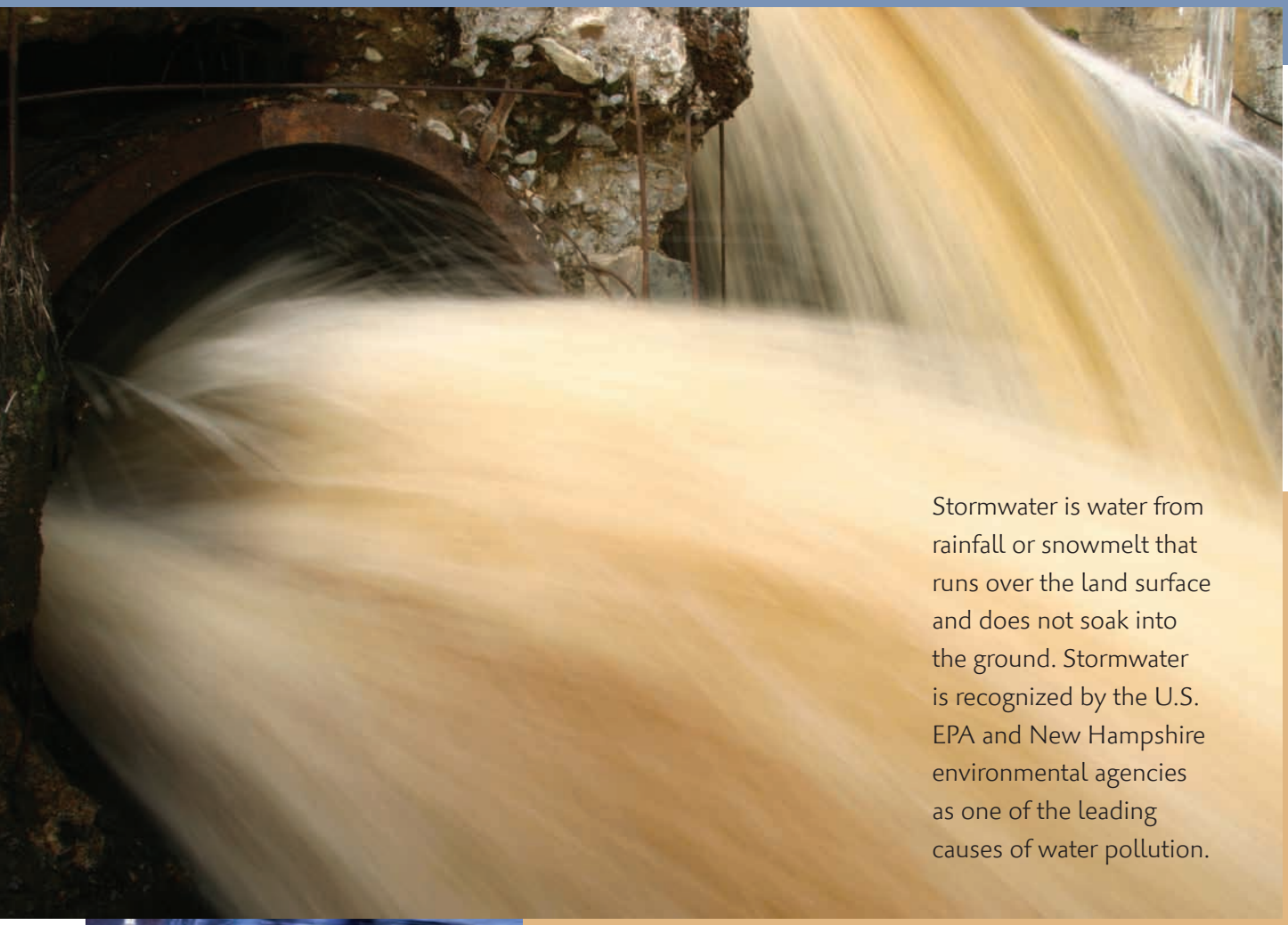
SUMMARY BRIEF

NH Stormwater Commission Final Report



Stormwater is water from rainfall or snowmelt that runs over the land surface and does not soak into the ground. Stormwater is recognized by the U.S. EPA and New Hampshire environmental agencies as one of the leading causes of water pollution.

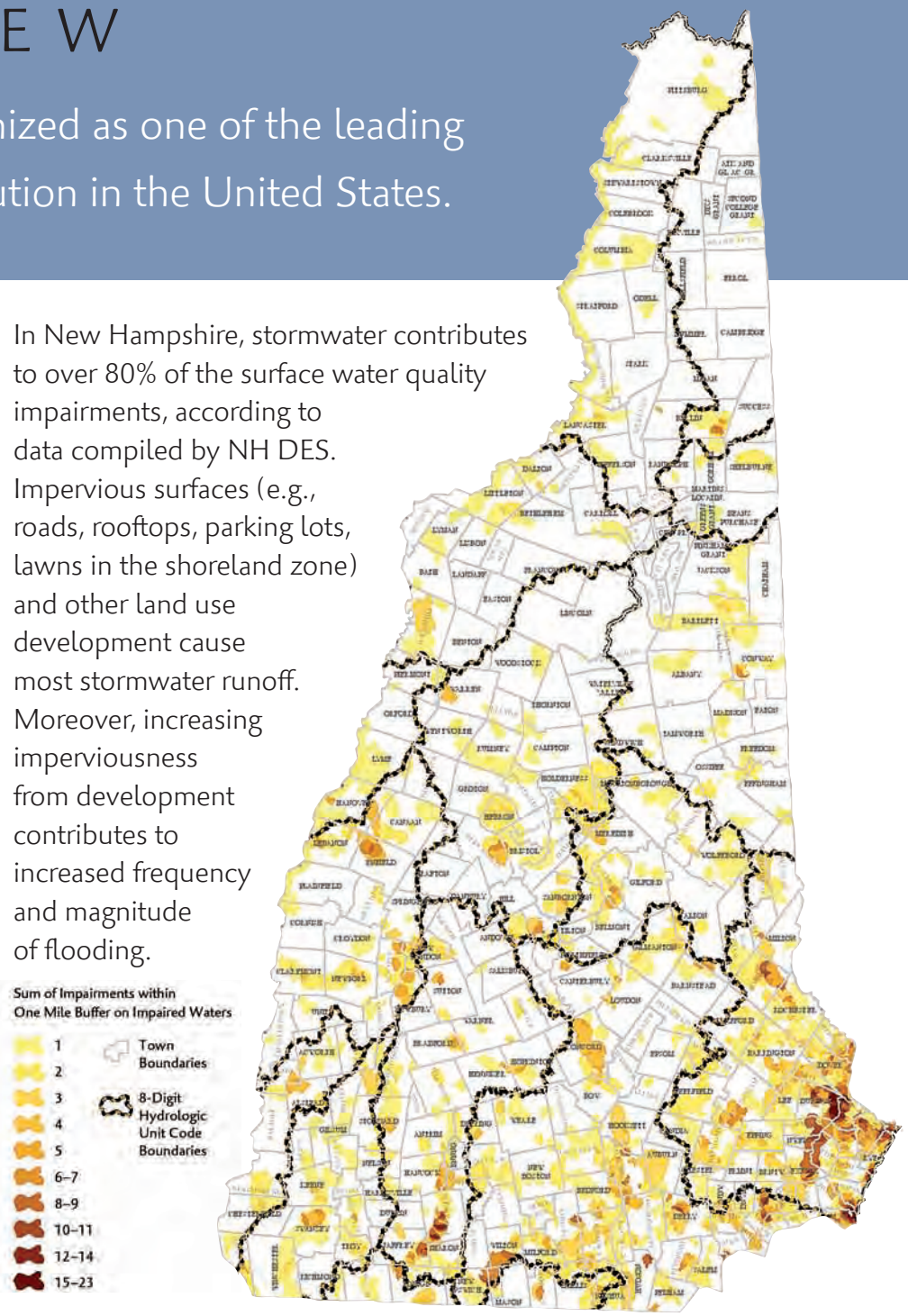
This document summarizes the major points from the Stormwater Study Commission November 2010 Final Report. The New Hampshire legislature established the Stormwater Commission in 2008 to identify issues and find solutions to reduce impacts from stormwater runoff. This Summary Brief is a non-technical overview intended for the legislature and other public officials.

The full commission report can be found at www.nh.gov/oep/legislation/2008/hb1295/index.htm

OVERVIEW

Stormwater is recognized as one of the leading causes of water pollution in the United States.

In New Hampshire, stormwater contributes to over 80% of the surface water quality impairments, according to data compiled by NH DES. Impervious surfaces (e.g., roads, rooftops, parking lots, lawns in the shoreland zone) and other land use development cause most stormwater runoff. Moreover, increasing imperviousness from development contributes to increased frequency and magnitude of flooding.



2010 surface water impairments related to stormwater with 1-mile buffer (NHDES, 2010).

Recent flooding in New Hampshire, exacerbated by imperviousness, has resulted in a tragic loss of life and millions of dollars of damage to our road and highway systems, private residences, and business properties. New regulations and action is needed on a state level in preference to and advance of new Federal regulations.

COSTS OF STORMWATER

A preliminary estimate of the capital costs to properly manage stormwater in New Hampshire is more than $180 million. The estimate was widely acknowledged by the commission to be low. While the monetary cost of managing stormwater is high, **the potential cost of inaction is even higher.**

Without significantly changing our approach to managing stormwater, New Hampshire will likely experience even more extensive flooding and degradation of water resources that will impact drinking water quality, aquatic habitat, recreational opportunities, and tourism.

In consideration of these issues, the Stormwater Study Commission was tasked with examining the following issues related to stormwater:

- The effect of stormwater and stormwater management on water quality, water supply and quantity, terrestrial and aquatic habitat, flooding, and drought hazards
- The relationship between land use change and stormwater
- The relationships among and adequacy of federal, state, and local regulations and practices that pertain to stormwater management
- State and municipal infrastructure construction and maintenance practices
- The role of design, construction, and maintenance practices by residential, commercial, and industrial property owners
- The effects of climate change on stormwater and stormwater management

THE STORMWATER PROBLEM

In contrast to a forested landscape, which infiltrates and naturally filters most precipitation and snowmelt, impervious surfaces in a watershed prevent water from soaking into the ground.

This overland flow is stormwater, which becomes polluted when it causes erosion and picks up contaminants such as nutrients and pesticides.

Even aside from pollution issues, the volume of storm-water runoff alone causes erosion and often warms surface waters, degrading aquatic habitats and damaging fisheries. Left untreated, stormwater can severely degrade the water quality of New Hampshire's waters.

Population growth and traditional development practices typically create more impervious surfaces, and in the next 20 years New Hampshire is projected to add about 180,000 new residents. Without adequately addressing the existing statewide stormwater problems and preparing for growth through improved planning and improved stormwater management strategies, additional degradation of the State's water resources from stormwater pollution will occur.

Compounding these problems are the potential impacts of climate change, which are predicted to bring about increasing rainfall, made worse by increased development and the risk of flooding.

To adapt to these changes and to protect our water resources, the Commission recommends a number of changes to the way stormwater is managed and land is developed in New Hampshire. A watershed-based strategy that distributes the responsibility and cost of stormwater management is essential to restoring and protecting the State's water resources, drinking water supplies, aquatic habitat, and recreational opportunities. Also essential is a shift away from traditional landscape development and stormwater management practices to a low impact development (LID) approach. LID is a development and stormwater management approach that focuses on controlling stormwater through better site planning, good housekeeping, and the use of small, decentralized stormwater treatment practices such as rain gardens, vegetated swales, green roofs, and porous pavement to treat stormwater close to the source.

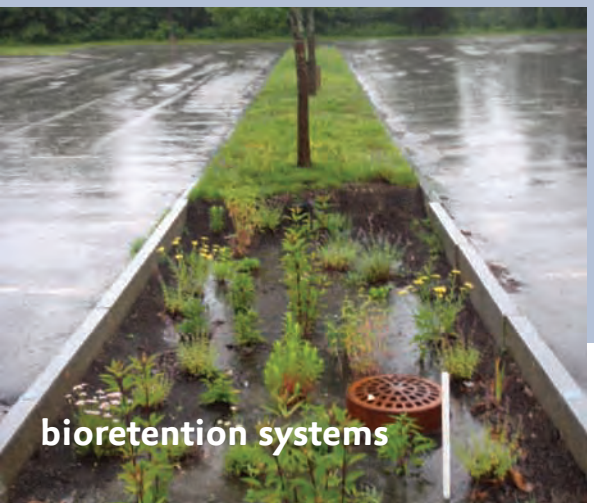
ECONOMIC ADVANTAGES OF LID

Municipalities and developers are realizing economic benefits by incorporating Low Impact Development (LID) strategies.

LID strategies, including 'green infrastructure', infiltrate stormwater back into the ground instead of allowing stormwater to run over the land surface. On a national level, substantive economic benefits for commercial development and municipal infrastructure projects are increasingly being observed when using a combination of conventional and green infrastructure for stormwater management. New York, Philadelphia, Chicago, Kansas City, and Portland, Oregon, as well as other major cities, are using green infrastructure tools as a cost-effective means of managing stormwater runoff, in addition to providing aesthetic benefits to their communities.

rain gardens

porous pavement



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Green infrastructure is often viewed as more expensive. However, costs savings are frequently realized because expensive traditional infrastructural elements can be reduced or eliminated.

Green infrastructure is often viewed as more expensive. However, cost savings are frequently realized because expensive traditional infrastructural elements, such as curbing, catch-basins, piping, ponds, and other hydraulic controls, can be reduced or eliminated. Other economic benefits include land development savings because projects require less land disturbance, a reduction in home cooling from use of natural vegetation and reduced pavement area, and higher property values. Increasing use of LID strategies will reduce the cost of development and managing stormwater as the markets develop for these products and methods.

The economic benefits of incorporating LID strategies were shown in two particular case studies in New Hampshire. These projects included a commercial and a residential development, each of which resulted in savings of 6% to 26% over the cost of permitting and construction using conventional designs, in addition to substantial environmental benefits.

RECOMMENDATIONS

Based on research over two years of study, the Commission developed a set of recommendations, draft legislation, and findings. While the Commission recognizes the broader implications of current economic conditions, it feels that its report recommendations are necessary for improving New Hampshire's stormwater infrastructure and water quality statewide, and funding the proposed implementation process. The Commission's recommendations include the following:

1 Define the Term "Stormwater" in State Law

Add a definition of stormwater in state law to clarify that stormwater is not sewage or waste. Expand upon and make the stormwater definition consistent with the federal definition of 40 CFR 122.26(b)(13):

"Stormwater means stormwater runoff, snow melt runoff, and surface runoff and drainage."

2 Property Owner's Responsibility for Stormwater

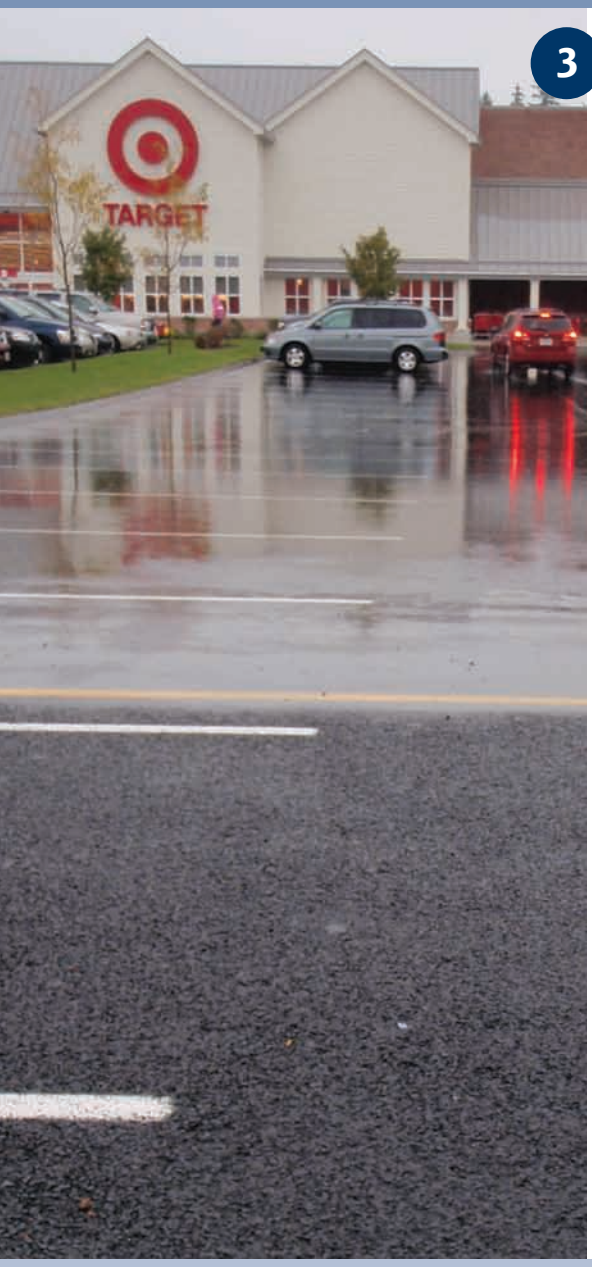
Include the concept in state statute that property owners are responsible for stormwater that originates on and discharges from their property and that such stormwater discharges shall not cause or contribute to a violation of water quality standards.

3 Statewide Stormwater Utility Program

Create a statewide stormwater utility program to:

1. raise revenue for stormwater best management practices ("BMPs") construction and management, and
2. create incentives, through the utility fee structure, for property owners to install and maintain stormwater BMPs. This approach eliminates the unfunded mandate problem, and charges only those responsible for stormwater runoff, rather than imposing a broad-based tax to solve the problem.

RECOMMENDATIONS



3 Statewide Stormwater Utility Program (continued)

The Commission agrees that a statewide, watershed-based stormwater utility is the best way to achieve the successful implementation of stormwater management to meet water quality standards and to provide a consistent and dedicated revenue stream for a stormwater program to be viable and self-supporting. The goal of this program would include covering the entire state of New Hampshire under a statewide stormwater utility, or groups of individual municipal or regional utilities. Individual municipalities would have three options:

Option 1: Create a municipal stormwater utility with incentives.

Option 2: Join an inter-municipal stormwater utility district.

Option 3: In lieu of **1** or **2**, a municipality would automatically become part of a state-administered watershed utility.

A new state-administered stormwater mitigation fund (SMF) would also be created from an impact fee on new and redevelopment projects greater than 10,000 square feet which do not meet State requirements. The SMF should include incentives for developers to promote LID land use planning and development, and would reinforce the connection between stormwater, land use, impervious coverage, and stormwater-related impacts, such as pollution and flooding. Incentives would have a fee structure based on percent impervious cover for both new and redevelopment.

3A Statewide Stormwater Discharge Permit

In the absence of a statewide stormwater utility, NHDES should create a fee-based statewide stormwater discharge permit for all developed properties in the state. A statewide permit program would establish statewide requirements for mitigating potential adverse impacts to water quality from stormwater and the implementation of BMPs to control stormwater from developed areas. The Commission recommends the statewide stormwater utility option over the statewide stormwater discharge permit option because it is incentives-based and has greater flexibility with respect to fee reduction and environmental protection.

RECOMMENDATIONS

4 Municipal Authority to Regulate Stormwater

Clearly enable municipalities to regulate stormwater within their boundaries, including operation and maintenance aspects currently not authorized by enabling legislation for municipal land use planning and regulation. The Commission believes municipalities should be authorized to regulate stormwater, particularly small MS4 municipalities, so they can comply with the EPA's NPDES stormwater general permit requirements without fear of exceeding their jurisdiction under state statute.

5 Other Issues

The Commission concluded some additional issues in regards to a Municipal Authority to Regulate Stormwater include:

- Municipalities should be given authority to regulate stormwater originating from properties within their boundaries, even when not specifically initiated by or associated with zoning/land use approval process.
- Requirements placed upon property owners by municipal stormwater regulations should be identical, or at least very similar from one municipality to another to avoid a patchwork of different regulations and to promote watershed protection.
- Minimum performance standards for construction and maintenance of BMPs and stormwater management regulations should be developed by NHDES for adoption by municipalities.

Summary document produced by the UNH Stormwater Center, under a grant received from the NH WRRC.

HB1295 Commissioners included David Cedarholm, Chair, Judith Spang, Vice Chair, David Borden: Jacalyn Cilley, Eber Currier, Paul Currier, Dave Danielson, Chris Devine, Karen Ebel, Mark Hemmerlein, Steve Kahl, Newbold Le Roy, Amy Manzelli, Josh Cline, Joe Robertie, Robert Roseen, Dari Sassan, Donald H. Sienkiewicz, L. Mike Kappler, and Michael Trainque.