

## Draft strategies to address urban and suburban related pollution – 2/7/04

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Strategies are based on existing community efforts and discussions held during the basin planning process. The following discussion addressing lawn and garden-related pollutants occurred during the basin planning process:

- December 2003 and January and February 2004 - meetings of the Vt. Green Lawn Coalition.
- February 17, 2004 - meeting with the MS4 entities involved in the regional stormwater educational program

Strategies addressing pathogens are based on recommendations in the Colchester Water Quality Strategic Plan.

As the Northern Lake Champlain Basin planning process continues, the strategies will be refined, and partners, funding sources, timelines and benchmarks will be identified.

### **BACKGROUND**

Urban stormwater runoff comes from roads, rooftops and other impervious surfaces associated with developed lands. This runoff causes erosion/property damage, endangers or destroys aquatic wildlife and wildlife habitats, causes unhealthy algal blooms and endangers public health via contact recreation sports (public beach closures) and by contaminating source water used for public water supplies.

The strategies in the basin plan help further the following efforts by communities in the basin to address urban stormwater issues, mostly through education:

#### *MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4) GENERAL PERMIT*

The urban communities within the northern Lake Champlain basin have developed plans for reducing water quality impacts from urban stormwater as part of the State's MS4 permit under Phase II of the federal NPDES. Based on the year 1990 census data eight municipalities in Vermont with municipal separate storm sewer systems (MS4) were required to seek coverage under the original MS4 General Permit or apply for an individual permit. These are Burlington, South Burlington, Colchester, Winooski, Essex, Essex Junction, Williston and Shelburne. Three publicly owned “non-traditional” separate storm sewer systems were also designated. These systems are owned or operated by the University of Vermont, Burlington International Airport and the Vermont Agency of Transportation. All of these entities have applied for and received coverage under the MS4 General Permit.

The 1987 Amendments to the Federal Clean Water Act (CWA) of 1972 (CWA 402(p)(5)) is the legislation behind the MS4 General Permit. The CWA required that the Environmental Protection Agency address urban stormwater runoff in a phased approach starting with the largest urban areas in the United States, as based on population census data. In November 1999 the EPA issued new federal stormwater regulations for the census defined metropolitan areas of less than 100,000 people called the Phase II Stormwater Rule.

There are six minimum measures required of each designated permittee under the Phase II rule. These measures are: (1) Public Education and Outreach, (2) Public Participation/Involvement, (3) Illicit Discharge Detection and Elimination, (4) Construction Site Runoff Control, (5) Post-Construction Runoff Control and, (6) Pollution Prevention/Good Housekeeping. The Phase II stormwater rule is administered as a National Pollutant Discharge Elimination System (NPDES) permit and has a 5 year permit life

*VERMONT GREEN LAWN COALITION*

Many non-profits and for profit based organizations within the community have programs to promote the use of lake friendly lawn and garden practices. In December 2003, a group began to meet as the Vermont Green Lawn Coalition to help leverage existing resources.

*STEVENS AND RUGG BROOKS WATERSHED STUDY*

The Northwest Regional Planning Commission facilitated a planning process with communities within the watershed of the Stevens and Rugg Brook to reduce the impacts from flooding and improve water quality.

*COLCHESTER STRATEGIC WATER QUALITY PLAN (SWQP)*

The Colchester Select Board appointed the Water Quality Committee members in 2000. The Water Quality Committee, in consultation with the Select Board, chose to draft the SWQP to help the Town comprehensively manage its water resources.

**GOALS:**

- **Promote lawn and garden-related practices that promote clean water, clean air and healthy soil for the benefit of human health and the environment**
- **Identify sources of water-borne pathogens**

**GENERAL APPROACH /OBJECTIVES**

① **Educate the community**

② **Develop monitoring programs**

**OBJECTIVE ① Educate the community**

**STRATEGIES**

1. Establish and support a coalition of existing groups that will help the community develop successful projects by disseminating useful information and leverage existing resources.
2. Collect data that is specific to a community regarding impact to water quality from lawn and garden practices, e.g., use surveys to understand community practices and water quality monitoring data.
3. Develop neighborhood campaigns
4. Increase the awareness of entities that have lawns or gardens such as businesses, condo associations, churches, schools and towns.
5. Provide education at garden supply centers and at environmental education centers
6. Promote the use of lake friendly lawn and garden care products through education and reduction of price. With some products, an increase in the volume of sales would allow the price to decrease. A program to subsidize the cost of the product could eventually lead to the reduction of cost through

increased volume of sales. Electric companies are promoting use of the low wattage light bulbs in this.

7. MS4 entities (see background information) plan to implement their stormwater management programs as of 2008, as required by the State's MS4 permit under Phase II of the federal NPDES. The programs include a collaborative effort by the MS4 entities in the implementation of Minimum Control Measure 1 (Public Education and Outreach) through the Regional Stormwater Education Program (RSEP).
8. Facilitate partnerships between towns and community groups to help qualifying MS4 entities meet requirements of the State's MS4 permit.

**OBJECTIVE ② DEVELOP MONITORING PROGRAMS**  
**STRATEGIES**

9. At public swimming areas, develop water quality monitoring plans that can identify health risks associated with water-borne pathogens. In addition, develop a monitoring plan that could identify the main sources of these pathogens.
  - a. *Promote the use of the DEC Water Quality Divisions, "Citizen's Guide to Bacterial Monitoring in Vermont Waters."* (comments in italics were added by DEC basin planner for discussion).
10. Increase the geographic and temporal coverage of programs by encouraging the development of volunteer-based *E. coli* monitoring program. *Volunteer based programs would also increase the community's understanding of health risks association with E. coli levels*
11. Encourage partnerships between towns and the entities that have resources to develop and implement effective monitoring programs
12. *Identify public beaches where water quality monitoring indicates low E. coli levels and develop a plan to protect existing water quality.*