



Tackling Stormwater Education and Outreach: Developing A Master Strategy for Woonsocket

Education Goal #1:
Don't dump down storm drains

Primary Audience:
Areas where dumping has been noticed (South Main to River Street)

- Key Messages:**
- 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:**
- Fishing and boating on the Blackstone and swimming at local beaches are directly affected by what goes down storm drains.

Overview of Possible Methods:

Method	Resources	Contact
Conduct storm drain marking program in this area, in conjunction with local schools, using stencils or markers in English and Spanish	URI Binder Section 2	-Save The Bay -das Manufacturing (for more info about markers, including "piggy-backing" on large orders) * - Elementary schools for teacher contacts (4 th or 5 th grade) or in cooperation with high schools, using student volunteers - High school science teachers and environmental clubs - Substance Abuse Task Force, Youth Committee
Incorporate storm drain info through Kid's Watershed display at a school or library program	URI Binder Section 6	-School science teachers -RI Resource Recovery -Keep Blackstone Valley Beautiful -Northern RI Conservation District -Audubon Society (Eugenia Marks) -Stormwater Education Programs (URI Binder Section 6)
Direct mail to residents in this area, using cartoons and <i>It's That Time of Year Series</i> (provided in English and Spanish**)	URI Binder Section 1	



English language radio ad (requires slight modification of our existing radio ad to eliminate ocean sounds)***	-URI Binder Section 7	Your contacts at WNRI and WOON
Spanish language radio ad***		Identify Spanish radio station contacts

Footnotes and Ways URI Can Help:

*Storm drain markers:

- We contacted das Manufacturing (800-549-6024) about markers and adhesives to address the problem of plowing them off. There is no stronger glue that will prevent markers from coming off when sidewalks are plowed. One option would be to place markers on the road at the inlet to the drain, since a street plow might not go right up to the curb edge, and being slightly below road grade, might not be swept away by street cleaner.
- Das Manufacturing currently has several printings scheduled. A small order could be "piggy-backed" onto other orders to reduce costs.
- They have no stock design showing a container pouring a liquid. **We can help with a custom design in standard two-color format.**

* *We can contact URI's Spanish Language Program regarding translation and may be able to help cover costs. We contacted Rhode Island Resource Recovery Corporation (Nate Hannon) about their previous translation work, but have no definitive answers yet. **We are currently coordinating a meeting between ourselves, RIRRC, and Keep Blackstone Valley Beautiful.** Although Keep Blackstone Valley Beautiful's VISTA intern, Emily Soergel, will be leaving in July, her supervisor has indicated that he is willing to help participate in stormwater education efforts within the Blackstone communities. We will keep you apprised of any progress we make.

***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 articles and factsheets contained within the binder, so that they are customized for Woonsocket.

We can assist the interns or any stormwater manager 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 City’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 -Town database
Customize a letter and send with the self-inspection checklist and information about <i>In Business For The Blackstone</i>	URI Binder Section 5	Blackstone River Coalition
Offer to meet with businesses or civic groups to discuss the IDDE ordinance, its impacts on local businesses, and the <i>In Business For The Blackstone</i> Program.	URI Binder Section 5 (including a sample PowerPoint presentation)	- Chamber of Commerce - Blackstone River Coalition
Send an Op-Ed piece to the <i>Valley Breeze</i> and <i>The Call</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 Woonsocket.

We can assist the interns or any stormwater manager with questions or coordination with other groups such as the Blackstone River Coalition.



Education Goal #3:

Dispose of yard waste properly; don't dump into brooks or other areas

Primary Audience:

Single-family homes in Teresa Brook area 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 for Town recycling, or compost leaves and other yard waste when possible; it can be used for mulch later.

Hooks To Incorporate Within Messages:

- Recreating on the Blackstone (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 this area, possibly timed with info about the existing Yard Waste Program or other recycling info, using cartoons and <i>It's That Time of Year Series</i> . Materials could be customized to relate to local flooding problems.	URI Binder Section 1	
Sponsor a How-To-Compost Day to make use of all the dumped yard waste at the local, illegal dump site*		-Investigate assistance available through Master Composter Program at URI Cooperative Extension -Local High School -Environmental Group - Boy/Girl Scout Troop
Hold a Yard Care Workshop at the local library or at a regularly-scheduled meeting of a local group**	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
Hold a Compost Bin Sale (could be done in conjunction with How-To-Compost Day)		-Town Recycling Coordinator -Solid Waste

Use the How-To-Compost Day, Yard Care Workshop, or Compost Bin Sale to publicize key messages in the <i>Valley Breeze</i> or <i>The Call</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***		Your contacts at WNRI and WOON

Footnotes and Ways URI Can Help:

*Need to focus on proper yard care disposal options. What does the Town want the message to be, when the Yard Waste Pick-Up Program is not in effect? Is there a reason that residents wouldn't use the Blackstone, MA yard waste disposal site mentioned on your website? Might also want to investigate whether a local landscape company wants to take the yard waste for his/her own use as mulch or compost.

**Having a pre-determined attendance 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.

*** 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 Woonsocket.

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



Education Goal #4:

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.

