



Is Stormwater Headed in the Right Direction?

“ The cycle of life is intricately tied up with the cycle of water. ”

JACQUES COUSTEAU

Audience

- ~ planning and zoning board members
- ~ conservation commissioners
- ~ wetlands commissioners
- ~ health officers
- ~ fire departments
- ~ zoning boards of appeal

Stormwater runoff is a natural part of the water cycle. However, our land use development practices and behaviors often interfere with this cycle by altering the natural infiltration capability of the land—replacing vegetation with buildings, driveways, parking lots, roads, and sidewalks. These impervious surfaces prevent rain and snowmelt from soaking into soils and recharging groundwater. Instead, stormwater washes over these surfaces, collecting pollutants, gaining speed and volume, raising water temperatures, and ultimately discharging into the nearest storm drain or surface water. Common pollutants collected in stormwater runoff include pesticides, fertilizers, oils, road salt, litter and other debris, sediment, heavy metals, bacteria, and other pathogenic organisms.

How can communities effectively control stormwater runoff to reduce flooding and erosion, protect drinking water supplies, maintain the integrity of fisheries, and provide safe water-related activities? How can they ensure the preservation of the ecological integrity of receiving waters, riparian corridors, and associated wetlands? Today, there are many new, cost-effective solutions available to communities. Begin by targeting environmentally sensitive areas, such as source water protection areas and wetlands.

Putting the Limelight on Stormwater

U.S. EPA's Stormwater Phase II Final Rule requires operators of small municipal separate storm sewer systems located in urban areas and small construction sites (between one and five acres) to implement programs and practices to control polluted stormwater runoff. Under Phase II, hundreds of urbanized communities in New England, as well as institutions (e.g., public universities, state highway facilities, prisons) that have separate stormsewer systems are regulated. To comply, they must develop comprehensive stormwater management programs that include:

- educating and involving the public
- finding and removing illicit discharge connections
- controlling runoff from construction sites during and after construction
- preventing stormwater pollution at municipal facilities.

If stormwater runoff has been identified as a problem in your Source Water Assessment report, the Phase II requirements can serve as the foundation for creating a comprehensive program that is fine-tuned to your source protection area.



Stormwater Runoff BMPs

Stormwater impacts are typically controlled through the use of the following types of best management practices (BMPs) to treat or manage runoff quantity and quality:

- Keep the pollutants released into your source water protection area to a minimum. Implement pollution prevention BMPs.
- Use the pretreatment capacity of soils and vegetation to intercept and treat runoff before it reaches receiving waters.
- Modify designs of structural drainage systems to minimize impacts to water quality.
- Minimize the creation of new impervious surfaces by changing conventional planning and design standards.

Is Your Community Going Down the Right Path?

We've come a long way in understanding the effects of our activities on nature's complex and interconnected processes. Some of the most promising new water resource management practices seek to mimic nature's ability to process and treat polluted water right where it is produced. Strategies such as Low Impact Development (LID) lend themselves to a more integrated water management approach that addresses issues such as drinking water, wastewater, irrigation, and storm water runoff simultaneously.

So take a closer look at your storm sewer management program and address the following issues:

- how to assess existing stormwater patterns
- how to mitigate existing runoff threats to source water areas
- how to ensure that future development will not exacerbate stormwater impacts in the water supply watershed
- how to take into account the cumulative impacts of runoff on the water supply region or watershed
- how to change public and political attitudes toward the value of and need for an effective stormwater management program
- how to fund an effective stormwater management program.



Strategies for Action

✓ **Establish a comprehensive stormwater management program to prevent the contamination of present and future source water from the harmful and destructive effects of stormwater runoff.**

Identify and implement pollution prevention strategies, seek out priority pollution reduction opportunities, protect natural areas that help control runoff, and begin ecological restoration and retrofit activities to clean up degraded waters.

✓ **Take advantage of readily available GIS resources to update information on the stormwater regime (e.g., drains, existing runoff controls, runoff patterns, percent impervious surface) in your source protection area.**

Work with your water supplier to undertake a program to thoroughly understand stormwater patterns, pollutant loadings, and recharge capacity to provide a basis for addressing any problems in your source water protection area.

✓ **Update your stormwater management regulatory program.**

Incorporate wise land use planning and zoning, creative and careful site design, and appropriate BMPs in your source protection area.

✓ **Educate developers, construction contractors, homeowners, and local officials about the importance of effective stormwater management and provide them with guidance on the use of appropriate BMPs.**

Take a lead role in public education efforts through signage, storm drain marking, pollution prevention outreach campaigns, and partnerships with citizen groups and businesses. Citizens can help prioritize cleanup strategies, volunteer to become involved in restoration efforts, and mark storm drains with "don't dump" messages.

✓ **Explore funding options for the various aspects of your stormwater management program.**



FOR MORE INFORMATION

For more detailed information, check out "Water Today... Water Tomorrow? Protecting Drinking Water Sources in Your Community: Tools for Municipal Officials" at www.neiwpcc.org. To find out more about your state's stormwater management program:

Connecticut:	(860) 424-3020	http://dep.state.ct.us/wtr/stormwater/stormwtrindex.htm
Maine:	(207) 287-5404	http://www.state.me.us/dep/blwq/docstand/stormwater/
Massachusetts:	(508) 849-4005	http://www.mass.gov/dep/brp/stormwtr/stormhom.htm
New Hampshire:	(603) 271-2984	http://www.des.state.nh.us/StormWater/
Rhode Island:	(401) 222-6800	http://www.state.ri.us/dem/programs/benviron/water/permits/ripdes/stwater/index.htm
Vermont:	(802) 241-3770 or (802) 241-3777	http://www.anr.state.vt.us/dec/waterq/stormwater.htm