



## Tackling Stormwater Education and Outreach: Developing A Strategy for Charlestown

### Education Goal #1:

Stormwater runoff is polluted, and it contributes to the pollution of local waters.

### Primary Audience:

Kids

### Key Messages:

- When it rains, water landing on driveways, roofs, roads, and other surfaces picks up pollutants and carries them directly to local water bodies without treatment.
- Storm drains carry water away without any treatment – anything that goes down a storm drain goes to local waters.
- Never dump anything down a storm drain.

### Hooks To Incorporate Within Messages:

- Swimming, fishing, boating, and general water quality are directly affected by the stormwater that goes down storm drains or flows directly into water bodies.

### Overview of Possible Methods:

Method	Resources	Contact
<p>"Scary Dad" display (with take-home factsheet) at local schools, YMCA, libraries, youth organizations, or at Town-sponsored events</p> <p>Should be conducted in the context of broader storm drain education</p>	URI Binder Section 7	-Elementary schools -YMCA -Libraries
<p>Expand storm drain info through Kid's Watershed display at a school, library program, or at Town-sponsored events<sup>1</sup></p> <p>Goal: educate all 4<sup>th</sup> or 5<sup>th</sup> graders annually</p>	URI Binder Section 6	-School science teachers -Audubon Society (Eugenia Marks) -Local watershed groups -Stormwater Education Programs (URI Binder Section 6)



### Footnotes and Ways URI Can Help:

1. A watershed model is available for loan from our office. A URI workshop on August 13<sup>th</sup> began the training process, so that a cadre of volunteers would be capable of taking the model into schools or to events, educating kids about stormwater issues. To schedule the use of the model, contact Vanessa Venturini at 874-7142.

**When necessary, we can help adapt any of the existing materials contained within the binder, so that they are customized for Charlestown.**

**We can assist with questions or coordination with other groups.**

**Education Goal #1:**

Stormwater runoff is polluted, and it contributes to the pollution of local waters.

**Primary Audience:**

Homeowners

**Key Messages:**

- When it rains, water landing on driveways, roofs, roads, and other surfaces picks up pollutants and carries them directly to local water bodies without treatment.
- Storm drains carry water away without any treatment – anything that goes down a storm drain goes to local waters.
- Never dump anything down a storm drain. Wash water, leaves, and other seemingly harmless materials also pollute stormwater and can clog drains, causing flooding.
- Recycle motor oil at a local center; drop-off paint and other household wastes at the Eco-Depot.

**Hooks To Incorporate Within Messages:**

- Swimming, fishing, and boating are directly affected by the stormwater that goes down storm drains or flows directly into water bodies.

**Overview of Possible Methods:**

Method	Resources	Contact
Direct mail or door-to-door distribution to residents using cartoons and <i>It's That Time of Year Series</i> <sup>1</sup>	URI Binder Section 1	-Neighborhood associations -Watershed groups
Ads in the <i>Westerly Sun</i> and <i>The Pipeline</i> , using cartoons and <i>It's That Time of Year Series</i>	URI Binder Section 1	
Op-Ed articles in the <i>Westerly Sun</i> , addressing general storm drain awareness	URI Binder Section 1	
Expand the town web content about stormwater <sup>2</sup>	<a href="http://www.RIStormwaterSolutions.org">http://www.RIStormwaterSolutions.org</a> Resources Link; Strategies Link  URI Binder Section 1	
Incorporate stormwater education into existing recycling education efforts		
Radio ad <sup>3</sup>	URI Binder Section 7	

## Footnotes and Ways URI Can Help:

1. Direct mail costs could be minimized, if a.) postcards were used, or b.) the Town was divided into sections, with a phased mailing, or simply focusing on residential areas near impaired waterways, or c.) volunteer groups would agree to distribute door hangers instead of using the postal system.

**2. If you are interested in pursuing this method, we can discuss a plan in greater detail.**

We would suggest specific content to be incorporated, such as:

- links to the Town's Annual Report and SWMPP,
- contact number to report discharges and erosion problems,
- Link to RIStormwaterSolutions.org

We can even share some of the main images from our RIStormwaterSolutions website.

**3. We can contact an audio/video resource at URI about editing and creating radio ads,** if you want to customize the existing radio ad that we used in our statewide campaign to mention local water resources.

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**We can assist with questions or coordination with other groups.**

**Education Goal #2:**

**Dispose of yard waste properly; especially don't dump into wetland areas**

**Primary Audience:**

Areas where dumping has been noticed

**Key Messages:**

- Never stockpile yard waste in wetlands or near surface waters; it may seem "natural," but it actually impairs water quality and causes flooding.
- Never rake yard waste toward a storm drain.
- Bag yard waste and dispose at Charlestown Residential Collection Center, or compost leaves and other yard waste when possible; it can be used for mulch later.

**Hooks To Incorporate Within Messages:**

- Boating, fishing, and local swimming beaches are impacted by what goes into smaller water bodies.

**Overview of Possible Methods:**

Method	Resources	Contact
Work with the towns to incorporate the message of proper yard waste disposal into existing recycling education efforts		
Hold a Compost Bin Sale  Could be done in conjunction with the Rain Barrel Sale (see Education Goal #3)	URI Binder Section 3	-Town Recycling Coordinator -Town Solid Waste
Use the Compost Bin Sale to publicize key messages in the <i>Westerly Sun</i> and <i>The Pipeline</i>	URI Binder Section 3	
Radio ad <sup>1</sup>		

**Footnotes and Ways URI Can Help:**

1. We can contact an audio/video resource at URI about editing and creating radio ads.

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We can assist with questions or coordination with other groups such as the URI Cooperative Extension programs.

**Education Goal #3:  
Minimize landscaping-related nitrogen inputs to coastal ponds**

**Primary Audience:**

Homeowners of property abutting coastal ponds

**Key Messages:**

- Keep fertilizer, pesticides, leaves, and grass clippings off hard surfaces and out of the path of storm drains and direct flows to bodies of water. Sweep any product that spills back onto the lawn.
- Skip the fertilizer; mow high and leave grass clippings on the lawn instead.
- If you must fertilize, September is the absolute best time. Use only slow-release fertilizer, and fertilize sparingly.
- **Avoid using lawn chemicals near wellheads or within 75 feet of waterways.**
- Water wisely: consider letting lawns go dormant in the summer; avoid watering paved areas; consider the use of drip irrigation.
- Divert rooftop runoff away from paved surfaces and away from direct flow into bodies of water.
- Keep shoreline buffers vegetated.

**Hooks To Incorporate Within Messages:**

- Boating, fishing, and local swimming beaches are impacted by what goes into smaller water bodies.

**Overview of Possible Methods:**

Method	Resources	Contact
Create a demonstration rain garden, perhaps at a local school	URI Binder Section 3	-Neighborhood associations -Plant societies -Landscape centers
Hold a Rain Barrel Sale  Could be done in conjunction with the Compost Bin Sale (see Education Goal #2)	URI Binder Section 3	-Town Recycling Coordinator -Town Solid Waste
Use the Rain Garden or Rain Barrel/Compost Bin Sale to publicize key messages in the <i>Westerly Sun</i> and <i>The Pipeline</i>	URI Binder Section 3	



Hold a Yard Care Workshop at the local library or at a regularly-scheduled meeting of a local group <sup>1</sup>	URI Binder Section 3	-Vanessa Venturini (874-7142) or the Cooperative Extension Center to reach a Master Gardener who can give the workshop -Local civic groups, rotary clubs, plant societies, landscape centers
Radio ad <sup>2</sup>		

**Footnotes and Ways URI Can Help:**

1. Having a pre-determined audience is essential. The Master Gardener will not hold the talk without having at least 20-25 attendees guaranteed. Having the workshop at an already-scheduled meeting (such as a Rotary Club meeting) might be the best approach.

2. We can contact an audio/video resource at URI about editing and creating radio ads.

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We can assist with questions or coordination with other groups such as the URI Cooperative Extension programs.

**Education Goal #4**

Animal waste contributes to stormwater pollution.

**Primary Audience:**

Pet owners; people who might feed waterfowl; property owners with property adjacent to water resources

**Key Messages:**

- Always pick up your pet’s waste. It’s easy to do when you’re prepared, so carry a bag with you, put the waste in the bag, and throw it in the trash – never in a storm drain!
- Don’t feed waterfowl; it causes them to concentrate in higher numbers than they would if they had to rely solely on natural food supplies, and that results in large quantities of waste that are carried by stormwater to local ponds, rivers, and the Bay.
- Create a buffer of higher vegetation on your property’s border with the water to discourage waterfowl such as geese from coming ashore. In time, they will stop feeding in areas that are not hospitable.

**Hooks To Incorporate Within Messages:**

- Fishing, boating, and swimming at local waterways are directly affected by what goes down storm drains.
- Tourism is directly tied to the quality of local water resources.

**Overview of Possible Methods:**

Method	Resources	Contact
Contact all local vets and animal shelters and ask to place the <i>Do You Scoop The Poop</i> fact sheet and/or the Bousquet Pooper Scooper cartoon in their offices; for those that use postcards as reminders, ask to use the cartoon as the postcard	URI Binder Section 4: List of RI Animal Shelters and Veterinarians  URI Binder Section 1: Fact sheet	
Radio ad <sup>1</sup>		





Op-Ed article addressing the issue of pet waste as a pollutant and/or Bousquet's Pooper Scooper cartoon (placed as an ad) in the <i>Westerly Sun</i>	URI Binder Section 1	
Direct mail or door-to-door visits to residents with waterfront property about buffers that deter geese populations	DEM's <i>Dealing With Resident Canada Geese</i> publication	
Signage at water bodies where people feed waterfowl		
Creation of a Town dog park or installation of pet waste stations at areas where dogs are frequently walked, including at beaches	URI Binder Section 4	

**Footnotes and Ways URI Can Help:**

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### Education Goal #5:

Support adoption and promote compliance with a stormwater ordinance designed to keep stormwater runoff onsite with new construction, expansion and redevelopment on individual parcels. Incorporate into zoning, other ordinance or subdivision regulations.

### Objectives:

Prevent increase in volume of stormwater runoff from existing or pre-development conditions to

- prevent nuisance flooding to neighboring properties;
- reduce stormwater volume and pollutants entering drainage system;
- promote pollutant removal by filtering and infiltration, maintain groundwater recharge and stream flow.

### Primary Audience:

- Council, board and commission members
- Developers, builders
- Property owners
- Applicants for building permits.

### Options:

Does a general ordinance already exist that applies to individual parcels? If so, educational materials can focus on existing requirements, information to be included in an application, and example solutions.

### Example ordinances from other municipalities

1. The following East Providence zoning provision ties the allowable increase in impervious area to the lot building coverage.

East Providence

**Code of Ordinances**

**Chapter 19 Zoning**

<http://clerkshq.com/default.ashx?clientsite=eastprovidence-ri>

#### **ARTICLE VIII. DEVELOPMENT PLAN REVIEW**

Sec. 19-455. Drainage/erosion standards.

- (10) Stormwater management. All developments shall be constructed and maintained such that adjacent or neighboring properties are not unreasonably burdened with surface waters as a result of such developments. More specifically:

- a. No development may be constructed or maintained such that development unreasonably impedes the natural flow of water from higher adjacent or neighboring properties across such development, thereby unreasonably causing substantial damage to such higher adjacent or neighboring properties;
- b. No development may be constructed or maintained such that surface waters from the development are unreasonably collected and channeled onto lower adjacent or neighboring properties at such locations or at such volumes as to cause substantial damage to such properties. The drainage plan shall address potential impacts on downstream property based on a 25-year storm. Off-site analysis shall be included in the drainage plan when required by the DPR committee; and
- c. Storm drains shall be designed based on a ten-year storm design.

**(11) Impermeable surface coverage.**

- a. Impermeable surfaces. For the purposes of calculating the amount of impermeable surface coverage, impermeable surfaces shall include all roads, driveways, parking areas, buildings, decking, rooftop landscapes and other impermeable construction covering the natural landscape. Swimming pool surface water areas for pools which discharge to the storm drainage system shall also be included. Water quality and detention basins, swales, and conveyances for drainage purposes only shall be calculated as impervious cover.
- b. Amount permitted. The maximum amount of the site that may be covered by an impermeable surface shall be determined by adding 20 percent of the site area to the maximum percent of lot building coverage established in schedules in sections 19-145 and 19-146, as applicable, of the zoning ordinance. For developments located near (within 200 feet of surface waters which are sensitive to runoff impacts, or for any developments from which runoff is discharged into any wetland or coastal feature, as defined by the state department of environmental management or the RI CRMC, the DPR committee may require a reduction of up to ten percent of the maximum allowable area of impermeable surface in order to mitigate the potential impact to the surface waters or wetland system. For developments located near wetlands or coastal features, compliance with requirements imposed by the DPR committee shall not remove the need to obtain appropriate state or federal approvals and to comply with any associated conditions.
- c. Design. Applicants shall integrate the location of permeable surfaces with the overall drainage plan for the site. Natural buffer

strips should be maintained adjacent to surface waters. Where this is not possible, vegetative filter strips, using seed mixtures recommended for this purpose and which require minimal or no fertilization should be used.

d. Parking areas. For developments located near surface waters, or for any developments from which runoff is discharged into any wetland, the DPR committee may permit the use of permeable paving materials for surfacing parking areas, provided adequate provisions have been made for delineation of parking spaces and for maintenance. It is the intent of this section that permeable surface areas shall be landscaped, and use of permeable paving materials for parking areas shall be permitted only where warranted by water quality and drainage enhancement considerations.

**2. The following Narragansett ordinance requires stormwater control for projects increasing impervious cover more than 10%. The standards for keeping runoff onsite could be stronger and also apply to redevelopment projects.**

**Narragansett**

Code of Ordinances

Chapter 78 Utilities, Article III. Sewers

<http://www.municode.com/resources/gateway.asp?pid=11204&sid=39>

(Ch. 789, § 4, 9-20-1999; Ch. 811(1), § 1(7.6), 3-4-2002; Ch. 878, § 2, 7-3-2006)

**7.7. Supplementary drainage requirements.**

No land alteration, construction, or development in the town of Narragansett may result in an increase in the rate or volume of stormwater runoff, erosion, or sedimentation off-site or downstream. All proposed construction and development which will increase the impervious surface on any lot or tract by more than ten percent of the lot area shall include systems to manage stormwater and to control erosion and sediment.

(1) *Stormwater management.* The stormwater management system for any site shall be designed to offset the increase in the rate of stormwater resulting from the proposed development. It shall implement the techniques and measures recommended in the most current revision of or supplement to "Urban Hydrology for Small Watersheds, Technical Release No. 55," prepared by the United States Department of Agriculture, Soil Conservation Service.

The system shall incorporate, to the maximum extent practicable, the natural drainage features of the site, including natural drainageways and permanent and periodic ponding areas. It also shall include stormwater control facilities such as pipes, ditches, culverts, swales, and, if necessary, water retention areas and structures.

The system shall prevent the discharge of stormwater runoff onto adjoining property in a manner which causes flooding or impairs the use or development of the property. Temporary stormwater and erosion control facilities adequate to protect adjoining property shall be installed at the commencement of construction, excavation, grading, or removal of vegetation. For purposes of this section, any property which faces a construction site across any street or highway shall be deemed adjoining property.