waste issues.

WORKED WITH THE AGRICULTURAL LAND

PRESERVATION COMMISSION TO PURCHASE development rights to four farms totaling 208 acres. More than 2900 acres of farmland on 38 farms have been preserved through this program.

DISTRIBUTED OVER 85,000 BROCHURES AND OTHER PRINTED MATERIALS promoting Rhode Island agriculture. Assisted community groups and agricultural organizations with marketing programs including radio and newspaper advertisements promoting Rhode Island crops, development of new brochures, etc.

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FORESTRY

Rhode Island's forestland contributes over 120 million dollars a year to the R.I. economy including 30 million dollars for primary industries (woodcutting and the state's 23 sawmills) and over 90 million dollars a year from the use of forest products in secondary wood industries such as furniture and pallet manufacture. ★ There are 72 wood mills dealing in such secondary products. ★ Another 48 businesses, which rely less on native wood, deal in wood pulp and paper products and contribute another 283 million dollars to the state's economy.

Rhode Island's woodlands are important for green space and wildlife habitat. ★ Rhode Islanders appreciate being able to reach upland forests with a drive of 30 minutes or less from most parts of the state.

The Department manages 40,000 acres of state-owned rural forestland, 6 percent of the state's land area and provides public recreation in management areas, including George Washington Campground, hiking and picnic areas, four intensively-used beaches, a horsemen's campground and a cross-country skiing area. It coordinates a statewide forest fire protection plan, provides forest fire protection on state lands, assists rural volunteer fire departments and develops forest and wildlife management plans for private landowners to manage property to protect forest resources.

The program promotes public understanding of environmental conservation, educates schoolchildren and the public on environmental issues pertaining to woodlands, enforces Department rules and regulations on DEM lands and helps the federal government provide landowner assistance programs. The Department works with communities to promote urban tree health to enhance property values, help clean the air and moderate temperature in urban areas, beautify neighborhoods through the planning and managing of urban ecosystems and promotes the economic health of local nurseries and small businesses in tree planting and tree care services.

In 1998, the Department:

ASSISTED OVER 250 LANDOWNERS by providing technical assistance on 7,500 acres.

AWARDED \$90,000 IN URBAN FOREST GRANTS to communities and groups for tree planting and projects, maintenance and inventories which was matched by over \$90,000 from communities. Since 1992 DEM has awarded nearly \$1,000,000 in grants which was matched by nearly \$1,300,000 from communities.

DISTRIBUTED 65,000 TREE SEEDLINGS.

PROVIDED ASSISTANCE TO LOGGERS AT 51 SITES ensuring the use of best management practices on 1,800 acres that produced 3,371,000 board feet of timber, 4,166 cords of firewood and 500 tons of wood chips.

HELPED THE FEDERAL GOVERNMENT collect forest health data on 375,000 acres of forestland.

ASSISTED COMMUNITIES IN FIGHTING 118 FOREST FIRES that burned 211 acres, achieving our target of limiting the average forest fire size to less than two acres.

LICENSED 508 ARBORISTS.

COMPLETED AN ASSESSMENT OF THE STATE'S FOREST NEEDS under the Forest Legacy Program, clearing the way for Rhode Island, one of the first states in the country to participate in this program, to acquire its first Forest Legacy property. Approvals were received to make an additional three acquisitions in 1999.

PARTNERED WITH THE RHODE ISLAND RURAL LANDS COALITION to identify strategies to protect and manage rural lands.

WORKED WITH THE URBAN FORESTRY COMMUNITY and the Rhode Island Tree Council to

coordinate a State Guide Plan for urban forestry activities within Rhode Island communities.

ORGANIZED AND HELD:

- Annual Urban Forestry Conference.
- Two Forest Stewardship Workshops.
- Two Arborist Workshops.
- Two Urban Tree Stewards Workshops.

CONTRIBUTED TO STATEWIDE ENVIRONMENTAL EDUCATION BY:

- Providing workshops for local educators.
- Providing information on environmental curricula and resources for teachers.
- Providing judges or supervisors in Future Foresters of America, Science Olympics and Envirothon.
- Serving in environmental education organizations at state, regional and national levels.
- Providing 20 educational Walks in the Woods to 450 students.

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FISHING, HUNTING AND BOATING

Fishing, hunting and boating are important to Rhode Island's quality of life and to the state's economy. ★ Marine fisheries support nearly 9,000 people in jobs associated with the commercial fishing or fish processing industry and over half a billion dollars annually for the economy.

Two hundred thousand residents and non-residents participate in recreational fishing in Rhode Island's marine waters generating 2,160 jobs and millions of dollars. ★ Another 50,000 people participate in the state's recreational shellfishery. ★ Thousands participate in hunting in the state's uplands areas spending \$162 million annually according to a 1991 federal survey. ★ Hundreds of thousands more participate in wildlife watching.



There are an estimated 54,000 boats using Rhode Island waters each year. Sales of boats and boating equipment contribute about 15 million dollars a year to the state's economy.

The Department manages the uplands and freshwater wetlands as well as the living resources in Narragansett Bay, other coastal ponds and estuaries, and marine resources of the off-shore waters, in addition to managing 48,000 acres of state-owned land. The Department also provides public access to hunting areas, maintains over 100 sportfishing access sites and boat ramps, grows over a hundred thousand trout and other freshwater fish stocking them into ponds and streams each year, and provides education to schoolchildren and the public on hunting, fishing and environmental issues.

The Department registers boats, issues marine licenses, promotes boating safety and compliance with conservation and boating safety laws and manages state port facilities to help maintain the commercial fishing industry. There are approximately 100 commercial fishing boats in Newport and approximately 300 in Galilee.

The Department provides 24-hour surveillance of the state's waters, thus protecting Rhode Island's commercial fish and shellfish industries, ensuring fish and shellfish quality and enabling the state to ship shellfish across state

lines. About 90 percent of the state's commercial shellfish harvest is sold outside the state.

The Department also enforces state and federal laws and regulations governing recreational hunting and fishing and sells over 12,000 hunting licenses, 39,000 fishing licenses and 15,000 deer hunting permits each year. Hunting and fishing are two of the largest participatory recreational activities in the state that have a significant multiplier effect in the retail sporting goods and tourism industries. Enforcing hunting regulations helps prevent accidents involving firearms.

The Department conducts search and rescue activities on the waters and in the forests of the state, responds to emergencies involving rabid animals, as well as numerous nuisance animal complaints, maintains a 24-hour hotline to respond to reports of violations seven days a week, patrols hunting and fishing grounds to enforce boating safety and conservation laws, promotes safe boating practices, provides after-hours telephone answering service for the State Fire Marshall and the Emergency Management Agency, and a radio base station for the Health Department's Drug Control agents during off hours, as well as keeping communication open during environmental emergencies such as oil spills and hurricanes.

In 1998, the Department:

DETERMINED THAT FEDERAL FISHERY MANAGEMENT PLAN COMPLIANCE was achieved for ten species of marine fish and shellfish important to Rhode Island's commercial and recreational fishery including: Lobster, summer flounder, winter flounder, striped bass, scup, black sea bass, tautog, horseshoe crab, shad and river herring.

BEGAN CONSTRUCTION OF A NEW 70 FOOT RESEARCH VESSEL and intensified data collection in Narragansett Bay and RI Sound.

CONDUCTED REVIEWS AND PREPARED COMMENTS on marine development proposals including the Providence River Dredging Plan and Quonset Point Development Plan.

TRANSPLANTED 500,000 POUNDS OF QUAAHAUGS from the Providence River to shellfish spawning sanctuaries.

MAINTAINED OVER 100 PUBLIC ACCESS FACILITIES including boat launching ramps, shorefishing areas and wildlife management area parking lots for anglers, hunters, birdwatchers, hikers and other outdoorspeople.

RESTORED 120 ACRES OF UPLAND AND WETLAND HABITAT in the wildlife management areas; planted 170 acres for wildlife food and cover, leased 260 acres for agriculture and maintained extensive waterfowl marshlands.

STOCKED NINE MANAGEMENT AREAS with 4,000 pheasants.

USED WILDLIFE POPULATION SURVEYS and surveys on hunters and harvests to manage and maintain game species.

RESPONDED TO OVER 700 NUISANCE WILDLIFE COMPLAINTS.

PROVIDED HUNTER SAFETY TRAINING for 2,125 students using the Hunter Safety Program's 100 volunteer instructors.

TRAINED 107 TEACHERS IN PROJECT WILD, PROJECT WILD AQUATIC OR PROJECT WET (WATER EDUCATION FOR TEACHERS) through the Aquatic Resource Education Program, now in its twelfth year.

SERVED 1,141 STUDENTS FROM SCHOOL AND YOUTH PROGRAMS in freshwater and marine ecology at the Division's Coastal Fisheries Lab in Jamestown; Rose Island, Newport; aboard the Vessel Night Heron, Snug Harbor and at freshwater fishing areas.

PROVIDED SPORTFISHING TRAINING to a total of 2,533 young people and five workshops on flytying to 167 adults and children.

STOCKED OVER 140,000 TROUT in over 70 locations throughout the state.

RAISED 7,000 LARGEMOUTH BASS FINGERLINGS at the Arcadia Hatchery and stocked them into selected ponds to improve largemouth bass fishing in the state.

MONITORED ANADROMOUS FISHWAYS AND SPAWNING RUNS, identifying an increase of return of shad and river herring.

PREPARED TO CONVERT TO A BIENNIAL, COMPUTERIZED REGISTRATION SYSTEM to speed processing of boat registrations.

CONTINUED OPERATING A SATELLITE REGISTRATION DESK at the state's annual boat show in January for the convenience of the public. In 1998, 502 registrations were renewed or issued at the boat show, over three times as many as in 1997.

PUBLISHED A SEVEN-LANGUAGE MARINE FISHERIES ABSTRACT to acquaint non-English speaking constituents with marine fisheries laws and regulations.

PROMOTED BOATING SAFETY THROUGH A POSTER CONTEST for grade school children. The winning artwork was used to create a poster for display at locations frequented by boaters.

CONDUCTED A CAMPAIGN WITH SUPPORT FROM NEWPORT



CREAMERY to promote use of lifejackets by children. Youths 16 and younger found wearing life jackets in boats were given certificates for free ice cream cones and boating safety packets.

INSTRUCTED 641 PEOPLE IN BOATING SAFETY PRACTICES.

CONTINUED WORK ON THE FIVE-YEAR PLAN to improve the commercial fishing ports in Galilee and Newport.

AT GALILEE, TOTALLY REPLACED THREE PIERS AND REFURBISHED MANY OTHER PIERS WITH NEW PILINGS, designed a new electrical system for eight piers, regraded firelanes and parking areas and covered them with new gravel, and worked with leaseholders to spruce up their property and remove unused trailers.

AT NEWPORT, PERFORMED A MAJOR CLEANUP AND RENOVATION grading over 250 cubic yards of new gravel, installed a new waste oil facility and removed the old tank and tainted soil, installed a new office for Conservation Officers, installed a new cap log and many new pilings and designated an area on the pier for gear storage.

ARRESTED 567 INDIVIDUALS for violating state laws.

ISSUED 1,631 WRITTEN WARNINGS.

LEVIED NEARLY ONE HUNDRED THOUSAND DOLLARS IN FINES.

SEIZED ILLEGALLY taken fish, shellfish and lobster valued at \$36,934.





WORKING FOR SUSTAINABLE COMMUNITIES

Long before sustainability became a popular term, DEM was working for sustainable communities through programs to control and reduce waste and litter, promote recycling and composting, prevent pollution and to collect used motor oil and household hazardous materials for recycling or safe disposal.★ Now, with DEM's planning effort that will guide the agency as we move to the 21st century, even greater emphasis has been placed on sustainability to find solutions that sustain the environment, the community and the economy.

DEM carries out planning, policy development and implementation of the Department's sustainable environment goal through programs in conservation development, urban environment protection, litter abatement and prevention, recycling, and the Eco-Depot (OSCAR), as well as

environmental information and education programs. It develops new programs, enhances existing programs and focuses Department resources on priority issues through comprehensive planning and policy initiatives to meet the challenges of diffuse new pollution problems that threaten natural resources and public health. DEM recognizes that one of the ways to prevent pollution and preserve our natural resources is to promote planning for sustainable development. Therefore, DEM has begun with others to develop, not anti-growth or slow-growth, but rather smart growth strategies.

DEM also encourages sustainability in the state's communities by assisting with planning to preserve the environment and providing technical assistance and financial assistance with such environmentally sensitive issues as solid waste handling. The Department aims to reduce dependence on landfills, prevent litter and protect the environment from improper disposal of household hazardous waste and hard-to-dispose-of materials. DEM operates the household hazardous waste collection facility (the Eco-Depot), automobile battery and used oil recycling programs, conducts educational outreach to promote waste reduction, recycling, litter prevention and safe disposal of problematic materials, and provides financial and technical assistance to promote recycling in businesses.

In 1998, the Department:

DEVELOPED A DRAFT DEM PROGRAM PLAN to better coordinate Department activities and develop Department-wide priorities.

MAINTAINED PARTNERSHIPS WITH THE GROW SMART COALITION AND THE RURAL LANDS COALITION to help develop statewide cooperation among state and local governments and business to more effectively manage growth.

BEGAN DEVELOPING FACT SHEETS on alternative business uses for forest lands, such as mushroom farming and ginseng growing, to help landowners maintain woodland holdings.

PUBLISHED AND DISTRIBUTED THE SCITUATE RESERVOIR WATERSHED ZONING PROJECT REPORT and companion Rural Design Manual to promote cutting-edge zoning to minimize impacts to the environment.

PROVIDED WORKSHOPS TO TOWN OFFICIALS on conservation zoning techniques.

IN PARTNERSHIP WITH URI, THE PAWCATUCK WATERSHED PARTNERSHIP AND THE RURAL LANDS COALITION started a project funded by DEM, EPA and USDA to help Wood-Pawcatuck communities manage growth, and protect resources and community character.

INITIATED AN EPA-FUNDED PROJECT WITH BROWN UNIVERSITY to compile a Greenhouse Gas Inventory showing extent and sources of greenhouse gases produced in Rhode Island. This information will be posted on the internet and used to develop an action

plan in 1999, including demonstration projects and education and outreach to address this problem.

DRAFTED AND PUBLISHED THE FRAMEWORK DOCUMENT for the EPA/DEM Performance Partnership Agreement (PPA), cited by EPA Regional Administrator John DeVillars as improving coordination between the state and federal agencies and improving environmental protection in Rhode Island. DeVillars also suggested that "Rhode Island has the potential to serve as a national model for effective environmental management."

PUBLISHED AN EXPANDED URBAN ENVIRONMENT CHAPTER in the PPA, believed to be the only such attempt to portray a state environmental agency's urban programs.

COORDINATED THE 28TH EARTH DAY CELEBRATION including 80 cleanups statewide and a festival with music, educational exhibits and activities at Goddard State Park in Warwick.

COORDINATED A POSTER ART CONTEST for RI schoolchildren with the winning art used on notecards and sold as a fundraiser for 1999 Earth Day.

RECEIVED A DONATION FROM BANKBOSTON of one half million carry-in/carry-out trash bags to be used at state parks and beaches during the summer. BankBoston also donated all entrance fees to state parks and beaches on Memorial Day, allowing state residents free access that day.



PARTNERED WITH RI AUDUBON SOCIETY AND BANKBOSTON to sponsor annual Get the Drift and Bag It! – a cleanup of coastal areas to gather data for a national program to prevent ocean dumping.

CONDUCTED 70 DR. TRASH EDUCATIONAL PRESENTATIONS for over 3,000 students at 34 schools and eight community organizations in 15 communities.

PARTNERED WITH THE ENVIRONMENT COUNCIL OF RI EDUCATION FUND to begin an EPA-funded network of environmental educators to review and disseminate environmental curricula to RI schools.

HELD 13 COLLECTIONS OF HOUSEHOLD HAZARDOUS WASTE AT THE ECO-DEPOT, serving 2,395 RI residents, collecting nearly 38,000 gallons of material including about 15,000 gallons of oil-based paint that was recycled.

COLLECTED 150,000 GALLONS OF USED MOTOR OIL for recycling through the OSCAR used oil recycling program, preserving a non-renewable resource and keeping this highly toxic material out of water supplies. OSCAR used oil collection facilities are located in most RI communities.

JOINED WITH THE TOWN OF WESTERLY TO PROMOTE A LITTER PREVENTION AND ENFORCEMENT INITIATIVE in

this popular tourist area.

AWARDED OVER \$152,000 IN GRANTS to 33 municipalities and non-profit agencies for the Youth Litter Corps which employs 200 teens and people with disabilities each summer for cleanup and other neighborhood improvement projects and provides environmental education for them.

RECEIVED AN AWARD for the Youth Litter Corps from the national organization Renew America.

BROUGHT TEN YOUTH LITTER CORPS CLEAN TEAMS to clean up the Scott's Pond area in Lincoln near the Blackstone Valley bikeway in partnership with Gaudette Machinery. Several other YLC teams joined together for such collaborative projects to clean up areas too big for one team.

PROVIDED YLC CLEAN TEAM MEMBERS WITH ENVIRONMENTAL EDUCATION at George Washington Management Area, the Scituate Reservoir water treatment plant, the Materials Recycling Facility in Johnston and the Blackstone Valley Explorer riverboat.

HOSTED THE SECOND ANNUAL RHODE ISLAND RECYCLES DAY, sponsoring 14 events statewide to promote buying recycled products.

PARTNERED WITH THE RHODE ISLAND RECYCLES DAY COMMITTEE to present awards for excellence in solid waste reduction and recycling to the City of Newport, the Towns of Barrington and Lincoln, the University of Rhode Island, Recycling for Rhode Island Education and Lieutenant Governor Bernard Jackvony.

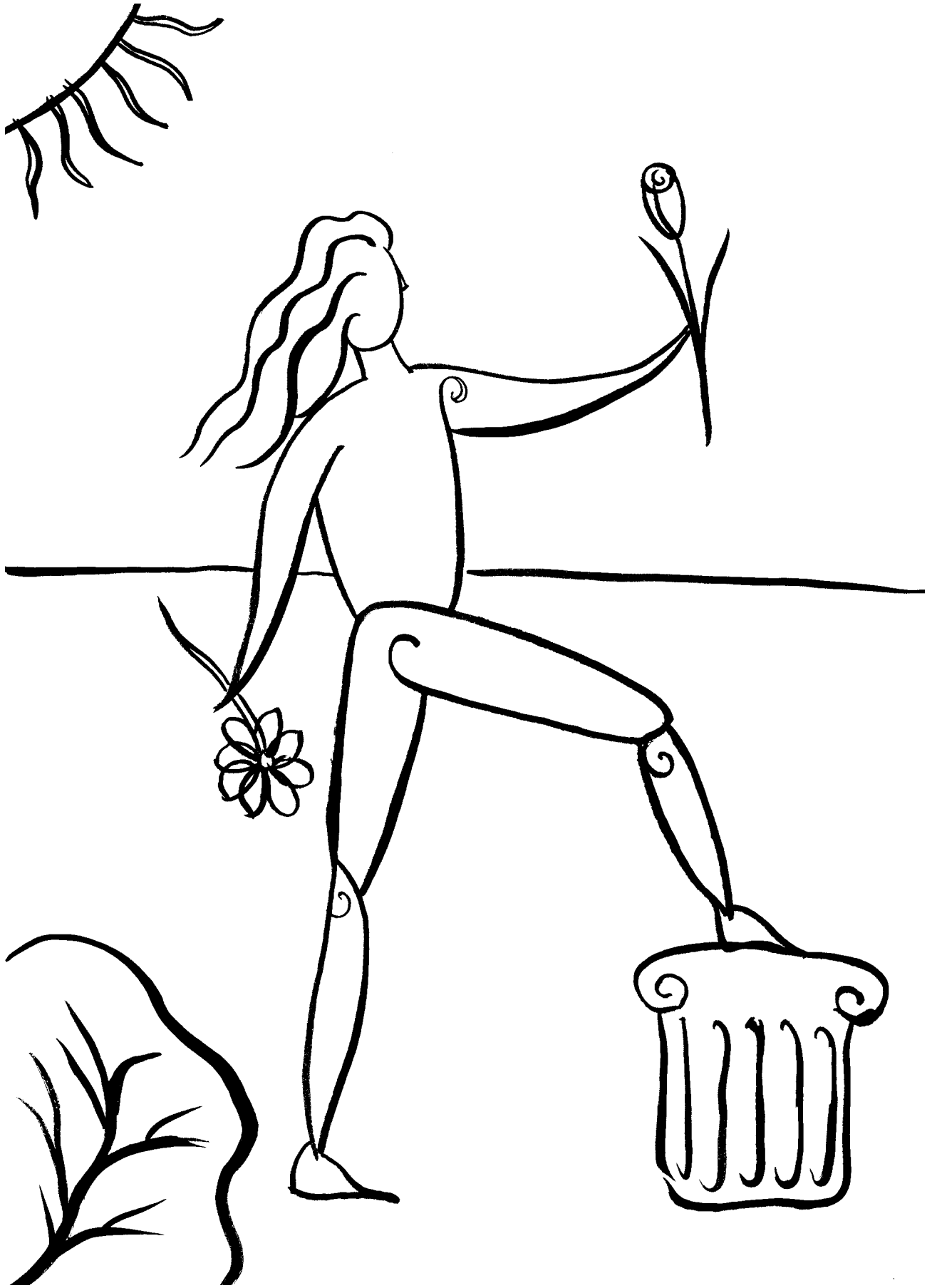
RECEIVED A \$29,000 EPA GRANT to promote pay-as-you-throw trash collection as a method to encourage waste reduction.

WORKING WITH THE RI DEPARTMENT OF ADMINISTRATION, negotiated a unified recycling contract for state offices in the Providence metropolitan area to save money and show the benefits of cooperative recycling.

HOSTED A STAKEHOLDERS WORKSHOP ON COMMERCIAL RECYCLING to share information, assess needs and establish an action plan to improve commercial recycling.

AWARDED FIVE GRANTS OF \$20,000 EACH to nonprofit agencies for cooperative ventures in recycling to provide cost-effective recycling services to small businesses and agencies. Awardees included: Arc of Northern RI, Blackstone Valley Arc and CranstonArc, which provide employment for individuals with disabilities; Recycling for Rhode Island Education; and the South Providence Development Corporation which focuses on job creation in Providence's distressed southside neighborhood.

AWARDED AN EPA-FUNDED CONTRACT TO SOUTH PROVIDENCE DEVELOPMENT CORPORATION to develop feasibility studies/business plans for three recycling businesses that would enhance recycling infrastructure and encourage economic development.



THANK YOU

TO DEM'S PARTNERS IN ENVIRONMENTAL ACTION

Protecting the environment is a big job and even a big department can't do it all. The Department of Environmental Management would like to thank the many agencies and organizations that have collaborated with DEM to help make Rhode Island a better place to live. ★ The Department offers heartfelt appreciation to the following partners for the environment:

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STATE OF RHODE ISLAND • Coastal Resources Management Council • Narragansett Bay Commission • Attorney-General's Office • Department of Health • Department of Transportation • Division of Motor Vehicles • Economic Development Corporation • Emergency Management Agency • General Assembly • Governor's Office • Greenways Council • Lt. Governor's Office • National Guard • Public Transit Authority • Resource Recovery Corporation • Statewide Planning Program • Water Resources Board • Conservation Committee

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UNITED STATES GOVERNMENT • Blackstone River Valley National Heritage Corridor Commission • Federal Bureau of Investigation • Federal Emergency Management Agency • Federal Highway Administration • National Marine Fisheries Service • U.S. Army Corps of Engineers • U.S. Coast Guard • U.S. Attorney's Office • U.S. Department of Agriculture • Farm Service Agency • Forest Service • Natural Resource Conservation Service • U.S. Department of Commerce • Economic Development Administration • National Oceanic and Atmospheric Administration • U.S. Environmental Protection Agency Region I • Lexington Laboratory • Narragansett Laboratory • U.S. Fish and Wildlife Service • Pittman-Robinson Program • Sportfish Restoration Program • U.S. Geological Survey • National Biological Service/Biological Resource Division • U.S. National Parks Service

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EDUCATION • Brown University • Community College of Rhode Island • Davies Career and Technical High School • Johnson & Wales University • Providence College • Rhode Island College • Roger Williams University • Tufts University • University of Massachusetts • University of New Haven • University of Rhode Island • Center for Pollution Prevention • Chemical Engineering Dept. • Civil & Environmental Engineering Dept. • Coastal Institute • Coastal Resources Center • College of the Environment and Life Sciences • Cooperative Extension Service • Fisheries, Animal and Veterinary Science Department • Food Science Department • Graduate School of Oceanography • Natural Resources Department • On-Site Wastewater Training Center • Plant Sciences Department • R.I. Sea Grant College Program • Textiles Department • Urban Field Center/Project Discovery • Watershed Watch Program

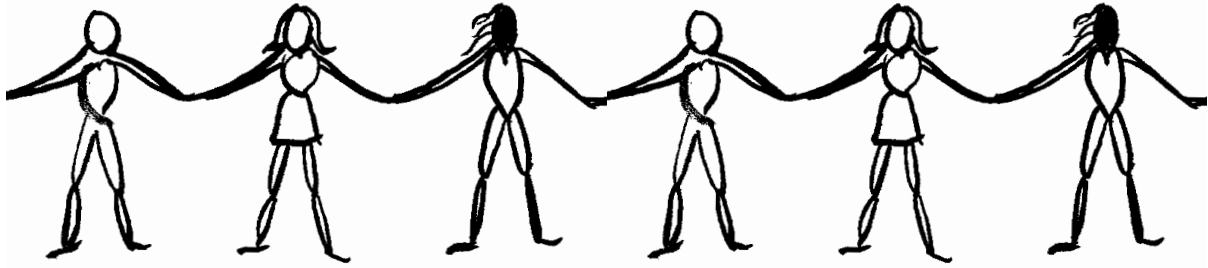
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PRIVATE ORGANIZATIONS AND OTHER AGENCIES

American Electroplaters and Surface Finishers Society • American Lung Association of R.I. • Arc of Northern R.I./Metech International • Audubon Society of Rhode Island • Blackstone Watershed Council • Blackstone Valley Chapter, ARC • Blackstone Valley Tourism Council • Champlin Foundations • Cranston Arc • Environment Council of RI * Education Fund • Environment Council of the States • GrowSmart Rhode Island • Narrow River Preservation Association • National Association of State Boating Law Administrators • National Safe Boating Council • The Nature Conservancy • New England Interstate Water Pollution Control Commission • Northeast Recycling Coalition • Northeast States for Coordinated Air Use Management • Northeast Waste Management Officials Association • Ozone Transport Commission • Partners in Resource Protection • Pawtuxet River Authority • Pokanoket Watershed Alliance • Providence Plan • Recycling for Rhode Island Education • R.I. Association of Wetland Scientists • R.I. Builders Association • R.I. Canoe and Kayak Association • R.I. Chapter, American Planning Association • R.I. Council of Electroplaters • R.I. Pretreatment Coordinators Association • R.I. Marine Trade Association • R.I. Natural Heritage Survey • R.I. Resource Conservation & Development Area • R.I. Recycling Coalition • R.I. Rivers Council • R.I. Rural Lands Coalition • R.I. Shellfishermen's Association • R.I. Tree Council, Inc. • R.I. Veterinary Medical Association • R.I. Wild Plant Society • Rhode Island's local animal control officers & numerous humane organizations • Rhode Island's Conservation Commissions • Rhode Island's Conservation Districts • Rhode Island's local land trusts • Rhode Island's municipalities • Rhode Island's public and private schools and colleges • Rhode Island's public and private water suppliers • Rhode Island's wastewater treatment authorities • The Runnins River Steering Committee • Salt Pond Coalition • Saugatucket River Heritage Corridor Commission • Save The Bay • Sierra Club • Small Craft Access Trust (SCAT) • South Providence Development Corporation • Southern New England Forest Consortium, Inc. • Stafford Pond Steering Committee • State and Territorial Air Pollution Control Administrators • State of Connecticut • State of Massachusetts • Tiogue Lake Association • Town of Seekonk • Trout Unlimited • Vision Rhode Island • William L. Burgin Architects • Wood-Pawcatuck Watershed Association

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WADK
WBRU
WERI AM/FM
WHJJ/WHJY/WSNE
WPRO AM/FM/LITE 105/
The Hawk
WRX/B101



DEM STAKEHOLDERS ADVISORY GROUPS

We also thank our many advisors – members of the public who give of their time to help plan activities and establish priorities. ★ We thank all those who have taken the time to give input, whether in phone calls, letters or in public meetings, and we are especially appreciative of those who have dedicated their time in organized advisory groups, whether on the Advisory Council on the Environment, appointed by the Governor or by joining numerous stakeholder advisory groups.

Advisory Council on the Environment • Stetson Eddy • Francis Golet • George Johnson • Keith Lang • Scott Nixon • Nancy Nowak • Beverly Scott • Harold Ward • Bruce Wilde • Walter S. Combs, Ph.D. (Ex officio, Dept. Of Health) • Rep. Paul W. Crowley • Rep. Wayne L. Salisbury • Sen. V. Susan Sosnowski • Lt. Governor Charles Fogarty

DEM Stakeholder Advisory Groups • Earth Day Advisory Group • Environment Council of Rhode Island • Environmental Education Advisory Group • Performance Partnership Advisory Group • Permit Streamlining Prioritization and Implementation Advisory Committee

Agriculture Programs • Agricultural Land Preservation Commission • Agriculture Advisory Committee • Eastern Equine Encephalitis Advisory Committee • Mosquito Abatement Board • New England Dairy Compact, R.I. Delegation • Pesticide Relief Advisory Board • Rabies Control Board • R.I. Beekeepers Association • R.I. Chapter Northeast Organic Farmers Association • R.I. Farm Bureau • R.I. Nursery and Landscape Association • R.I. Organic Certification Committee • Air Resources Programs • Motor Vehicle Inspection/Maintenance Advisory Committee • Operating Permits Advisory Committee • Risk Management Plans Stakeholders Work Group • Forest Programs • Forest Fire Advisory Committee • R.I. Trails Advisory Committee • Urban Tree Council • R.I. Forest Conservators Organization • Marine Fisheries Management Council • Striped Bass Advisory Panel • Scup Advisory Panel • Sea Bass Advisory Panel • Summer Flounder Advisory Panel • Tautog Advisory Panel • Winter Flounder Advisory Panel • Lobster Management Advisory Panel • Shellfish Management Advisory Panel • Waste Management Programs Stakeholder Advisory Group • Underground Storage Tank Program Technical Steering Committee • Waste Facility Management Program Technical Steering Committee • Site Remediation and Brownfields Program Technical Steering Committee • Water Programs • CCMP Implementation Committees • Habitat Restoration Team • Pawcatuck Watershed Partnership • PWP Water Use Stakeholder Group • Technical Review Committee/On Site Wastewater Technologies • Urban Rivers Team • Urban Strategy Advisory Group • Watershed Approach Writing Group • Well Drilling Board

DEM TABLE OF ORGANIZATION

OFFICE OF THE DIRECTOR

Jan Reitsma, Director





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