



BURLINGTON INTERNATIONAL AIRPORT

DATE: June 15, 2007
TO: James Pease
FROM: Heather Kendrew
RE: MS4 Buffer Report

Attached please find a copy of the South Burlington ordinances for stream buffers. The Burlington international Airport, located in South Burlington, Vermont, will comply with all local and Act 250 permitting regulations in regards to stream buffers. This obligation applies to all property that abuts the Centennial Brook and Potash Brook watersheds.

If you have any questions or need further information, please let me know.
Thank you.

1200 Airport Drive, #1
South Burlington, Vermont 05403

Phone: (802)-863-2874 (TTY)
Fax: (802)-863-1526

SOUTH BURLINGTON

Background on the Comprehensive Plan:

As of March 31, 2006, the South Burlington Comprehensive Plan (“the Plan”) was in draft form and not yet adopted. The preceding version of the Plan was adopted April 16, 2001. The 2001 Comprehensive Plan was reviewed for this report. It is anticipated that the new Plan will be adopted in the first half of 2006.

Part A—Inventory:

The DEC’s *Local Planning and Zoning Options for Water Quality Protection* recommends first gathering information on characteristics of water resources. These are divided into four categories: Lakes, Rivers & streams, Shorelines, and Watershed.

Lakes/Ponds: Lake Champlain is discussed on page 60 of the South Burlington Comprehensive Plan. The Plan notes that the City has 2.3 miles of frontage along Lake Champlain, and lists major land uses along that shoreline. It also notes the lake’s role as public water supply, and its role in dilution of stormwater runoff and discharge from wastewater treatment facilities.

Rivers/Streams: Rivers and streams are discussed on pages 58-59 of the Plan. The dynamic nature of streams is noted, as is the influence of soils, bedrock geology, vegetative buffers, flood events and land use on stream dynamics. The City’s major rivers and streams are listed and discussed in detail; its minor drainages are referenced. Presence of dams on the Winooski River is noted. The role of Potash Brook as a substantial stormwater discharge system is noted.

Shorelines: On page 57 (Topography) the Plan notes that significant wetlands are present in each of the City’s watersheds, and that wetlands can be found along the shorelines of the City’s major and minor rivers and streams. This section of the Plan notes the specific location of two large wetland complexes. Shoreline vegetative buffers are mentioned on page 62, as is their role in filtering runoff. Erosion problems along Bartlett Brook are discussed under Chapter 14 of the Plan (Public Utilities and Services) on pages 101-102 (Storm Drainage).

Watersheds: Watersheds are discussed on page 61 and 62 of the Plan. A definition of the term “watershed” is provided. Several sentences discuss non-point source pollution, including its relationship to land uses in a watershed. Page 57 of the Plan (Topography) states that the City’s land area can be divided into five watersheds. Watershed boundaries are mapped on Map #7.

Population Growth & Development: Population growth trends are addressed on pages 10-18 of the Plan. Development trends are addressed on pages 19-29. Land uses throughout the City are discussed in the Plan’s Land Use element (pages 19-29). Table 5-1 (page 28) provides data on distribution of existing land uses in the City.

Part B—Regulations:

The DEC's *Local Planning and Zoning Options for Water Quality Protection* recommends that Municipal Regulations that are designed to protect water quality be in place. These include shoreland (lake or river) districts, wetlands regulations, conservation districts, a municipal sewage disposal ordinance, and subdivision regulations that allow for water quality protection. The document also recommends reviewing the state classification of waters, and inventorying any existing surface use regulations imposed by the State Water Resources Board.

South Burlington's most recent Land Development Regulations ("the Regulations") became effective June 28, 2004.

Shoreland Regulations: Article 3 of the Regulations establishes the Bartlett Brook Watershed Protection Overlay District, and the Potash Brook Watershed Protection Overlay District. Article 12 of the Regulations establishes Surface Water Protection Standards for the City. Article 12.03 describes the Bartlett Brook Watershed Protection Overlay district, which is intended to control stormwater runoff and prevent worsening of erosion problems in the brook's watershed.

Wetland Regulations: Article 12.02 of the Regulations sets forth restrictions on land uses in designated wetlands areas, in order to protect wetland functions and values related to surface and groundwater protection, wildlife habitat and flood control. The restrictions apply to all areas within 50 feet of wetlands boundaries.

Sewage Disposal Ordinance: The City's "Ordinance Regulating the Use of Public and Private Sanitary Sewerage and Stormwater Systems" was last amended March 21, 2005.

Conservation Districts: Article 6 of the Regulations notes that one of the purposes of the Industrial/Open Space District is to minimize impacts on water quality. Article 12.01 allows the City's Development Review Board to require technical review of proposed development activities within 150 feet of the centerline of Potash Brook's Tributary 3, for the purpose of maintaining consistency with the City's plan for ecosystem restoration in the Tributary 3 watershed.

Subdivision Regulations: Article 15 of the Regulations deals with Subdivision and Planned Unit Development (PUD) Review.

Classification of Waters: The Plan does not reference the State of Vermont's water quality classification categories.

Existing Surface Water Regulations: The Plan does not address any existing Water Resources Board regulations imposed on surface waters within South Burlington.

Part C—Water Resources Goals, and Implementation Strategies:

The DEC's *Local Planning and Zoning Options for Water Quality Protection* recommends establishing local goals, policies, and strategies for the maintenance and protection of water quality. Recommendations include:

1. discussing major surface waters in the municipality in the context of their watershed,
2. identifying realistic water quality goals in the Plan,
3. expressing the desired character of shorelands based on public input
4. preparing policy statements and/or implementation strategies for the Plan.

Major Surface Waters & Watershed: The Plan discusses the City's major surface waters in the context of their watersheds.

Water Quality Goals: Each section of the Plan begins with a goal statement and ends with objectives. Natural Resources Objectives are given on page 65, and include the protection of watersheds from pollution and erosion, maintenance of groundwater quality, and protection and restoration of wetland ecosystems.

Desired Character based on Public Input: Citizen participation in the planning process responsible for the 2001 Comprehensive Plan is described on pages 1-2, and again on page 22 of the Plan.

Water Quality Policy Statements/Implementation Strategies: Natural Resources Recommended Actions are listed on pages 65-68 of the Plan. These include provision of undisturbed stream buffers; stormwater education and best management practices, regional cooperation on management of non-point source pollution; and, designation of a Watershed Quality District for the Shelburne Pond watershed. Article 12 of the Regulations (Surface Water Protection Standards) establishes numerous specific policies that implement the City's surface water protection goals.

Part D—Design or Revise Zoning for Water Quality Protection:

The DEC's *Local Planning and Zoning Options for Water Quality Protection* recommends reviewing and, as necessary, revising zoning regulations for water quality protection. Several elements are recommended for the zoning ordinance, including:

1. districts
2. Permitted, conditional, and prohibited uses
3. land use standards, such as setback distances, vegetated buffer strips, density along shorelines, erosion & sediment control measures, stormwater control, and impervious surface maximums

The document also recommends adopting Flood Hazard Regulations, and a Highway Access Policy & Ordinance.

Shoreland Districts: See page 2 of this report.

Permitted, Conditional, and Prohibited Uses: Permitted and conditional uses are provided for all districts in Table C-1 (page 277) of the Regulations.

Setback Distances: Article 12.01 of the Regulations establishes requirements applying to all lands within 10 feet of a drainage way centerline, 50 feet of a minor stream centerline, 100 feet of the centerlines of Muddy Brook and Potash Brook, 100 feet of the channel of the Winooski River, and 150 feet of the high-water elevation of Lake Champlain (except lands within certain other zoning districts).

Vegetated Buffer Strips: Article 12.01 of the Regulations includes a stated goal of maintaining native vegetation in designated stream buffers to reduce the impact of stormwater runoff. It regulates removal of native vegetation within the buffers discussed above.

Density Along Shoreline: Dimensional requirements, such as minimum lot size and maximum lot coverage are provided in Table C-2 (page 281) of the Regulations.

Erosion & Sediment Control: Article 16 of the Regulations deals with construction and erosion control standards.

Stormwater Control: Article 15.13 of the Regulations (Utility Services), Section F (Stormwater Management) requires new subdivisions or PUDs to meet applicable standards of the Vermont Stormwater Management Manual, or the standards set forth in Article 12 of the Regulations. Article 15.13 also stipulates that a proposed development's drainage facilities must accommodate upstream runoff, and that new runoff generated by the proposed development must not overload downstream drainage facilities.

Flood Hazard Bylaw: Article 3 of the Regulations establishes a Floodplain Overlay District. The Floodplain Overlay District includes areas that are identified as areas of special flood hazard on Federal Insurance Administration Flood Insurance Rate Maps (most recently updated in 1981). It is intended to maintain the floodwater carrying capacity of the City's floodplains.

Driveway Curb Cut Standards: Appendix B of the Regulations (Traffic Generation Data and Calculation Procedures) encourages developers to minimize the number of curb cuts for a site. Figure 15-1 (pages 238-239 of the Regulations) provides maximum widths for commercial driveways, and minimum culvert diameters for all driveways.

RECOMMENDATIONS:

This section of the report is not intended to dictate to municipalities how to conduct their community planning processes, or to demand a “one-size fits all” approach to municipal policy documents and implementation tools. The intention is to share general impressions that CCRPC staff has developed after combing through nineteen unique sets of municipal plans and land use regulations.

The following recommendations are offered specifically for South Burlington.

INVENTORY & PLANNING

Lakes/Ponds: No recommendations at this time.

Rivers/Streams: No recommendations at this time.

Shorelines: The Plan could reference South Burlington’s adopted *All-Hazards Mitigation Plan* (2005) for its discussion of specific locations of shoreline erosion.

ORDINANCES

Shoreland Districts: Article 12.04 reserves space in the Regulations for a Potash Brook Watershed Overlay District. Article 12.05 does the same for a Stormwater Management Overlay District. If the City deemed it a priority, adoption of regulations pertaining to these two districts could reinforce existing water quality protection mechanisms afforded by the South Burlington Land Development Regulations.

Driveway/Curb Cut Standards: *Local Planning and Zoning Options for Water Quality Protection* encourages establishment of maximum slope values for driveways. The Regulations could reference the City’s Public Works Standards, if such provisions are included in that document.