



Little Compton Landscapes

Newsletter of The Sakonnet Preservation Association

Summer 2003

Greenspace Planning Will Be Featured at July 17th Annual Meeting

Heather Steers, President, Sakonnet Preservation Association

Land is finite.

As more of Little Compton is developed, the large tracts of open space that afford environmental and scenic value diminish. Because land values have skyrocketed, protecting these undeveloped areas is getting harder and more expensive for communities.

In March, several Sakonnet Preservation Association (SPA) directors attended the Fifth Annual Rhode Island Land Trust Council Conference, titled *Conserving The Landscape, Preserving Our Communities*, in Providence. At the morning session, *Preserving Watersheds That Shape Our Towns*, Scott Millar, Chief of the Sustainable Watersheds Office of the Rhode Island Department of Environmental Management, gave a stimulating presentation on "Greenspace Planning." Also called "Open Space Planning" or "Conservation Development," this creative land-use technique allows towns to grow while preserving community character. The planning flexibility of Conservation Development allows for open space areas in conjunction with development.

Land trusts across the country are getting involved in land-use planning. Together, zoning and other regulations that are the tools of land use planning have the power to shape the landscape in ways that transcend the preservation of individual parcels. The SPA is examining land-use issues that may help maintain open space while allowing for growth.

To that end, SPA has invited Scott Millar to give his "Greenspace Planning" PowerPoint presentation at the Annual Meeting on July 17. Please come hear Scott explain an approach to planning that guides development to the areas of a site that are the most appropriate and helps to preserve open space at little cost to the town.

**The Sakonnet
Preservation Association**

presents

Greenspace Planning

A PowerPoint Presentation

by

Scott Millar

Chief of Sustainable Watersheds
Rhode Island Department of
Environmental Management

THURSDAY

July 17

6 pm

at THE STONE HOUSE

**Join the SPA at its
ANNUAL MEETING**

Public Invited

Cash Bar

Hors d'oeuvres

INSIDE THIS ISSUE:

This edition of the SPA newsletter includes the Watson Reservoir Project Report on pages 3-6. This report is a culmination of the project which began in November 2002 with a grant from the Prince Charitable Trusts. A well attended workshop was held on May 6th with the following speakers; Julie Lundgren and John Berg from the Nature Conservancy, and Lorraine Joubert from the URI Cooperative Extension reporting on the Source Water Assessment Program. The Watson Reservoir Project Committee, which includes chairman Terry Tierney, Larry Anderson, Sheila Mackintosh, Karen Richmond, Heather Steers and Sarah Storer, provided additional information. The enclosed report was written by Sarah Storer, the Watson Reservoir project manager.



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A Meadow Near Your Home

BY ROGER GREENE, LONG-TIME SPA DIRECTOR AND MANAGER OF
THE NARRAGANSETT BAY NATIONAL ESTUARINE RESEARCH RESERVE

*M*any Little Compton landowners have decided that they want a portion of their land beyond the lawn to be in meadow. There are many advantages. The most obvious is the reduction in the amount of time (or expense) in maintaining a large area as lawn. Meadows may require mowing only once a year to keep them from growing into the next stage of woody vegetation. Another advantage is the beauty of the succession of native meadow flowers that naturally appear spring through fall. The tall swaying grasses, green in the summer and yellow-brown as they mature and set seed, add to the beauty of a meadow.

Still another advantage of managing some land as meadow is the diverse habitat it creates. This is the reason that I was particularly interested in creating meadow habitat at the Narragansett Bay National Estuarine Research Reserve. (The Reserve encompasses approximately 4,500 acres: all of Hope Island, Dyer Island, nearly all of Patience Island, and 60% of Prudence Island, and the surrounding waters out to the 18 foot depth.) I worked with the Reserve staff to identify a suitable area for meadow restoration. We selected a four-acre area that had been used as a ball field. It was adjacent to the Reserve's labs and staff offices so it would be easy to monitor. To this we added three more acres bordering one of the Reserve roads. Then the Reserve scientists developed a monitoring program to determine the habitat changes within these meadows.

The results were remarkable. After only one year, we discovered that we had a native New England wildflower never found anywhere else in Rhode Island. Since this plant goes to seed each year, its numbers are increasing in the meadow. We found another plant that had been classified by the Department of Environmental Management as a plant "Of State Concern" because of the limited number of sites it has been found in RI. The Reserve is fortunate to have a rare grass growing in the Reserve that has been found in only one other site in New England. This grass quickly spread into the restoration meadow.

The monitoring of the new meadow revealed that small mammals, such as meadow voles, quickly took up residence. The mature grasses were flattened by snow during the winter, creating a mat of dead grass where the meadow voles make their covered paths and nests for their young. All of this happened within the first two years. Once the meadow could support meadow voles, predators followed. Foxes were seen hunting in the evening for meadow voles. Hawks, including many kestrels, circled the meadow during the day looking for small mammals to eat. Deer droppings were seen in the meadow, so the staff expanded the times of monitoring to determine the use of the area by these crepuscular animals (animals that are active in the early morning and evening). The Reserve's scientists saw deer in the meadow most mornings and evenings. They found evidence that they bedded down in the tall grass at the far end of the meadow.

Last year, during the third year of the meadow restoration, a visiting scientist conducted a survey of moths and butterflies in the Reserve. He caught a rare pink moth in the restoration meadow that had never before been found in Rhode Island. This moth depends on the mature stage of the rare grasses in the Reserve where it lays its eggs. [The eggs hatch and the caterpillars feed, then pupate before becoming this small delicate moth.]

Sometimes people who manage land as meadow determine their mowing schedule to ensure that ground-nesting birds have had the opportu-

Continued on back page...

The Watson Reservoir Watershed Project

In October 2002, the Sakonnet Preservation Association (SPA) received a grant to study land use and conservation within the Watson Reservoir watershed. The Watson Reservoir Watershed Project was initiated to identify and address issues within the Watson Reservoir watershed that may jeopardize the water quality of the reservoir. The project received funding from the Prince Charitable Trusts, with the mandate to conduct a thorough land-use analysis specific to the Watson Reservoir watershed and to create a systematic plan for protection of the watershed through the acquisition of development rights.

During this project, the committee members were often asked: "There's a 300 acre lake over there?" Many people see a body of water in the distance when they are walking near Windmill Hill or driving down Burchard Avenue, but have no idea what it is, who owns it or how it got there. The second question often asked was: "I'm in a watershed? What's that?" The truth is, we all live within a watershed of some body of water. The swamps, streams and brooks of Little Compton flow under roads, through woodlands and past commercial areas. They flow past houses, lawns, pastures and farmland. All of these brooks, ponds and wetlands are part of a landscape of uplands and wetlands that form a watershed. We all live among them and rely upon them for our drinking water. It is up to us to maintain the quality of these watersheds as they provide natural filtering systems for everyone's water supply.

The History of the Watson Reservoir

The Watson Reservoir lies predominantly in the northerly end of the town of Little Compton and a southern portion of Tiverton, RI. The Westport quadrangle of the USGS topographic maps shows the reservoir south and east of Windmill and Richmond Hills, two high points in the Little Compton landscape. The reservoir lies east of West Main Road, north of Peckham Road and west of Burchard Avenue. The Algonquin gas line runs SE to the NW near the northern perimeter of the watershed. The reservoir is owned and managed by the city of Newport and provides a back-up drinking water supply to Aquidneck Island. The reservoir encompasses 375 acres of open water and another 300 acres of surrounding land, all owned by the City.

Looking NW from corner
Burchard and Peckham, 1961

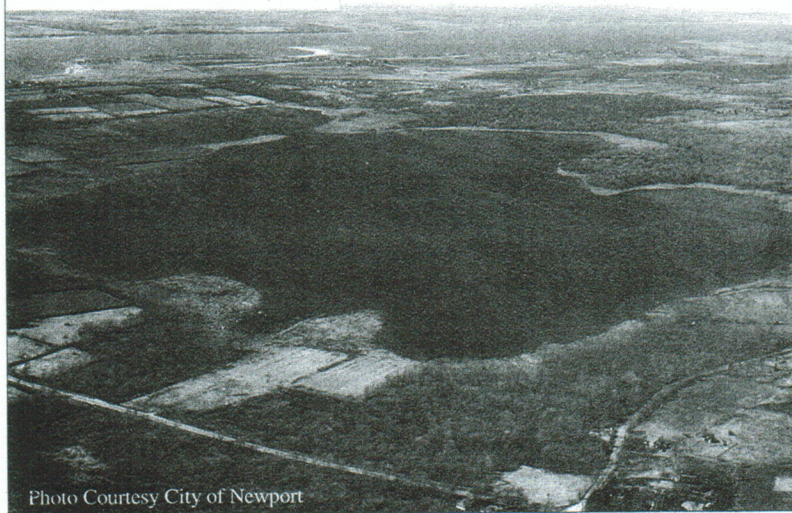


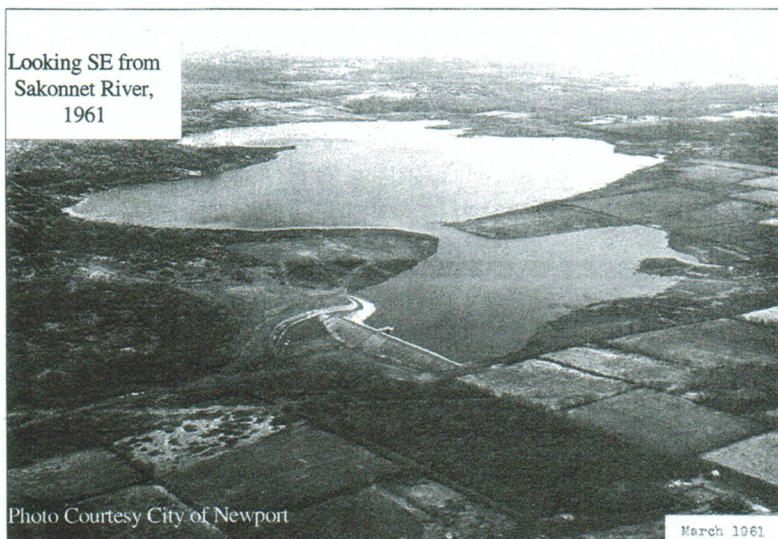
Photo Courtesy City of Newport

In the early 1950s, Dr. Henry R. Watson, then director of the Newport Water Board, conceived of the plan for the Watson Reservoir. The City of Newport sought to stabilize its water supply, and looked across the Sakonnet River to the rural lands of Little Compton for a new source of water. The plan called for a dam across the Pachet Brook at the northern end of the so-called "Cedar Swamp." The water would then be piped underground to Nonquit Pond in Tiverton. From there it would be piped under the Sakonnet River to be treated and distributed using the existing distribution facilities on Aquidneck Island. The land required to build the reservoir was acquired through various Acts passed by the Rhode Island General Assembly. These Acts expanded on the existing Act of 1933 which originally authorized the purchase of land in Middletown and Portsmouth for

the purpose of supplying drinking water for Newport. In 1953, an amendment to that Act (Chapter 3092) allowed the city to acquire any land in Little Compton for the purposes of enlarging any such water supply. That Act was amended in 1957 to allow the power of condemnation only within the Pachet Brook area north of Peckham Road. The land condemned was also limited to an area delineated no further than 200 feet beyond the 50' contour line on a USGS topographic map. In that Act, Little Compton reserved the perpetual right to purchase water from any reservoir constructed by the City within the town of Little Compton. Over a period of four years, the city purchased land from approximately 15 Little Compton landowners, totaling over 675 acres. Construction on the reservoir began in 1959, and the reservoir was filled to capacity by 1961. At maximum capacity, 1.6 billion gallons, the reservoir is designed to fill no higher than the 47' contour, and on average fills to the 45' contour. Usable capacity of the reservoir is 1.3 billion gallons, with a total unusable volume of 3 million gallons.

Watson Reservoir, the largest of the nine reservoirs within the Newport system, has a surface area of 375 acres. In addition to the body of water which makes up the reservoir, the City of Newport owns another 300 acres around the perimeter of the reservoir and holds an additional 97 acres of development restrictions on land within the watershed. Watson's watershed, the source water for the reservoir and a sub-watershed of the Sakonnet River, covers 3.71 square miles, 98% of which is in Little Compton and the remainder in Tiverton. The total land area owned or protected by the city of Newport is 33% of the entire watershed. A total of 15% of the watershed is permanently protected by the City, conservation organizations and government agencies. That leaves a significant portion of the watershed at risk of development.

In addition to the Pachet Brook, three other tributaries, draining portions of the watershed to the east and south, provide water to the



reservoir. To the north of the reservoir lies Windmill and Richmond Hills, elevated areas with farmland, bedrock outcroppings and mature woodlands. Much of the reservoir watershed is forested, with portions of the upland woods made up of oak-holly forest, a globally rare plant community, as well as low-land forests of red maple swamp with associated black gum, serviceberry and blueberry. The soils in the area are typical of this part of Rhode Island, with a relatively high water table in a great portion of them, making a good portion of the watershed unsuitable for development. Documented historic sites within the watershed include the William Whaley homestead on Burchard Avenue. This early 19th century home and barn sit among stone-walls and overlook the reservoir. The Homestead is

registered with the National Register of Historic Places.

Why protect the Watson Reservoir?

The protection of the Watson Reservoir watershed is important to the long term health and wellbeing of the town of Little Compton as well as the security of the City of Newport's drinking water supply today and Little Compton's potential drinking water source in the future.

The Issue Analysis Survey of 300 permanent residents of Little Compton, conducted by the Kitchens Group for the SPA, the Nature Conservancy and the Little Compton Agricultural Conservancy Trust in December 2002, showed that ensuring safe drinking water dominates as the primary reason for land preservation.

The Kitchens Group report states that when Little Compton residents were asked to choose among reasons for protecting open space, preserving safe drinking water was their number one reason. (Kitchens Group 2003)

"Somewhat" or "very important" reasons for preserving land were as follows (as percentage of respondents):

Protect water quality:	92%
Protect wetlands and coastal ponds:	93%
Provide habitat for birds:	90%
Protect scenic views and landscapes:	87%

The cost of community services study conducted for the Little Compton Agricultural Conservancy Trust in 1994 concluded that the benefits of the protection of open space and farmland were multifold: the open space and farmland actually subsidized the costs of services for residential properties, as well as provided long term public benefit by preserving the rural character of the town.

The Watson Reservoir watershed provides habitat for a variety of common and rare floral and faunal species. The Nature Conservancy conducted a survey of portions of the Watson Reservoir watershed while collecting data for "A Conservation Plan for Wetlands and Associated Natural Resource Areas in Little Compton and Tiverton, Rhode Island." Two of the three rare lepidopteron (butterfly and moth) species identified in the watershed during the project rely specifically on the globally uncommon oak-holly forest plant community, which occurs within the Watson watershed. Additionally, at least one plant species of state concern has been identified within the

watershed. Maintaining unfragmented forest habitat is crucial to the survival and health of this diverse wildlife community. Land uses such as open space and forested land pose minimal risk to contamination of drinking water supplies. Fish species in the tributaries and the reservoir are chiefly white perch and bluegill; in the Pachet Brook north of the reservoir four-spine stickleback and mummichogs are the predominant species.

The water quality data collected by the Rhode Island Department of Health and the Newport Water Division suggest that the Watson Reservoir has some of the best water drinking water quality of any of the reservoirs within the Newport system. Due to a variety of reasons such as a periodic build up of organics and sediment, the Newport Water Division releases from time to time the bottom water of the reservoir. The Watson Reservoir is a back-up water source for Aquidneck Island. In recent years, the usage of the reservoir has increased. From 1998 to 2002, three of the five years Newport pumped between 400-600 million gallons of water from the reservoir. The City expects that it may become more reliant on the Watson water in the future, but does not expect the reservoir ever to be economically viable as a primary water source for the island.

In the Act passed in 1953, Little Compton reserved the right to purchase water from any reservoir the City of Newport creates within the town. Additionally, individual Little Compton farmers may have specific agreements with the Newport Water Division for use of the water for agricultural purposes. Preserving the water quality for the immediate use of Aquidneck Island residents secures the quality of the drinking water for the potential use of Little Compton residents in the future.

Potential Impacts on the Watson Reservoir Water Quality

In the 1993 "Nonpoint Source Pollution Management Plan For The Newport Surface Water Supply Watersheds" published by Rhode Island Department of Environmental Management, almost 70% of the land area within the Watson/Nonquit watershed fell within the minimal risk category for contamination. Nearly 12% of the land area fell within the "slight risk" category, 17% moderate risk, and under 3% within the high-severe risk categories. Those risks to contamination include: low density residential development and agricultural/ pasture. In the 2003 Source Water Assessment (SWAP) report by Lorraine Joubert and Patricia Hickey, it is suggested that risks to the water quality of Watson will likely remain low provided that wetlands and buffer zones continue to be protected, and agricultural Best Management Practices continue to be followed. The virtually undisturbed forested shoreline in the Watson watershed provides excellent protection to the water quality of the reservoir. Forested, undeveloped land has a high infiltration rate of rain-water, and provides a good buffer for nutrients entering the hydrologic cycle. It is also far more cost effective to keep the water source uncontaminated than to treat the water once it has been collected, either in a well or a surface reservoir. While the reservoir watershed is relatively undeveloped, there is cause for concern. Based on the SWAP study, two thirds of the farmland in the Watson Reservoir watershed could be developed based on existing zoning and wetland regulations. Additionally, there are key land use types within the watershed that may pose a threat to the water quality. Currently, the Newport Water Division and the Rhode Island Department of Health test water flowing out of the Watson Reservoir. Testing of specific tributaries flowing into Watson could provide data to determine the influence of particular land use types on the water quality of the reservoir. Road run-off in the winter may have an influence on the water quality of the reservoir. Peckham and West Main Road are state roads, maintained by the RI Department of Transportation; Burchard and Willow are local roads maintained by the town. Little Compton purchases the salt for local roads and the State provides the standard 3:1 sand:salt ratio. During any storm event, the town applies a maximum of two road treatments, unless directed by the police department. The state, however, may apply more to the state roads, as it sees fit.



Planning and Preservation

A powerful tool for a community to protect the long term health of its water supply is the development of pro-active zoning regulations to preserve the natural systems that keep our drinking water pristine. Enforcing existing wetland regulations and creating innovative zoning regulations that would enhance the protection of wetlands and streams within the watershed, such as increased buffer zones, would contribute to the perpetual protection of the water quality. Preserving wetland buffers is a cost effective tool for protecting water quality. Instituting a Watershed Protection District, with regulations pertaining to On Site Disposal Systems (OSDS), pervious cover, housing density and land use, would be an effective layer of protection to the reservoir watershed. Little Compton is currently developing an On-site Wastewater Management Plan with a grant from RIDEM. The intention is to offer low interest loans to landowners interested in upgrading sub-standard or failing septic systems. Priority will be given to the two most densely populated areas of town. It may be in the best interest of the town to include the Watson Reservoir watershed as a third priority area. A mandatory inventory of OSDS's within the watershed district, and subsequent repair or replacement of failing systems, would help mitigate the impact of failing septic systems on the water quality of the reservoir.

The City of Newport owns approximately 30% of the land in the Watson watershed. Working closely with Newport and encouraging the city to permanently preserve their land could effectively reduce the threat to the water quality from residential development in the future. At the minimum, the City could be encouraged to develop a Land Stewardship Plan for the reservoir property. This plan could be an introduction to working with abutters to the Newport property to prevent activities detrimental to the reservoir's water quality, such as clearing of vegetative buffers along the shoreline of the reservoir and associated wetlands. The Plan could encourage Best Management Practices for agriculture and residential land uses alike. The City has already developed a relationship with neighbors of the reservoir; perhaps this relationship could be formalized into a Volunteer Stewardship Corps, that could assist Newport Water Division staff in monitoring City-owned lands. The Corps could also have the added benefit of giving Little Compton residents a sense of pride and inclusiveness in the largest privately-owned land mass in their town.

Currently, 18% of the town of Little Compton is permanently protected, totaling 2518 acres. Land is protected through a variety of means, and numerous private conservation organizations and public agencies have been working within Little Compton to achieve its open space goals. The Sakonnet Preservation Association, established in 1972, has worked with landowners to protect 286 acres in town. Established by voters in 1986, the Little Compton Agricultural Conservancy Trust (LCACT), has protected over 900 acres, primarily using funds raised through a 2% real estate transfer tax. The Nature Conservancy, RI Audubon, as well as the town, state and federal governments have all been very active within Little Compton, helping to protecting the rural, ecological and scenic values of the town. While regulations, zoning and responsible land stewardship can address many of the issues currently affecting the reservoir, permanently protecting open space within the watershed will insure the future protection of the water quality within the watershed. Funding may be available through various federal, state and local programs. However, perpetual land protection is most often achieved when landowners donate conservation easements, development restrictions and fee title to a conservation organization or government agency.

Watershed Awareness

Little Compton has appeared on the pages of the Wall Street Journal as the next "Hamptons." Neighboring Southeastern Massachusetts is one of the hottest real estate markets in the northeast, and the commuter rail to Boston is destined for Fall River and New Bedford. The development pressure is building in this region. Landowner and resident education is key to the long-term protection of the water quality in Little Compton and the Watson watershed specifically. Our personal, everyday decisions, as well as the actions of our local government, affect the water quality of the watersheds in which we live. Increased public awareness of those impacts can help preserve the long-term quality of our drinking water and enhance the overall quality of life for the community of Little Compton.

The Watson Reservoir Watershed Project Committee would like to acknowledge the reports and publications used to develop this report, many of which are available at the SPA office. If not, SPA would be happy to provide information for obtaining any of these publications.

A Conservation Plan for Wetlands and Associated Natural Resource Areas in Little Compton and Tiverton, RI, Jane M. Jackson, The Nature Conservancy, 2001

Estimating the Cost of Community Services in the Town of Little Compton, RI, Laurie Houston and Dennis Wichelns, 1994

Issue Analysis, Little Compton, Rhode Island, Kitchens Group, December 2002

Little Compton Comprehensive Plan, Draft, Little Compton Comprehensive Plan Advisory Committee, 1993

Nonpoint Source Pollution Management Plan for the Newport Surface Water Supply Watersheds, RIDEM, 1993

Tiverton/Little Compton Newport Water Supply Source Water Assessment, Lorraine Joubert and Patricia Hickey, URI Cooperative Extension, 2003

City of Newport Files, Newport Water Division

Report prepared by Sarah French Storer, Watson Reservoir Watershed Project Manager

KAREN RICHMOND HONORED AS SPA VOLUNTEER

The Sakonnet Preservation Association honored SPA director Karen Richmond on April 24 at the Little Compton Community Center's 4th Annual Volunteer Recognition Night for her outstanding service to the organization. SPA director Tack Eddy described her accomplishments and presented her with a framed photo and citation.

Karen joined the SPA board of directors in 1996, served as Annual Meeting Committee chair for two years, and she is currently chair of the Public Information and Stewardship Committees.

A graphic designer, Karen has designed many of SPA's flyers and promotional materials. She does the layout and production of the bi-annual newsletter. As Stewardship Chair since 1999, Karen has been responsible for setting up SPA's volunteer monitoring program. This past year she has worked closely with Sarah Storer, an experienced land manager from the Dartmouth Natural Resources Trust, compiling baseline documentation files for SPA's conservation easement properties and gathering data for the Watson Reservoir Project.

Karen has overseen the spraying and clearing of the *Phragmites australis*, an invasive reed, at the Ponderosa, an action that has proven beneficial for Little Compton's ice skaters. She enlisted volunteers to cut and remove the reeds to insure that the pond would be open when the cold weather arrived. Because of Karen's efforts, skating was the best it has been in years. After accepting her award at the recognition dinner, Karen stated, "I volunteer because I believe in land conservation and I wish to help organizations that are in need of my skills." SPA is grateful for all Karen has done and continues to do for the all volunteer organization.



Sakonnet Preservation Association

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I would like to volunteer for the SPA. ☐

A Meadow... continued from page 2

nity to fledge their young before mowing. However, mowing this early in the season may not allow some of the later-flowering meadow plants to mature and set their seed. Without setting seed, they cannot increase their numbers throughout the meadow. Delaying mowing as late as possible into the fall, perhaps even waiting to very early spring before any of the meadow plants begin to grow, may allow most of the meadow plants to mature and the habitat as a whole to develop. The grass seeds that remain on the golden grass through the winter help to increase the number of these plants and the seeds also provide food for seed-eating birds that over-winter here or migrate through in the fall or spring. Very late mowing or very early spring mowing also allows some of the grass to fall down with the winter's snow and form the mat of dead grass that can create the beginning stages of a meadow habitat near your home.

Whether it is for sheer beauty or for meadow habitat that results, creating meadows near your home is a rewarding endeavor. Some people manage for meadows in order to provide habitat for ground nesting birds. However, many of these birds require larger areas than those areas being managed and, in areas with an abundance of ground predators, such management may not result in more fledged ground nesting birds. But there are so many other species that do benefit from the creation of meadow habitats that it is well worth the effort. (Actually, it takes less effort to create meadow than to create lawn.). So sit back and watch the wildlife.

Eco-Depot

The traveling Eco-Depot sponsored by Rhode Island Resource Recovery is an opportunity for Rhode Islanders to dispose of household hazardous waste at a site closer to their homes. It debuted in Tiverton this past May. The traveling Eco-Depot's next scheduled stop for East Bay residents is Sept. 13 in Bristol. Appointments must be made in advance by calling 942-1430, ext. 241. The state's Central Landfill in Johnston regularly accepts products such as gasoline, oil paint, fluorescent light-bulbs, propane gas tanks, pool chemicals, turpentine, pesticides, paint thinner, mercury thermostats and household poisons. Rhode Islanders are urged to dispose of these items properly so as to avoid contamination of our groundwater and soils.

Postal Customer

Our Mission
The Sakonnet
Preservation
Association,
a non-profit
land trust,
is dedicated to
preserving the
rural character
and natural
resources of
Little Compton
for the lasting
benefit of the
community.
For information:
401. 635. 8800



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