



Tackling Stormwater Education and Outreach: Developing A Master Strategy for South Kingstown

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>Conduct storm drain marking program, in conjunction with URI, local schools, or community groups, using stencils or markers¹</p> <p>Goal: mark all municipal storm drains, beginning with watersheds of impaired waters and Special Resource Protection Waters</p>	URI Binder Section 2	<p>-URI 101 Fall 09 storm drain marking project tentatively scheduled (Contact Lisa at 874-5687 to determine URI 101 schedule)</p> <p>- Elementary schools for teacher contacts (4th or 5th grade) or in cooperation with high schools, using student volunteers</p> <p>- High school science teachers and environmental clubs</p> <p>-Neighborhood associations</p>
<p>Incorporate storm drain info through Kid's Watershed display at a school, library program, or at a Town-sponsored booth at one of Wakefield's Block Parties²</p> <p>Goal: educate all 4th or 5th graders annually</p>	URI Binder Section 6	<p>-School science teachers</p> <p>-Audubon Society (Eugenia Marks)</p> <p>-Local watershed groups (e.g. NRPA)</p> <p>-Stormwater Education Programs (URI Binder Section 6)</p>

<p>“Scary Dad” display (with take-home factsheet) at local schools, YMCA, libraries, youth organizations, or at a Town-sponsored booth at one of Wakefield’s Block Parties</p>	<p>URI Binder Section 7</p>	<p>-Elementary schools -YMCA -Libraries</p>
<p>Should be conducted in the context of broader storm drain education</p>		

Footnotes and Ways URI Can Help:

1. Storm drain marking:

- As we mentioned in the meeting, the true value of storm drain marking lies in the education associated with the marking itself, not the deterring power of the label on the drain. I believe that Jon Schock has agreed to have **students from a URI 101 class mark drains this Fall 2009 semester**, but we should coordinate the details.
- Das Manufacturing currently has several printings scheduled. A small order could be “piggy-backed” onto other orders to reduce costs.
- **We can help with a custom design in standard two-color format.**

2. A watershed model is available for loan from our office. A URI workshop on August 13th 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 South Kingstown.

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> ¹	URI Binder Section 1	-Neighborhood associations -Watershed groups
Ads in the <i>Narragansett Times</i> , using cartoons and <i>It's That Time of Year Series</i>	URI Binder Section 1	
Op-Ed articles in the <i>Narragansett Times</i> , addressing general storm drain awareness	URI Binder Section 1	
Develop South Kingstown's web content about stormwater, including contact to report discharges and erosion problems ²	http://www.RIStormwaterSolutions.org Resources Link; Strategies Link URI Binder Section 1	
Incorporate stormwater education into existing recycling education efforts		

Develop signage about stormwater for Wakefield's River Walk along the Saugatucket		
Have a Town-sponsored booth at one of the Block Parties held on Wakefield's Main Street, providing stormwater information and/or directing people to the River Walk signage		
Radio ad ³	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 noticed that the new website has pages for wastewater, onsite wastewater, water, and solid waste, so a stormwater page would not be out of place. We would suggest specific content to be incorporated (e.g. links to the Annual Report and SWMPP) and 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.

When necessary, we can help adapt any of the existing materials contained within the binder, so that they are customized for South Kingstown. If South Kingstown's stormwater web pages are developed, we could add that URL to any materials.

We can assist with questions or coordination with other groups.



**Education Goal #2:
Eliminate illegal connections/discharges from businesses**

Primary Audience:
Local business owners

Key Messages:

- Connections that send sewage, process wastewater, wash water, or indoor drains or sinks to the Town’s storm drain system are illegal and must be removed, as specified in the Illicit Discharge Detection and Elimination (IDDE) Ordinance.
- Contaminated stormwater runoff from business sites also contributes directly to the impairment of local waters.

Hooks To Incorporate Within Messages:

- Businesses offer a public face that makes them ideal to help lead the movement toward better stormwater management in the town.
- Publicized activities, promoted as stormwater-friendly or “green,” might boost the recognition and appeal of a local business.

Overview of Possible Methods:

Method	Resources	Contact
Prepare a list of all local business owners (or those in targeted areas such as those adjacent to water bodies) and develop a mailing list		-Chamber of Commerce, Economic Development Committee or other local group
Customize a letter and send with the self-inspection checklist	URI Binder Section 5	
Offer to meet with businesses or civic groups to discuss the IDDE ordinance, its impacts on local businesses, and the idea of a local program modeled after <i>In Business For The Blackstone</i> .	URI Binder Section 5 (including a sample PowerPoint presentation)	- Chamber of Commerce - Blackstone River Coalition
Send an Op-Ed piece to the <i>Narragansett Times</i> , highlighting the ordinance and what businesses can do or are already doing (could be co-authored by town and business groups)	URI Binder Section 5	

Footnotes and Ways URI Can Help:

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

We can assist with questions or coordination with other groups.



Education Goal #3:

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 Rose Hill Transfer Station, 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
Direct mail to residents in applicable areas, possibly timed with info about recycling, using cartoons and <i>It's That Time of Year</i> Series. Materials could be customized to relate to local flooding problems.	URI Binder Section 1	
Hold a Yard Care Workshop at the local library or at a regularly-scheduled meeting of a local group ¹	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, neighborhood associations, plant societies, landscape centers
Hold a Compost Bin Sale		-Town Recycling Coordinator -Solid Waste
Use the Yard Care Workshop or Compost Bin Sale to publicize key messages in the <i>Narragansett Times</i>	URI Binder Section 3	

Add stormwater educational information such as the <i>It's That Time of Year Series</i> and additional disposal options to the Solid Waste page of the Town's website	URI Binder Section 1	
Radio ad ²		

Footnotes and Ways URI Can Help:

1. Having a pre-determined attendance is essential. The Master Gardner 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.

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

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
Adopt and advertise a pet waste ordinance; tie the adoption of the ordinance directly to pet waste as a source of water contamination	URI Binder Section 4 Including a model ordinance, sample press releases, and sample op-ed article	
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 ¹		

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>Narragansett Times</i>	URI Binder Section 1	
Direct mail 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 (possibly Saugatucket River Walk?)		

Footnotes and Ways URI Can Help:

1. 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.

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

We can assist with questions or coordination with other groups.



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.

