MEMORANDUM

TO: City of Burlington Planning Commission Chair
   Town of Shelburne Planning Commission Chair
   Town of Colchester Planning Commission Chair
   Town of Williston Planning Commission Chair
   City of Winooski Planning Commission Chair
   Town of Essex Planning Commission Chair
   Village of Essex Junction Planning Commission Chair
   Chittenden County Regional Planning Commission
   VT Department of Housing and Community Development

FROM: Paul Conner, Director of Planning & Zoning

SUBJECT: Proposed Land Development Regulation Amendments

DATE: April 13, 2021

Enclosed please find a series of proposed amendments to the City of South Burlington’s Land Development Regulations, as well as a report from the Planning Commission, as required under Chapter 117. The Planning Commission will hold a public hearing on these amendments on Thursday May 20, 2021 at 7:00 pm via GoToMeeting. Participation options:

   Interactive Online: https://www.gotomeet.me/SouthBurlingtonVT/po-2021-05-20
   Telephone (audio only): (571) 317-3112 Access Code: 886-368-509

A copy of the proposed amendments are enclosed, and available on the City’s website.

Feedback on the draft amendments is welcome, either at the hearing, or in writing in advance of the hearing date. Should you have any questions, feel free contact the Department of Planning & Zoning at planning@sburl.com.
PROPOSED AMENDMENTS to the SOUTH BURLINGTON LAND DEVELOPMENT REGULATIONS

Public Hearing Thursday, May 20, 2021 at 7:00 pm

PLEASE TAKE NOTICE that the Planning Commission will hold a public hearing on Thursday, May 20, 2021 at 7:00 PM to consider amendments to the Land Development Regulations. The amendments affect all parts of the City unless otherwise specified below. The hearing will be held via remotely via GoToMeeting. Participation options:

Interactive Online: https://www.gotomeet.me/SouthBurlingtonVT/pc-2021-05-20
Telephone (audio only): (571) 317-3112 Access Code: 886-368-509

The purpose of the hearing is to consider the following:

LDR-20-01: Modifications to Environmental Protection Standards, including existing 100-year floodplain, river corridor, stream buffer, wetland & wetland buffer, and stormwater management standards; establishment of standards regarding 500-year (0.2%) floodplain, habitat block, habitat connector, steep slope, and very steep slope standards; establishment of criteria to evaluate undue adverse effect; and related amendments referencing the above-listed resources.

Specific Articles / Sections to be Amended:
Section 2.02 Definitions
Section 2.03 Definitions for Flood Hazard and River Corridor Purposes
Section 3.01 Establishment of Districts and Description of Certain Districts
Section 3.02 Official Maps and Other Maps
Section 3.03 District Boundaries
Section 3.04 Applicability of Regulations
Section 9.06 Dimensional and Design Requirements Applicable to All [Southeast Quadrant] Sub-Districts
Section 9.12 SEQ-NRP; Supplemental Regulations
Section 10.01 Floodplain Overlay District (FP)
Section 10.07 River Corridor Overlay District (RCO)
Article 12 Environmental Protection Standards [Replaces Surface Water Protection Standards]
Section 15.02 [Subdivision and Planned Unit Development] Authority and Required Review
Section 15.18 Criteria for Review of PUDs, Subdivisions, Transect Zone Subdivisions, and Master Plans
Appendix E, Submission Requirements
Natural Resources Map [Replaces Wetlands Map]

Copies of the proposed amendments are available for inspection at the Department of Planning & Zoning, City Hall, 2nd Floor, 575 Dorset Street, and on the city website at www.sbvt.gov.

Jessica Louisos, Planning Commission Chair
April 13, 2021
South Burlington Planning Commission
Proposed Land Development Regulations
Amendment & Adoption Report
Planning Commission Public Hearing Thursday, May 20, 2021

In accordance with 24 V.S.A. §4441, the South Burlington Planning Commission has prepared the following report regarding the proposed amendments and adoption of the City’s Land Development Regulations.

Outline of the Proposed Overall Amendments

The South Burlington Planning Commission will hold a public hearing on Thursday, May 20, 2021 at 7:00 pm, via GoToMeeting electronic platform, to consider the following amendments to the South Burlington Land Development Regulations:

LDR-20-01: Modifications to Environmental Protection Standards, including existing 100-year floodplain, river corridor, stream buffer, wetland & wetland buffer, and stormwater management standards; establishment of standards regarding 500-year (0.2%) floodplain, habitat block, habitat connector, steep slope, and very steep slope standards; establishment of criteria to evaluate undue adverse effect; and related amendments referencing the above-listed resources.

Brief Description of the Proposed Amendments

The proposed amendments include the following:

- Enhancement of standards and/or geographic area for protection of natural resources currently regulated by the City: notably 100-year floodplains, class I and II wetlands, streams, and river corridors
- Mapping and establishment of standards for newly-regulated natural resources: habitat blocks, habitat connectors, steep slopes, and 500-year floodplains
- Update of stormwater management and 100-year floodplain standards to current best practices and streamlining of review for public stormwater restoration projects
- Update of references to natural resources throughout the regulations to be directed to the Environmental Protection Standards of Articles 10 and 12
- Establishing thresholds and consistent standards of review applicable to limited allowances for impacts to regulated natural resources, including infrastructure
- Categorization of regulated natural resources into three tiers
Below is a table summarizing the proposed changes / additions to natural resource:

<table>
<thead>
<tr>
<th>Hazards</th>
<th>Section</th>
<th>Status</th>
<th>Summary of Proposed Changes</th>
<th>How boundary is established</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 year (1%) Floodplain</td>
<td>10.01</td>
<td>Existing</td>
<td>Updates for consistency with State guidelines, provision for historic structures</td>
<td>FEMA Flood Insurance Rate Maps</td>
</tr>
<tr>
<td>500-year (0.2%) Floodplain B2 Area</td>
<td>10.01</td>
<td>New</td>
<td>No new buildings in the 500-year floodplain; substantial renovations must meet floodproofing standards</td>
<td>State River Corridor Map or applicant measurement using LiDAR data</td>
</tr>
<tr>
<td>River Corridors and Surface Waters</td>
<td>10.07</td>
<td>Existing</td>
<td>Consolidates two overlapping sets of current standards: Stream Buffer and River Corridors. Geographic areas include areas previously included under each, and uniform measurement from top of bank/slope for buffers. Allowable incursions into buffers are reduced.</td>
<td>State-mapped River Corridor Flood Insurance Rate Maps</td>
</tr>
<tr>
<td>Class I, II Wetlands, Buffers</td>
<td>12.03</td>
<td>Existing, Expanded</td>
<td>Buffer for Class II wetlands expanded from 50’ to 100’ in residential and conservation districts. Allowable incursions in areas outside City Center FBC limited to only certain infrastructure and exemptions. Updated standards within City Center FBC. [Class I wetland buffers also expanded, none presently identified in South Burlington]</td>
<td>On-site field delineation using City/State maps as indicator</td>
</tr>
<tr>
<td>Very Steep Slopes (25+%)</td>
<td>12.09</td>
<td>New</td>
<td>No new development except certain infrastructure and exemptions</td>
<td>Applicant measurement using LiDAR data</td>
</tr>
<tr>
<td><strong>Level I Resources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habitat Blocks</td>
<td>12.05</td>
<td>New</td>
<td>No new development within City-mapped Habitat Blocks except certain allowances to exchange land certain infrastructure, parcels with &gt;70% Hazards/Level 1, and exemptions</td>
<td>Boundary as shown on City Natural Resources Map</td>
</tr>
<tr>
<td>Habitat Connectors</td>
<td>12.06</td>
<td>New</td>
<td>Habitat connector function must be kept intact, mapped location may be modified with approval</td>
<td>Boundary as shown on City Natural Resources Map</td>
</tr>
<tr>
<td><strong>Level II Resources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500-year Floodplain B1 Zone</td>
<td>10.01</td>
<td>New</td>
<td>New development and substantial renovation must meet floodproofing standards</td>
<td>FEMA Flood Insurance Rate Maps where they exist or applicant measurement using LiDAR data</td>
</tr>
<tr>
<td>Class III Wetlands, Buffers</td>
<td>10.03</td>
<td>Existing</td>
<td>Wetlands under 300 s.f. are exempted. Updated standards for review of proposed impact</td>
<td>On-site field delineation</td>
</tr>
<tr>
<td>Steep Slopes (15 to 25%)</td>
<td>12.09</td>
<td>New</td>
<td>New development must demonstrate slope stabilization</td>
<td>Applicant measurement using LiDAR data</td>
</tr>
<tr>
<td>Intermittent Streams, Buffers</td>
<td>10.07, 12.08</td>
<td>Existing</td>
<td>Clearer definition. Specifically excludes human-created drainage systems. Updated standards for relocation</td>
<td>On-site field delineation</td>
</tr>
</tbody>
</table>
Categories of Natural Resources

Resources are grouped into three (3) categories: Hazards, Level I Resources, and Level II Resources.

- **Hazards** are resources for which impacts can have significant effects on safety of property or life. They are often regulated at the State or Federal level. They may be large or small in area. Very limited incursions into these resources, particularly for certain infrastructure, may be permitted following review.

- **Level I Resources** are locally-identified natural resources that are typically larger in area and cross multiple properties. The draft regulations allow for limited adjustment of boundaries in certain circumstances and limited incursions under specific circumstances. Credit may be provided for the conservation of these areas through density transfers in certain Planned Unit Development types.

- **Level II Resources** require specific review for any impact, but are not necessarily excluded from development parcels. They are typically smaller in area and/or can be mitigated through careful site design.

Background and Context of the Proposed Regulations

The proposed modifications to the Regulations draw on the research work of prior Planning Commission efforts, the 2016 Comprehensive Plan, and several studies undertaken by the community in recent years, including the 2015 Open Space Plan, the 2020 Habitat Block and Assessment and Ranking, and the 2020 Interim Zoning Open Space Committee Final Report, among others.

Standards and geographic boundaries established by these Regulations were developed based on mapping, research, and consultations with subject area experts. Habitat Blocks and Habitat Connectors included in the proposed Regulation used the 2020 Habitat Block Assessment and Ranking as their starting point. Geographic boundaries, thresholds, standards for allowed modifications or incursions were subsequently established.

These draft amendments are proposed to function as one of a collection of tools to support natural resource conservation and thoughtful development in the community in support of the Comprehensive Plan.

Findings Concerning the Proposed Amendments

The proposed amendments have been reviewed by the Planning Commission in the context of the text, goals, and objectives of the City of South Burlington’s Comprehensive Plan, adopted February 1, 2016. The Commission has addressed the following as enumerated under 24 VSA 4441(c):

“…The report shall provide a brief explanation of the proposed bylaw, amendment, or repeal and shall include a statement of purpose as required for notice under section 4444 of this title, and shall include findings regarding how the proposal:

(1) Conforms with or further the goals and policies contained in the municipal plan, including the effect of the proposal on the availability of safe and affordable housing.
(2) Is compatible with the proposed future land uses and densities of the municipal plan.
The 2016 Comprehensive Plan establishes four (4) principal Goals for the City:

Vision & Goals. Here and into the Future, South Burlington is...

**Affordable & Community Strong** Creating a robust sense of place and opportunity for our residents and visitors.
- Be affordable, with housing for people of all incomes, lifestyles, and stages of life;
- Keep unique features, and maintain or enhance the quality of life of existing neighborhoods;
- Be a recognized leader in public education offerings and outcomes;
- Provide quality public safety, infrastructure, health, wellness, and recreation services;
- Ensure transparent and accessible government.

**Walkable.** Bicycle and pedestrian friendly with safe transportation infrastructure.
- Develop a safe and efficient transportation system that supports pedestrian, bicycle, and transit options while accommodating the automobile;
- Establish a city center with pedestrian-oriented design, mixed uses, and public buildings and civic spaces that act as a focal point to the community.

**Green & Clean.** Emphasizing sustainability for long-term viability of a clean and green South Burlington.
- Promote conservation of identified important natural areas, open spaces, aquatic resources, air quality, arable land and other agricultural resources, historic sites and structures, and recreational assets;
- Reduce energy consumption city-wide and increase renewable energy production where appropriate.

**Opportunity Oriented.** Being a supportive and engaged member of the larger regional and statewide community.
- Prioritize development that occurs within the community into the higher intensity areas identified within this Plan;
- Support a diverse and vibrant economy built on quality jobs, employment centers and a supportive educational and research system; support markets for local agricultural and food products.

The 2016 Comprehensive Plan also includes the following objectives and strategies specific to ecological resources in the community:

**Ecological Objectives**

Objective 30. Proactively plan for a network of interconnected and contiguous open spaces to conserve and accommodate ecological resources, active and passive recreation land, civic spaces, scenic views and vistas, forests and productive farmland and primary agricultural soils.

Objective 31. Conserve, restore and enhance biological diversity within the City, through careful site planning and development that is designed to avoid adverse impacts to critical wildlife resources, and that incorporates significant natural areas, communities and wildlife habitats as conserved open space.

**Ecological Strategies**

Strategy 67. Substantially restrict new subdivision and development from primary resource conservation areas to include hazardous and environmentally sensitive areas identified, mapped and regulated by the City. Minimize the adverse impacts of new subdivision and development, including resource fragmentation and encroachment, within secondary resource conservation areas, to include those resources of state or local significance as indicated on available resource maps, identified in available inventories and studies, and confirmed through site investigation.

Strategy 68. Redefine open space in new developments such that usable, quality open space shall be required. Qualifying open space should include civic spaces, recreation, wildlife habitat, and usable agricultural lands.
Strategy 69. Retain healthy and high-quality existing trees, vegetation, and publicly owned natural areas and woodlands. Develop long-range management plans for each area to foster their continued health and use.

Strategy 70. Encourage public education about tree functions and tree disease inspection in urban areas through cooperation with the UVM Horticultural Farm and Vermont Department of Forest Parks, and Recreation, Urban and Community Forestry Program.

Strategy 71. Maintain the City’s wildlife diversity, including making use of available planning and legal tools such as buffers, transfers of development rights, overlay zoning districts, conservation easements and other tools as appropriate.

Strategy 72. Work with adjoining municipalities and regional entities to enact complementary land use policies where wildlife habitat areas cross City boundaries.

Strategy 73. Maintain existing overall tree canopy. Set targets to increase overall tree canopy, with a focus on increasing tree canopy in urban areas and residential property parcels as identified in the Report on Existing and Potential Tree Canopy in the City of South Burlington (2014).

Strategy 74. Foster passive recreational use of natural areas and identify areas that may be appropriate for an “off-limits” designation due to their fragile nature.

And finally, the Comprehensive Plan establishes a series of five categories of Future Land Use, as depicted on Map 11, along with the following statement: “Together, these broad categories are intended to encompass key issues and areas addressed in this Comprehensive Plan and provide an overall framework for implementation of the plan.”

- Very low intensity, principally open space.
- Lower intensity, principally residential
- Medium intensity, residential to mixed use
- Medium to higher intensity, principally non-residential
- Medium to higher intensity, mixed use

The proposed Regulations substantively and substantially advance the ecological goals and strategies enumerated in the 2016 Comprehensive Plan, and do so in the context of the overall Vision and Goals for the City and the designations within the Future Land Use Map.

The proposed regulations have been prepared following detailed evaluation of each individual resource as well as their collective and coordinated roles in support of the objectives and strategies above.

The specific resources included within the draft Environmental Protection Standards are not intended to be a precise replication of the individual resources as described or mapped in the Comprehensive Plan; South Burlington-specific study and analysis of these resources, consideration of best practices in resource conservation, and consideration of the geographic context of natural resources across the City were important factors in developing regulatory tools to implement these objectives and strategies.

The amendments have been considered for their impacts on the availability of safe and affordable housing. Establishing restrictions on certain land as priority areas for conservation of natural resources can affect the total land area available for the construction of new housing. The existing and proposed regulations mitigate the effects of this conservation, through several means:
• Existing regulations allow for the re-allocation of allowable housing density within a property through the use of Planned Unit Developments.
• The draft Regulations accommodate circumstances where certain natural resources – notably Habitat Blocks and Habitat Connectors - are present across the substantial majority of the land.
• The draft regulations provide for reduced standards, exemptions, or allowable modifications within areas designated as Medium to Higher Intensity in the Future Land Use Map.
• Recent prior amendments to the Land Development Regulations have increased building height allowances along principal transportation corridors, established inclusionary zoning requirements, and reduced or eliminated minimum parking standards.
• The proposed regulations are intended to provide greater clarity and certainty for all parties involved in land development.

(3) Carries out, as applicable, any specific proposals for any planned community facilities.

The proposed amendments do not directly affect planned community facilities. Planned Community facilities are specifically addressed through reference to the Official Map.
LDR-20-01: ENVIRONMENTAL PROTECTION STANDARDS & RELATED

KEY TO AMENDMENTS:
Text in underline are proposed additions or relocated text
Text in strikethrough are proposed deletions or text that has been moved
Text in yellow highlights are notes to the draft

ARTICLE 2 DEFINITIONS

2.02 Specific Definitions

Building Envelope. A designated area or portion of a lot, delineated on a subdivision plat, within which all structures, parking and loading areas, and clearing of land must be located, with the exception of driveways and utility lines. A building envelope shall be defined by minimum setback and maximum height requirements unless otherwise specified in these Regulations.

Environmental Restoration Project: A project authorized under the MS4 General Permit, TS4 General Permit, or Municipal Roads General Permit (MRGP), that address a primary pollution source identified in a Vermont Department of Environmental Conservation approved watershed implementation plan (i.e. TMDL, Flow Restoration Plan, or Phosphorus Control Plan) and is not required for the purpose of developing or redeveloping impervious surfaces. Additionally, any floodplain reconnection or stream channel restoration projects that are not included in a Flow Restoration Plan or Phosphorus Control Plan, but are necessary to meet the required pollutant reductions in a TMDL.

Habitat Block. Contiguous forested and adjacent unmanaged shrubby areas of old field, young forest, and unmanaged wetland as demarked on the Natural Resources Map. Includes areas large enough to provide habitat, either permanently, or seasonally for wider ranging species of wildlife such as bobcat, red and grey fox, white-tailed deer, river otter and fisher. These species of wildlife require larger areas (than squirrels or rabbits for example), and a variety of appropriate habitat to fulfill their daily, seasonal, and yearly habitat needs. These needs include security for breeding activities, a variety of food resources, secure cover for raising young, and the presence of water- either for drinking or in the case of aquatic species, as a general habitat. Habitat Blocks fall within a matrix of land-uses that include urban, residential, agricultural, transportation, and rural uses. Habitat Blocks at time of establishment in these Regulations are greater than 50% forested and totals at least 20 acres in size (area may, however, extend beyond City boundary). Portions of contiguous forest or shrubland that cannot be connected by an area wider than 160’ are not considered habitat blocks.

Habitat Connector. Areas in the providing wildlife served by Habitat Blocks the ability to move across the landscape in stepping-stone fashion between Habitat Blocks as demarked on the Natural Resources Map. For species such as fox, fisher, and bobcat, accessing multiple Habitat Blocks make up for the smaller, more fragmented nature of the Habitat Blocks in the community.

Hazard: Floodplain overlay districts A, AE, A1-30, and 0.2% B2, River Corridors except those along intermittent streams, Very Steep Slopes, Class 1 and Class 2 wetland and associated buffers

Level I Resources: A Habitat Block or Habitat Connector.
**Level II Resources:** River Corridors along intermittent streams, Floodplain Overlay District Zone 0.2% B1 (500-year floodplain, Class 3 wetlands (greater than 300 square feet in size) and associated buffers, and steep slopes.

**Rare, Threatened or Endangered Species.** A wildlife or plant species identified by the Vermont Department of Fish & Wildlife as being rare, threatened or endangered.

**Significant Wildlife Habitat.** Those natural features that contribute to the survival and/or reproduction of the native wildlife of South Burlington. This includes: (1) habitat for rare, threatened and endangered species (state or federally listed); (2) River Corridors as defined in these regulations; (3) wetlands and wetland buffers as defined in these Regulations; (4) Habitat Blocks, and (5) Habitat Connectors.

**Site Balancing.** Where stormwater control and/or treatment of certain limited areas of new, redeveloped, or substantially reconstructed impervious surface area are not possible, the impact from these areas of untreated impervious surfaces will be compensated on an equivalent basis by controlling and/or treating other impervious surfaces on the lot, parcel, or property. This can be accomplished by providing additional control and/or treatment beyond what is required for impervious surface areas already subject to the requirements of 12.083(C) or by providing control and/or treatment for impervious surfaces that are not otherwise required to meet the requirements of 12.083(C). The applicant must own or otherwise control the impervious surfaces used for site balancing.

**Steep Slopes.** Any land formation, aside from individual rocks, with a measured slope of between 15 and 25% containing a vertical drop of at least three (3) feet.

**Steep Slopes, Very.** Any land formation, aside from individual rocks, with a calculated slope of over 25% containing a vertical drop of at least three (3) feet.

**Stream.** A watercourse having a source and terminus, banks, and channel through which waters flow at least periodically.

*Stream, intermittent.* Streams with a drainage area smaller than .5 square miles that are not subject to the River Corridor regulations. This definition shall not include ditches and other constructed channels primarily associated with land drainage or water conveyance.

**Substantial reconstruction.** The reconstruction of an impervious surface where an impervious surface currently exists when such reconstruction involves site grading, subsurface excavation, or modification of existing stormwater conveyance. Substantial reconstruction does not include maintenance or management activities on impervious surfaces including any crack sealing, patching, cold planning, resurfacing, or reclaiming, or grading treatments used to maintain pavement and bridges, or grading treatments used to maintain and unpaved roads.

**Undue Adverse Effect.** An impact that 1) violates a clear, written community standard under these regulations, and that 2) cannot be mitigated through siting or design modifications or conditions of approval.

**Wetland.** An area that is inundated by surface or groundwater with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. Such areas include, but are not limited to, fens, marshes, swamps, sloughs, potholes, ponds, but excluding such areas as grow food or crops in connection with farming activities. The boundary of a wetland shall be delineated by the methodology set forth in the 1989 edition of the Federal Manual for Identifying and
Delineating Jurisdictional Wetlands, or any subsequent amendment or revision of that document. Wetlands are classified as Class I, Class II, or Class III wetlands by the most recently adopted Vermont Wetland Rules.

2.03 Definitions for Flood Hazard and River Corridor Purposes

**Average grade level.** The average of the natural or exiting topography at center of all exterior walls of a building or structure to be placed on site.

**Substantial damage.** In Floodplain Overlay District Zones A, AE, and A1-30, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged conditions would equal or exceed 50 percent of the market value of the structure before the damage occurred. In Floodplain Overlay District Zones 0.2% B1 and B2, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged conditions would equal or exceed 75 percent of the market value of the structure before the damage occurred.

**Substantial improvement.** In Floodplain Overlay District Zones A, AE, and A1-30, any repair, reconstruction, rehabilitation, addition, or other improvement of a structure after the date of adoption of this bylaw, the cost of which, over three years, or over the period of a common plan of development, cumulatively equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either: (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or (b) Any alteration of an “historic structure”, provided that the alteration will not preclude the structure’s continued designation as an “historic structure”.

In Floodplain Overlay District Zones 0.2% B1 and B2, any repair, reconstruction, rehabilitation, addition, or other improvement of a structure after the date of adoption of this bylaw, the cost of which, over three years, or over the period of a common plan of development, cumulatively equals or exceeds 75 percent of the market value of the structure before the “start of construction” of the improvement.

This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either: (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or (b) Any alteration of an “historic structure”, provided that the alteration will not preclude the structure’s continued designation as an “historic structure”.


ARTICLE 3 GENERAL PROVISIONS

3.01 Establishment of Districts and Description of Certain Districts

B. Description of Certain Districts.

(1) Floodplain Overlay District. The boundaries of the Floodplain Overlay District shall include those areas that are identified as areas of special flood hazard (Zones A, AE, A1-30, and 0.2%) in and on the most current flood insurance studies and maps published by the Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. Chapter 32 § 753, which are hereby adopted by reference and declared to be part of these regulations. Zone 0.2% has been further divided into Zone B1 and Zone B2 on Map ****, and Map *** is hereby incorporated into these Regulations. The location of the boundary shall be determined by the Administrative Officer (AO). If the applicant disagrees with the determination made by the AO, a Letter of Map Amendment from FEMA shall constitute proof.

(a) Floodplain Overlay District (Zones A, AE, and A1-30) Subdistrict. The boundaries of these Zones—Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict shall include those areas of special flood hazard designated in and on the above referenced studies and maps as Zones A, AE, or A1-30.

(b) Floodplain Overlay District (Zones 0.2% B1A and B2) Subdistrict. The boundaries of these Zones—Floodplain Overlay (Zone 0.2%) Subdistrict shall include those areas of special flood hazard designated in and on the above referenced studies and maps as Zone 0.2%, and are separated into a zone that reflects generally developed and priority development areas, and a zone that reflects generally undeveloped areas.

3.02 Official Maps and Other Maps

D. Wetlands Map. The Wetlands Map identifies wetland areas throughout the City that are subject to the restrictions set forth in Article 12 of these regulations. The Wetlands Map is filed in the office of the City Clerk and is incorporated herein by reference. Natural Resources Map. The Natural Resources map identifies Hazards, Level I Resources and Level II Resources that are subject to the restrictions set forth in Articles 10 and 12 of these.

F. Open Space Plan Areas Map [reserved]

3.03 District Boundaries

D. Wetland Boundaries. The boundaries of wetlands shall be as shown on the Official Wetlands Map unless alternative information is submitted and reviewed pursuant to the standards and procedures for review set forth in Article 12, Section 12.02(C) and (D) of these Regulations. All wetland delineations submitted for review by the City shall be delineated by the methodology set forth in the most recent edition of the Federal Manual for Identifying and Delineating Jurisdictional Wetlands. This methodology employs three parameters: vegetation, soils and hydrology. The Development Review Board may use the most recent edition of The Wetland Plant List of the State of Vermont published by the U.S. Fish and Wildlife Service to determine the frequency of vegetation occurrence in wetlands.
3.04 Applicability of Regulations

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H. Undue Adverse Effect. Where the terms Undue Adverse Effect or Undue Adverse Impact are used in these Regulations, the Development Review Board shall apply the test enumerated in Figure 3-0, Determining Undue Adverse Effect

**Figure 3-0 Determining Undue Adverse Effect**

The following test shall be used by the Development Review Board in all circumstances when the South Burlington Land Development Regulations requires the Development Review Board to determine whether or not an undue adverse effect is being created.

1. First, the Development Review Board shall determine if a proposed project will have an adverse effect upon the resource, issue and/or facility in question. The Development Review Board shall determine such by responding to the following question:
   (a) Will the project have an unfavorable impact upon the resource, issue and/or facility in question?

2. If it is determined by the Development Review Board that an adverse effect will be being created by a project, the Development Review Board shall then determine if the adverse effect is “undue.” To determine whether or not an adverse effect is undue, the Development Review Board shall respond to the following two questions:
   (a) Will the project conflict with a clear, written standard in these regulations or the Municipal Plan applicable to the resource, issue or facility in question?
   (b) Can the unfavorable impact be avoided through site or design modifications, or mitigation, or other conditions of approval?

The Development Review Board shall conclude that adverse effect is “undue” if the answer to 2(a) is YES OR the answer to 2(b) is NO.
ARTICLE 9 SOUTHEAST QUADRANT – SEQ

9.06 Dimensional and Design Requirements Applicable to All Sub-Districts

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B. Open Space and Resource Protection.

(1) Open space areas on the site shall be located in such a way as to maximize opportunities for creating usable, contiguous open spaces between adjoining parcels, creating or enhancing stream buffer areas, or creating or enhancing buffers for primary or secondary natural communities.

(2) Building lots, streets and other structures shall be located in a manner consistent with the Regulating Plan for the applicable sub-district, allowing carefully planned development at the average densities provided in this bylaw.

(3) A plan for the proposed open spaces and/or natural areas and their ongoing management shall be established by the applicant. Such plan shall describe the intended use and maintenance of each area. Continuance of agricultural uses or enhancement of wildlife habitat values in such plans for use and maintenance is encouraged. Existing natural resources on each site shall be protected through the development plan, including (but not limited to) primary natural communities, streams, wetlands, floodplains, conservation areas shown in the Comprehensive Plan, and special natural and/or geologic features such as mature forests, headwaters areas, and prominent ridges. In making this finding the Development Review Board shall use the provisions of Articles -10 and 12 of this bylaw related to Hazards, Level I Resources, and Level II Resources. Sufficient grading and erosion controls shall be employed during construction and after construction to prevent soil erosion and runoff from creating unhealthy or dangerous conditions on the subject property and adjacent properties. In making this finding, the Development Review Board may rely on evidence that the project will be covered under the General Permit for Construction issued by the Vermont Department of Environmental Conservation.

(4) Sufficient grading and erosion controls shall be employed during construction and after construction to prevent soil erosion and runoff from creating unhealthy or dangerous conditions on the subject property and adjacent properties. In making this finding, the Development Review Board may rely on evidence that the project will be covered under the General Permit for Construction issued by the Vermont Department of Environmental Conservation.

(5) Sufficient suitable landscaping and fencing shall be provided to protect wetland, stream, or primary or natural community areas and buffers in a manner that is aesthetically compatible with the surrounding landscape. The use of split rail or other fencing made of natural materials is encouraged. Chain link fencing shall be prohibited except:

(a) fencing for agricultural purposes, and

(b) fencing for recreational purposes, such as baseball diamonds, tennis courts, basketball courts, dog parks, or similar activities. Any chain link fencing installed for these purposes shall be plastic coated in either dark green or black.

In all cases, proposed fences shall comply with this section and section 13.17 (Fences) of these Regulations.

C. Agriculture. The conservation of existing agricultural production values is encouraged through development planning that supports agricultural uses (including but not limited to development plans that create contiguous areas of agricultural use), provides buffer areas between existing agricultural operations and new development, roads, and infrastructure, or creates new opportunities for agricultural use (on any soil group) such as but not limited to community-supported agriculture. Provisions that enhance overall neighborhood and natural resource values rather than preservation of specific soil types are strongly encouraged.
9.12 SEQ-NRP; Supplemental Regulations

A. Any lot that lies entirely within a SEQ-NRP sub-district is subject to the following supplemental regulations:

   (1) Such lot shall be conveyed to the City of South Burlington as dedicated open space or to a qualified land trust and shall not be developed with a residence, or

   (2) Such lot may be developed with a residence or residences pursuant to a conservation plan approved by the Development Review Board. See 9.12(B) below.

   (3) Such lot may be developed with uses other than residences, as listed in Table C-1, subject to the Development Review Board’s approval of a conservation plan that balances development or land utilization and conservation. Such lot may also include the following additional development/activities:

      (a) Driveways, roads, underground utility services, or other appurtenant improvements to serve approved development or uses. Utility service components, such as transformers and amplifiers, may be installed at ground level where such accords with standard industry practices.

      (b) Landscaping, regrading, or other similar activities necessary to the creation of a buildable lot.

B. A lot that was in existence on or before June 22, 1992 and which lies substantially or entirely within a SEQ-NRP sub-district may be improved with one or more single family detached dwelling units, subject to conditional use review and the following supplemental standards:

   (1) Where the lot is less than fifteen (15) acres in size, the Development Review Board may permit no more than one (1) single family dwelling unit only if:

      (a) The portion of the lot in any other (non-NRP) SEQ sub-district is insufficient to accommodate the construction and use of a single family dwelling unit in compliance with these Regulations, and;

      (b) The location of structures, yards, and access drives have no portion within a designated primary natural community hazard, level I resource, level II resource or its related buffers.

   (2) Where the lot is fifteen (15) acres or more in contiguous area, the Development Review Board may allow a subdivision of no more than three (3) lots and construction of one (1) single family dwelling unit on each of these lots only if:

      (a) The DRB shall determine whether the portion of the lot in any non-NRP SEQ sub-district is sufficient to accommodate the construction and use of at least three (3) single family dwelling units on lots approvable in compliance with these Regulations.

      (i) Where the DRB finds that the portion of the lot in any non-NRP SEQ sub-district is sufficient to accommodate the construction and use of at least three (3) single family dwelling units on lots approvable in compliance with these Regulations, no subdivisions of land or construction of new dwelling units shall be permitted in the NRP subdistrict;

      (ii) Where the DRB finds that the portion of the lot in any non-NRP SEQ sub-district is sufficient to accommodate the construction and use of two (2) single family dwelling units on lots approvable in compliance with these Regulations, the subdivision of land and construction of up to one (1) new dwelling unit in the NRP subdistrict may be permitted by the DRB in compliance with these Regulations;
(iii) Where the DRB finds that the portion of the lot in any non-NRP SEQ sub-district is sufficient to accommodate the construction and use of one (1) single family dwelling units on lots approvable in compliance with these Regulations, the subdivision of land and construction of up to two (2) new dwelling unit in the NRP subdistrict may be permitted by the DRB in compliance with these Regulations;

(iv) Where the DRB finds that the portion of the lot in any non-NRP SEQ sub-district is insufficient to accommodate the construction and use of any single family dwelling units on lots approvable in compliance with these Regulations, the subdivision of land and construction of up to three (3) new dwelling unit in the NRP subdistrict may be permitted by the DRB in compliance with these Regulations; and,

(b) such lots shall have a minimum size of 12,000 square feet per dwelling unit, and,

(c) the location of structures, yards, and access drives have no portion within a designated primary natural community Hazard, Level I Resource, Level II Resource or its related buffers, and,

(d) The location of structures and access drives are clustered such that no dwelling unit is located more than one hundred (100) feet from any other structure, and,

(e) The dwelling units shall be detached single family dwellings, and,

(f) Such subdivision plan shall be subject to the Development Review Board’s approval of a conservation plan in a form acceptable to the City Attorney that permanently encumbers the land against further land subdivision and development.

C. A single tax parcel existing as of the effective date of these regulations which exceeds one hundred (100) acres and is located entirely within the NRP sub-district, as shown on the South Burlington Tax Maps last revised 6/05 (June 2005), whether such lands are contiguous or not, may be subdivided at an average overall density for the entire tax parcel of one (1) single-family dwelling per ten (10) acres. Any new lots so created shall have a minimum size of 12,000 square feet per dwelling unit. Such lots shall be clustered in a manner that maximizes the resource values of the property and shall have no portion within a Hazard or Level I Resource Area designated primary natural community or its related buffers. All dwelling units shall be detached single family houses. Such subdivision plan shall be subject to the Development Review Board’s approval of a conservation plan in a form acceptable to the City Attorney that permanently encumbers the land against further land subdivision and development.
10 OVERLAY DISTRICTS  FP, TR, SVP, IHO, TO, UDO, RCO

10.01 Floodplain Overlay District (FP)

[NOTE TO DRAFT: SECTION 10.01 IS DISPLAYED A COMPLETE REPLACEMENT OF THE EXISTING TEXT. EXISTING TEXT IS SHOWN WITH STRIKETHROUGH FOLLOWING SECTION]

A. Purpose. It is the purpose of the Floodplain Overlay District to:

1. Avoid and minimize the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding;

2. Ensure that the selection, design, creation, and use of development is reasonably safe and accomplished in a manner that is consistent with public wellbeing, does not impair flood plain services or the stream corridor;

3. Manage the flood hazard area designated pursuant to 10 V.S.A. Chapter 32 § 753, the municipal hazard mitigation plan; and make the City of South Burlington, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available.

B. Authority. In accordance with 10 V.S.A. Chapter 32, and 24 V.S.A. Chapter 117 §4424, §4411 and §4414, there is hereby established a bylaw for areas at risk of flood damage in the City of South Burlington Vermont. These regulations shall apply to development in all areas in the City of South Burlington identified as within the Floodplain Overlay District designated in Section 3.01(B).

C. [reserved]

D. Administration

1. Floodplain Review. All development in the City of South Burlington located within the Floodplain Overlay District shall be subject to Floodplain Review. The Floodplain Overlay District overlays other existing zoning districts. All other requirements of the underlying district shall apply in addition to the provisions herein, unless otherwise indicated. The Floodplain Overlay District is composed of two areas:


   b. Floodplain Overlay District Zones 0.2% B1 and B2. The boundaries of these Zones include those areas of special flood hazard designated in and on the most current flood insurance studies and maps published by the Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, and on Map ****, and Map ***, and mapped as Zone 0.2% B1 and Zone 0.2% B2. Floodplain Overlay District Zone 0.2% B1 is composed of areas of the 500-year floodplain that are already substantially developed and where additional opportunities for infill development is appropriate. Floodplain Overlay District Zone 0.2% B2 is composed of areas of the 500-year floodplain that are not developed and where future development is not appropriate.
2. **Interpretation.** The information presented on any maps, or contained in any studies, adopted by reference, is presumed accurate. However, if uncertainty exists regarding the Floodplain Overlay District boundary, the following procedure shall be followed:

   a. If uncertainty exists with respect to the boundaries of the Floodplain Overlay District Zones A, AE, and A1-30 the location of the boundary shall be determined by the Administrative Officer. If the applicant disagrees with the determination made by the Administrative Officer, a Letter of Map Amendment from FEMA shall constitute proof that the property is not located within the Special Flood Hazard Area.

   b. If uncertainty exists with respect to the boundaries of the Floodplain Overlay District Zones 0.2% B1 and B2 the location of the boundary shall be determined by the Administrative Officer. If the applicant disagrees with the determination made by the Administrative Officer, the applicant may appeal the determination in accordance with Article 17.

3. **Base Flood Elevations and Floodway Limits.**

   a. Where available (i.e. zones A1-A30, AE, AH, and 0.2% B1 within the floodplain of the Winooski River), the base flood elevations and floodway limits (or data from which a community can designate regulatory floodway limits) provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps shall be used to administer and enforce the provisions of these regulations.

   b. In Zone A of the Floodplain Overlay District where base flood elevations and floodway limits have not been provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps, it shall be the responsibility of the applicant to develop the base flood elevation at the site using data available from state or federal agencies or other sources.

4. **Warning of Disclaimer of Liability.** This bylaw does not imply that land outside of the areas covered by this overlay district will be free from flood damages. These regulations shall not create liability on the part of the City of South Burlington, or any municipal official or employee thereof, for any flood damages that result from reliance on these regulations, or any administrative decision lawfully made hereunder.

5. **Precedence of Bylaw.** The provisions of this Floodplain Overlay District shall not in any way impair or remove the necessity of compliance with any other local, state, or federal laws or regulations. Where these regulations imposes a greater restriction the provisions here shall take precedence.

6. **Exempted Development.** The following types of development are exempt from Floodplain Review. The following types of development may also still be subject to other standards in the South Burlington Land Development Regulations including Section 12.01 General Stream and Surface Water Protection Standards:

   a. The removal of a building or other improvement in whole or in part, so long as the ground elevations under and adjacent to the removed structure remain unchanged. Please be aware that for damaged structures where FEMA mitigation funds may be used, the damaged structure may be required to remain in place until funds are granted.

   b. Routine maintenance of existing buildings in the usual course of business required or undertaken to conserve the original condition, while compensating for normal wear and tear.
c. Routine maintenance includes actions necessary for retaining or restoring a piece of equipment, machine, or system to the specified operable condition to achieve its maximum useful life and does not include expansions or improvements to development.
d. Interior improvements to existing buildings that cost less than five-hundred (500) dollars.
e. Maintenance of existing sidewalks, roads, parking areas, or stormwater drainage; this does not include expansions.
f. Maintenance of existing bridges, culverts, and channel stabilization activities; this does not include expansions.
g. Streambank armoring and stabilization, retaining walls, and abutment work that do not reduce the cross-sectional flow area of the river or stream channel and have coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder.
h. The following activities are exempt from Floodplain Review, but may require a permit under the State’s “Vermont Flood Hazard Area and River Corridor Rule” (Environmental Protection Rule, Chapter 29):
   i. State-owned and operated institutions and facilities.
   ii. Forestry operations and silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont or other accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation.
   iii. Agricultural activities conducted in accordance with the Vermont Agency of Agriculture Food and Market’s Required Agricultural Practices (RAPs).
   iv. Public utility power generating plants and transmission facilities regulated under 30 V.S.A. § 248.

E. Floodplain Review Application Requirements

1. Application Submission Requirements. All applications for Floodplain Review shall include:
   a. Floodplain Development Plan. A Floodplain Development Plan that depicts the proposed development, property boundaries, all water bodies, all boundaries (Floodplain Overlay District boundaries – all zones), the shortest horizontal distance from the proposed development to the top of bank of any river, any existing and proposed drainage, any proposed fill, pre- and post-development grades, and the elevation of the proposed lowest floor as referenced to the same vertical datum as the elevation on the current Flood Insurance Rate Maps; and
   b. Project Review Sheet. A completed Vermont Agency of Natural Resources Project Review Sheet. The Project Review Sheet shall identify all State and Federal agencies from which permit approval is required for the proposal, and shall be filed as a required attachment to the municipal permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Administrative Officer and attached to the permit before work can begin.
2. **Supplemental Application Requirements.** Some applications may require additional information based on the location and type of the development. The following information shall be developed and provided with an application, as required below:

   a. **Base Flood Elevation (BFE).** BFE information is required for applications that include the following development located in Zones A, A1-A30, AE, AH, and 0.2% B1 within the floodplain of the Winooski River:
      
      i. New, substantially improved, or substantially damaged structures;
      
      ii. Projects requiring elevation or dry-floodproofing above BFE;
      
      iii. Additions to existing historic structures; and
      
      iv. Any accessory structure proposed to have building utility systems that will need to be protected from flood waters through elevation above the BFE.

   b. **Floodway Data.** The following information is required for development proposed to be located in the floodway. All floodway data shall be certified by a registered professional engineer. All submitted proposals shall include electronic input/output files mapping showing cross-section locations and the following information:

      i. Hydraulic calculations demonstrating no rise in BFE or velocity for proposed new or expanded encroachments within the floodway.

      ii. In accordance with 44 C.F.R. § 60.3(c)(10), where BFE data has been provided by FEMA, but no floodway areas have been designated, the applicant shall provide a floodway delineation that demonstrates that the proposed development, when combined with all existing and anticipated future development, will not increase the water surface elevation of the base flood by more than one foot at any point within the community.

   c. **Average Grade Level.** Information about average grade level is required for development involving all structures proposed to be located in Zone 0.2% B1 and Zone 0.2% B2.

   d. **Erosion Control Projects.** For projects involving erosion control measures within the floodplain on Lake Champlain, the applicant shall submit:

      i. Renderings or other additional information relevant and necessary to evaluating the aesthetic or visual impact of the proposed improvement.

      ii. A landscaping plan.

3. **Waiver of Application Requirements.** Upon written request from the applicant, the Development Review Board may waive specific application requirements when the data or information is not needed to comply with these regulations.

F. **Floodplain Review - Development Review Process.** All applications for development in the Floodplain Overlay District shall be reviewed according to the following procedures:

1. **Referrals.**
a. **NFIP Coordinator.** Upon receipt of a complete Floodplain Review application for a substantial improvement or new construction the Administrative Officer shall forward a copy of the application and supporting information to the State National Flood Insurance Program Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. 4424. A permit may be issued only following receipt of comments from the Agency, or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner. The Administrative Officer, and/or Development Review Board shall consider all comments from ANR.

b. **Stream Alteration Engineer.** If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be submitted to the adjacent communities, the Stream Alteration Engineer at the Vermont Agency of Natural Resources, and the Army Corps of Engineers. Copies of such notice shall be provided to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner.

2. **Review Process.**

a. **Administrative Review.** Floodplain Review may be completed administratively by the Administrative Officer for the following types of development in the Floodplain Overlay District provided that the application is complete and the proposed development can be approved administratively under all other sections of the South Burlington Land Development Regulations:

i. Changes from a permitted land use to another permitted land use provided that any other changes to the site may also be administratively reviewed.

ii. Above grade development, which has not been elevated by the placement of fill, that is two feet above base flood elevation and documented with field-surveyed topographic information certified by a registered professional engineer or licensed land surveyor (Elevation Certificate).

iii. Open fencing and signs elevated on poles or posts that create minimal resistance to the movement of floodwater.

iv. Municipal transportation infrastructure improvements designed and constructed by the Vermont Agency of Transportation that have written confirmation from the ANR Regional Floodplain Manager that the project is designed to meet or exceed the applicable standards in these regulations.

v. River and floodplain restoration projects, including dam removal, that restore natural and beneficial floodplain functions and include written confirmation from the ANR Regional Floodplain Manager that the project is designed to meet or exceed the applicable standards in these regulations.

vi. Improvements or repairs of damage to structures that do not expand the existing footprint and do not meet the definition of “substantial improvement” or “substantial damage.”
vii. Accessory structures less than 500 square feet in size in the Floodplain Overlay District Zones 0.2% B1.

viii. Building utilities.

ix. Recreational vehicles. See Section 3.08 Temporary Structures and Uses for additional applicable standards.

b. **Development Review.** All development in the Floodplain Overlay District that cannot be approved through administrative Floodplain Review shall require Floodplain Review by the Development Review Board.

3. **Permits.** A permit is required from the Administrative Officer for all development, as defined in Section 2.03 (Floodplain Definitions), in the Floodplain Overlay District. A permit shall only be issued for development meeting the standards in Section 10.01(G) and the following the review process outlined in Section 10.01(F) and Article 17.

a. Within 30 days of receipt of a complete application per Section 10.01(E), including all application materials and fees, the Administrative Officer shall act to either issue or deny a permit in writing, or to refer the application to the Development Review Board. If the Administrative Officer fails to act with regard to a complete application for a permit within the 30-day period, a permit shall be deemed issued on the 31st day, unless the permit is for new construction or substantial improvement, in which case a permit shall not be issued until the Administrative Officer has complied with the requirements of Section 10.01(F)(1).

b. No zoning permit shall be issued by the Administrative Officer for any use or structure which requires the approval of the Development Review Board until such approval has been obtained. For permit applications that must be referred to a state agency for review, no permit shall be issued until a response has been received from the State, or the expiration of 30 days following the submission of the application to the State, whichever is sooner.

G. **Floodplain Review Standards.** Development in the Floodplain Overlay District shall be reviewed to ensure that it complies with the following standards:

1. **Prohibited Development.** In addition to any uses not specifically listed in this section, the following types of development are specifically prohibited in the Floodplain Overlay District:

   a. New principal structures, both residential or non-residential (including the placement of manufactured homes), except within Zone 0.2% B1 of the Floodway Overlay District;

   b. New accessory structures except within the Zone 0.2% B1 of the Floodplain Overlay District.

   c. New critical facilities;

   d. Excavation of earth products shall be prohibited in such cases where it is anticipated that such excavation will lower the level of the water table, interfere with natural flow patterns, or reduce flood storage capacity;

   e. Storage or junk yards;

   f. New fill except as necessary to elevate structures above the base flood elevation.

   g. Within the floodway: new encroachments, except for minor improvements to existing structures or relating to bridges, culverts, roads, stabilization projects, public utilities, river and/or
floodplain restoration projects, or health and safety measures. Minor improvements are those that would not affect base flood elevations, consistent with the provisions of FEMA P-480; Desk Reference for Local Officials.

2. Development in the Floodway. Within the floodway, the following standards apply to all development:
   a. New encroachments are prohibited within the floodway, except for the following, which also shall comply with subsection (b) below:
      i. New encroachments relating to bridges, culverts, roads, stabilization projects, public utilities, functionally dependent uses, and river or floodplain restoration projects; and
      ii. New encroachments relating to health and safety measures, such as replacement of preexisting on-site septic and water supply systems, if no other practicable alternative is available.
   b. For all proposed new encroachments and above-grade development, a hydraulic analysis is required to be provided for review. The analysis should be performed in accordance with standard engineering practice, by a registered professional engineer, and shall certify that the proposed development will:
      i. Not result in any increase in flood levels during the occurrence of the base flood;
      ii. Not increase base flood velocities; and
      iii. Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.
   c. For development that is either below grade or will not result in any change in grade, the hydrologic & hydraulic analyses may be waived, where the applicant will provide pre and post-development elevations demonstrating that there will be no change in grade, and that the development will be adequately protected from scour.
   d. For any new encroachment that is proposed within the Floodway where a hydraulic analysis is required, the applicant may provide a FEMA Conditional Letter of Map Revision (CLOMR) in lieu of a hydraulic analysis, to demonstrate that the proposed activity will not have an adverse impact.

3. Development in the Floodplain Overlay District. All development in the Floodplain Overlay District shall comply with the following standards:
   a. All development shall be reasonably safe from flooding, as determined by compliance with the specific standards of this subsection.
   b. All development shall be designed (I) to minimize flood damage to the proposed development and to public facilities and utilities, and (II) to provide adequate drainage to reduce exposure to flood hazards.
   c. All development shall be (I) designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure during the occurrence of the base flood, (II) be constructed with materials resistant to flood damage, (III) be constructed by methods and practices that minimize flood damage, and (IV) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
d. **Water Supply and Wastewater.** New and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters. On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

e. **Stream Alteration.** The flood carrying capacity within any portion of an altered or relocated watercourse shall be maintained.

f. **Manufactured Homes.** Replacement manufactured homes shall be elevated on properly compacted fill such that the top of the fill (pad) under the entire manufactured home is above the base flood elevation.

g. **Structures.**

i. **Residential Structures**

   a) Residential structures to be substantially improved in Floodplain Overlay District Zones A, A1-30, AE, and AH shall be located such that the lowest floor is at least two (2) feet above base flood elevation; this must be documented, in the proposed and as-built condition, with a FEMA Elevation Certificate.

   b) Residential structures to be substantially improved in Floodplain Overlay District 0.2% Zones B1 & B2, and new structures in Floodplain Overlay District Zone 0.2% B1, shall be located such that the lowest floor is at least two (2) feet above the average grade level on-site; this must be documented, in the proposed and as-built condition, with a FEMA Elevation Certificate. Average grade level means the average of the natural or exiting topography at center of all exterior walls of a building or structure to be placed on site.

ii. **Non-residential Structures.** Non-residential structures to be substantially improved, and new non-residential structures in the Floodplain Overlay District 0.2% Zone B1, shall meet the following standards:

   a) Meet the standards in Section 10.01(G)(3)(g)(i) Residential Structures; or,

   b) Have the lowest floor, including basement, together with attendant utility and sanitary facilities be designed so that two (2) feet above the base flood elevation (for structures in Zones A, A1-30, AE, and AH), or two (2) feet above the average grade level on-site (for structures in Zones 0.2% B1 and B2), the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A permit for flood proofing shall not be issued until a licensed professional engineer or architect has reviewed the structural design, specifications and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection. An occupancy permit for the structure shall not be issued until an "as-built" plan has been submitted and a licensed professional engineer or architect has certified that the structure has been constructed in accordance with accepted standards of practice for meeting the provisions of this subsection.

h. **Basements.** For all new construction and substantial improvements, fully enclosed areas below grade on all sides (including below grade crawlspaces and basements) shall be prohibited.
i. **Areas Below Base Flood Elevation.** For all new construction and substantial improvements, fully enclosed areas that are above grade, below the lowest floor, below Base Flood Elevation and subject to flooding, shall be (i) solely used for parking of vehicles, storage, or access, and such a condition shall clearly be stated on any permits; and, (ii) designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by a licensed professional engineer or architect, or meet or exceed the following minimum criteria: A minimum of two openings on two walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

j. **Impact to Base Flood Elevation.** In the AE Zone, where base flood elevations and/or floodway limits have not been determined, development shall not be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachment, will not increase the base flood elevation more than one (1) foot at any point within the community. The demonstration must be supported by technical data that conforms to standard hydraulic engineering principles and certified by a licensed professional engineer.

k. **Recreational Vehicle.** All recreational vehicles shall be fully licensed and ready for highway use.

l. **Accessory Structures.** In Floodplain Overlay District 0.2% Zone B1, a small accessory structure of 500 square feet or less in gross floor area that represents a minimal investment need not be elevated to the base flood elevation in this area, provided the structure is placed on a site so as to offer the minimum resistance to the flow of floodwaters and shall meet the criteria of 10.01(G)(3)(i). Accessory structures are prohibited in all other parts of the Floodplain Overlay District.

m. **Critical Facilities.** Critical facilities that are to be replaced, substantially improved, or meet the definition of substantial damage shall be constructed so that the lowest floor, including basement, shall be elevated or dry-floodproofed at least two (2) feet above the average grade level in Floodplain Overlay District 0.2% Zone B1 and Floodplain Overlay District 0.2% Zone B2, or three (3) feet above base flood elevation in Floodplain Overlay District Zones A, AE, and A1-30. A critical facility shall have at least one access road connected to land outside the 0.2% annual chance floodplain that is capable of accommodating emergency services vehicles. The top of the access road shall be no lower than the elevation of the 0.2% annual chance flood event.

n. **Historic Structures.** For historic structures that would meet the definition of substantial improvement or substantial damage if not for their historic structure designation, the improved or repaired building shall meet the following mitigation performance standards for areas below the base flood elevation:
   
   i. Utility connections (e.g., electricity, water, sewer, natural gas) shall be protected from inundation and scour or be easily repaired;
   
   ii. The building foundation shall be structurally sound and reinforced to withstand a base flood event;
   
   iii. The structure’s historic designation shall not be precluded;
   
   iv. The likelihood of flood waters entering the structure during the base flood is reduced; and
v. There shall be no expansion of uses below base flood elevation except for parking, storage, building access, or, in the case of non-residential buildings, where the space is dry floodproofed.

o. **No Rise Requirement.** No encroachment, including fill, new construction, substantial improvement, or other development, that would result in any increase in flood levels within the regulatory floodway during the occurrence of the base flood discharge, shall be permitted unless hydrologic and hydraulic analyses are performed in accordance with standard engineering practice, by a licensed professional engineer, certifying that the proposed development will: a) Not result in any increase in flood levels (0.00 feet) during the occurrence of the base flood; and b) Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.

p. **Erosion Control Measures on Lake Champlain.** The installation of erosion control measures within may be approved by the DRB provided the following standards are met:

i. The improvement involves, to the greatest extent possible, the use of natural materials such as wood and stone.

ii. The improvement will not increase the potential for erosion.

iii. The project will not have an undue adverse effect on the aesthetic integrity of the lakeshore.

iv. The project shall preserve, maintain and supplement existing trees and ground cover vegetation to the greatest extent possible.

4. **Other Applicable Standards.** Development in the Floodplain Overlay District may be subject to these additional standards:

a. All land lying within a River Corridor as defined in these regulations is subject to the standards of Section 10.07 in addition to the standards of this section.

b. All land lying within a stream or surface water buffer, and all land within the 0.2% B1A Zone, is subject to the standards of Section 12.02 in addition to the standards of this section.

H. **Nonconforming Structures.**

1. A nonconforming structure in the Floodplain Overlay District that has been substantially damaged or destroyed may be reconstructed in its original location only if it is rebuilt to comply with all requirements of the National Flood Insurance Program and these regulations.

2. Nonconforming structures and uses shall be considered abandoned where the structures or uses are discontinued for more than 6 months. An abandoned structure shall not be permitted for re-occupancy unless brought into compliance with these regulations and Section 3.11(G). An abandoned use shall not be permitted unless brought into compliance with these regulations.

I. **Variances.**

1. A variance for development in the Floodplain Overlay District may be granted by the Development Review Board only in accordance with Title 24, Vermont Statutes Annotated and 44 CFR Section 60.6.

2. Any variance issued in the Special Flood Hazard Area shall not increase flood heights, and shall inform the applicant in writing over the signature of a community official that the issuance of a variance to construct a structure below the base flood elevation increases risk to life and property and will result in increased
flood insurance premiums up to amounts as high as $25 for $100 of coverage. Such notification shall be maintained with a record of all variance actions.

J. Certificate of Occupancy. A Certificate of Occupancy shall be required for all new structures or substantial improvements to structures in the Floodplain Overlay District.

1. Upon receipt of the application for a certificate of occupancy, the Administrative Officer shall review the permit conditions and inspect the premises to ensure that:
   i. All required state and federal permits that have been obtained by the applicant;
   ii. All work has been completed in conformance with the zoning permit and associated approvals; and
   iii. All required as-built documentation has been submitted to the Administrative Officer (e.g. updated FEMA Elevation Certificate, dry floodproofing certificate, as-built volumetric analysis, or as-built floodway encroachment analysis).

K. Enforcement. Enforcement shall be conducted by the Administrative Officer. All enforcement action related to property in the Floodplain Overlay District shall be performed in compliance with Article 17 and the following procedures:

1. The State NFIP Coordinator shall be provided a copy of all notices of violation issued by the Administrative Officer for development that is not in conformance with this section.
2. If any appeals have been resolved, but the violation remains, the Administrative Officer shall submit a declaration to the Administrator of the National Flood Insurance Program requesting a denial of flood insurance to the property pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.

10.01 Floodplain Overlay District (FP)

A. Purpose. It is the purpose of the Floodplain Overlay District to:

   (1) Avoid and minimize the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding;
   (2) Ensure that the selection, design, creation, and use of development is reasonably safe and accomplished in a manner that is consistent with public wellbeing, does not impair floodplain services or the stream corridor;
   (3) Manage the flood hazard area designated pursuant to 10 V.S.A. Chapter 32 § 753, the municipal hazard mitigation plan, and make the City of South Burlington, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available.

B. Authority. In accordance with 10 V.S.A. Chapter 32, and 24 V.S.A. Chapter 117 § 4424, § 4411 and §4414, there is hereby established a bylaw for areas at risk of flood damage in the City of South Burlington, Vermont. These regulations shall apply to development in all areas in the City of South Burlington identified as within the Floodplain Overlay District designated in Section 3.01(B).

C. Comprehensive Plan. These regulations hereby implement the relevant portions of the City of South Burlington’s adopted Comprehensive Plan, and are in accord with the policies set forth therein.

D. Warning of Disclaimer of Liability. This bylaw does not imply that land outside of the areas covered by this overlay district will be free from flood damages. This regulation shall not create liability on the part of
the City of South Burlington, or any municipal official or employee thereof, for any flood damages that result from reliance on this regulation, or any administrative decision lawfully made hereunder.

E. **Precedence of Bylaw.** The provisions of this Floodplain Overlay District shall not in any way impair or remove the necessity of compliance with any other local, state, or federal laws or regulations. Where this regulation imposes a greater restriction the provisions here shall take precedence.

F. **Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict**

1. **Development Review in Hazard Areas**
   
   (a) **Permits.** A permit is required from the Administrative Officer for all development, as defined in Section 2.03 (Floodplain Definitions), in the Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict.
   
   (b) **Submission requirements.** In addition to all information required for permitted and conditional uses, the applicant shall prepare and submit a Project Review Sheet to Vermont Agency of Natural Resources. The Project Review Sheet shall identify all State and Federal agencies from which permit approval is required for the proposal, and shall be filed as a required attachment to the municipal permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Administrative Officer and attached to the permit before work can begin.
   
   (c) **Referrals.**
      
      (i) Upon receipt of a complete application for a substantial improvement or new construction the Administrative Officer shall forward a copy of the application and supporting information to the State National Flood Insurance Program Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. 4424. A permit may be issued only following receipt of comments from the Agency, or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner.
   
      (ii) If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be submitted to the adjacent communities, the Stream Alteration Engineer at the Vermont Agency of Natural Resources, and the Army Corps of Engineers. Copies of such notice shall be provided to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner.
   
   (d) **Permitted Uses.** The following uses are permitted in the Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict. Structures associated with any of the permitted uses below shall be allowed only as Conditional Use subject to the provisions of this Section 10.01.
      
      (i) Park;
      
      (ii) Recreation path;
      
      (iii) Outdoor recreation facility;
      
      (iv) Non-substantial improvements of existing structures;
      
      (v) Development related to on-site septic or water supply systems;
      
      (vi) Building utilities;
      
      (vii) At-grade parking for existing buildings; and,
      
      (viii) Recreational vehicles.
(e) **Conditional Uses.** The following uses are allowed in the Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict as conditional uses subject to approval by the Development Review Board in accordance with the provisions of this Section 10.01 and Table C-2, Dimensional Standards:

(i) Substantial improvement, elevation, relocation, or flood proofing of existing structures;

(ii) Accessory structures;

(iii) New or replacement storage tanks for existing structures;

(iv) Grading, excavation, or the creation of a pond;

(v) Improvements to existing roads;

(vi) Bridges, culverts, channel management activities, or public projects which are functionally dependent on stream access or stream crossing;

(vii) Public utilities.

(f) **Prohibited Uses.** In addition to any uses not specifically listed in this section, the following uses are specifically prohibited in the Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict:

(i) New residential or non-residential structures (including the placement of manufactured homes);

(ii) Storage or junk yards;

(iii) New fill except as necessary to elevate structures above the base flood elevation; and,

(iv) Accessory structures in the floodway.

(2) **Area, Density and Dimensional Requirements.** In the Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict, all structures shall be subject to the area, density and dimensional requirements of the Residential 1 District as set forth in Section 4.01 and Table C-2, Dimensional Standards of these regulations.

(3) **Additional Standards.**

(a) No encroachment, including fill, new construction, substantial improvement, or other development, that would result in any increase in flood levels within the regulatory floodway during the occurrence of the base flood discharge, shall be permitted unless hydrologic and hydraulic analyses are performed in accordance with standard engineering practice, by a licensed professional engineer, certifying that the proposed development will:

(i) Not result in any increase in flood levels (0.00 feet) during the occurrence of the base flood; and

(ii) Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.

(b) Within the Floodplain Overlay (Zones A, AE, and A1-30) Subdistrict, excavation of earth products shall be prohibited in such cases where it is anticipated that such excavation will lower the level of the water table, interfere with natural flow patterns, or reduce flood storage capacity.

(c) All development allowed as Conditional Uses pursuant to Section 10.01(F)(1)(e) above shall meet the following additional standards:

(i) All development shall be reasonably safe from flooding, as determined by compliance with the specific standards of this subsection.

(ii) All development shall be designed (I) to minimize flood damage to the proposed development and to public facilities and utilities, and (II) to provide adequate drainage to reduce exposure to flood hazards.

(iii) All development shall be (I) designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure during the occurrence of the base flood, (II) be constructed with materials resistant to flood damage, (III) be constructed by methods and practices that minimize flood damage, and (IV) be constructed with electrical, heating, ventilation,
plumbing, and air-conditioning equipment and other service facilities that are designed and/or
located so as to prevent water from entering or accumulating within the components during
conditions of flooding.

(iv) New and replacement water-supply and sanitary sewage systems shall be designed to
minimize or eliminate infiltration of flood waters into the systems and discharges from the systems
into flood waters.

(v) On-site waste-disposal systems shall be located to avoid impairment to them or
contamination from them during flooding.

(vi) The flood carrying capacity within any portion of an altered or relocated watercourse shall
be maintained.

(vii) Replacement manufactured homes shall be elevated on properly compacted fill such that
the top of the fill (pad) under the entire manufactured home is above the base flood elevation.

(viii) Structures to be substantially improved in Zones A, A1-30, AE, and AH shall be located
such that the lowest floor is at least one (1) foot above base flood elevation; this must be
documented, in as-built condition, with a FEMA Elevation Certificate.

(ix) Non-residential structures to be substantially improved shall:

(I) Meet the standards in Section 10.01(F)(3)(c)(viii); or,

(II) Have the lowest floor, including basement, together with attendant utility and
sanitary facilities be designed so that two (2) feet above the base flood elevation the structure
is watertight with walls substantially impermeable to the passage of water and with structural
components having the capability of resisting hydrostatic and hydrodynamic loads and effects
of buoyancy.

A permit for flood proofing shall not be issued until a licensed professional engineer or
architect has reviewed the structural design, specifications and plans, and has certified that
the design and proposed methods of construction are in accordance with accepted standards
of practice for meeting the provisions of this subsection. An occupancy permit for the
structure shall not be issued until an "as-built" plan has been submitted and a licensed
professional engineer or architect has certified that the structure has been constructed in
accordance with accepted standards of practice for meeting the provisions of this subsection.

(x) For all new construction and substantial improvements, fully enclosed areas below grade
on all sides (including below-grade crawlspaces and basements) shall be prohibited.

(xi) For all new construction and substantial improvements, fully enclosed areas that are
above grade, below the lowest floor, below Base Flood Elevation and subject to flooding, shall be
(i) solely used for parking of vehicles, storage, or access, and such a condition shall clearly be
stated on any permits; and, (ii) designed to automatically equalize hydrostatic flood forces on
exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by
a licensed professional engineer or architect, or meet or exceed the following minimum criteria:
A minimum of two openings on two walls having a total net area of not less than one square inch
for every square foot of enclosed area subject to flooding shall be provided. The bottom of all
openings shall be no higher than one foot above grade. Openings may be equipped with screens,
louvers, valves, or other coverings or devices provided that they permit the automatic entry and
exit of floodwaters.

(xii) In Special Flood Hazard Areas where base flood elevations and/or floodway limits have
not been provided by the National Flood Insurance Program in the Flood Insurance Study and
accompanying maps, it is the applicant’s responsibility to develop the necessary data.
(xiii) In the AE Zone, where base flood elevations and/or floodway limits have not been determined, development shall not be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachment, will not increase the base flood elevation more than one (1) foot at any point within the community. The demonstration must be supported by technical data that conforms to standard hydraulic engineering principles and certified by a licensed professional engineer.

(xiv) All recreational vehicles shall be fully licensed and ready for highway use.

(xv) A small accessory structure of 500 square feet or less in gross floor area that represents a minimal investment need not be elevated to the base flood elevation in this area, provided the structure is placed on a building site so as to offer the minimum resistance to the flow of floodwaters and shall meet the criteria of subsection (xi) above.

(4) Administration and Enforcement.

(a) The Zoning Permit issued for any development pursuant to this Section 10.01(F) shall include:

(i) a record of the elevation, in relation to mean sea level, of the lowest floor, including basement, of all new construction or substantial improvements of structures.

(b) Upon issuance of a zoning permit, the Administrative Officer shall properly file and maintain a record of:

(i) Elevation Certificates with the as-built elevation (consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community) of the lowest floor, including basement, of all new or substantially improved structures (not including accessory structures) in the Special Flood Hazard Area;

(ii) All flood proofing and other certifications required under this regulation; and,

(iii) All decisions of the Board (including variances and violations) and all supporting findings of fact, conclusions and conditions.


(d) Enforcement

(i) A copy of any notice of violation of this section shall be mailed by the Administrative Officer to the State NFIP Coordinator.

(ii) If any appeals have been resolved, but the violation remains, the Administrative Officer shall submit a declaration to the Administrator of the National Flood Insurance Program requesting a denial of flood insurance to the property pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.

(iii) Any proposed agricultural structure that does not meet the criteria and process in the Accepted Agricultural Practices will be in violation of this bylaw. Such violations shall also be immediately reported to the Secretary of Agriculture for enforcement under 6 V.S.A. Section 4812.

(e) Variances

(i) A variance may be granted by the Development Review Board only in accordance with Title 24, Vermont Statutes Annotated and 44 CFR Section 60.6.

(ii) Any variance issued in the Special Flood Hazard Area shall not increase flood heights, and shall inform the applicant in writing over the signature of a community official that the issuance of a variance to construct a structure below the base flood elevation increases risk to life and property and will result in increased flood insurance premiums up to amounts as high as $25 for $100 of coverage. Such notification shall be maintained with a record of all variance actions.
6. **Floodplain Overlay (Zone 0.2%) Subdistrict**

   (1) **Permits.** A permit is required from the Administrative Officer for all development, as defined in Section 2.02 (Definitions), in the Floodplain Overlay (0.2% Zone) Subdistrict.

   (2) **Permitted Uses.** Those uses allowed as permitted uses in any underlying zoning district within the City may be permitted in the Floodplain Overlay (0.2% Zone) Subdistrict only in accordance with the provisions of this section.

   (3) **Conditional Uses.** Those uses allowed as conditional uses in any underlying zoning district within the City may be permitted in the Floodplain Overlay (0.2% Zone) Subdistrict only in accordance with the provisions of this section.

   (4) **Prohibited Uses.** In addition to any uses not specifically listed in the underlying zoning district, new Critical Facilities are specifically prohibited in the Floodplain Overlay (0.2% Zone) Subdistrict.

   (5) **Area, Density and Dimensional Requirements.** In the Floodplain Overlay (0.2% Zone) Subdistrict, all structures shall be subject to the area, density and dimensional requirements of the underlying zoning district as set forth in Article IV and Table C-2, Dimensional Standards of these regulations.

   (6) **Additional Standards.**

      (a) Any Critical Facilities to be expanded or substantially improved in the Floodplain Overlay (0.2% Zone) Subdistrict shall be located such that the lowest floor is at least one (1) foot above base flood elevation.

      (b) In the Floodplain Overlay (0.2% Zone) Subdistrict, where base flood elevations and/or floodway limits have not been provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps, it is the applicant’s responsibility to develop the necessary data.

   (7) **Administration and Enforcement.** Administration and enforcement of development in the Floodplain Overlay (0.2% Zone) Subdistrict shall be subject to all requirements of Article XVII (Administration and Enforcement) of these Regulations.

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10.07 River Corridor Overlay District (RCO)

[NOTE TO DRAFT: SECTION 10.07 IS DISPLAYED A COMPLETE REPLACEMENT OF THE EXISTING TEXT. EXISTING TEXT IS SHOWN WITH STRIKETHROUGH FOLLOWING SECTION]

A. **Purpose.** It is the purpose of the River Corridor Overlay District to:

   (1) Establish protection of the river corridor to provide rivers and streams with the lateral space necessary to maintain or reestablish floodplain access and minimize erosion hazards through natural, physical processes;

   (2) Allow for wise use of property within river corridors that minimizes potential damage to existing structures and development from flood-related erosion;

   (3) Discourage encroachments in undeveloped river corridors;

   (4) Protect and improve the quality of surface waters and streams within the City of South Burlington; and

   (5) Provide sufficient space for wildlife habitat along rivers and streams.
(4) Provide allowances for infill and redevelopment of designated centers that are within river corridors.

B. Authority. In accordance with 24 V.S.A. Chapter 117, §4424, and §4414, there is hereby established a bylaw for areas at risk of erosion damage in the City of South Burlington Vermont. These regulations shall apply to development in all areas in the City of South Burlington identified as within the River Corridor Overlay District designated in Section 3.01(B).

C. Comprehensive Plan. These regulations hereby implement the relevant portions of the City of South Burlington’s adopted Comprehensive Plan and are in accord with the policies set forth therein.

D. Warning of Disclaimer of Liability. This bylaw does not imply that land outside of the areas covered by this overlay district will be free from erosion damages. This regulation shall not create liability on the part of the City of South Burlington, or any municipal official or employee thereof, for any erosion damages that result from reliance on this regulation, or any administrative decision lawfully made hereunder.

E. Precedence of Bylaw. The provisions of this River Corridor Overlay District shall not in any way impair or remove the necessity of compliance with any other local, state, or federal laws or regulations. Where this regulation imposes a greater restriction, the provisions in these regulations shall take precedence.

F. District General Provisions

(1) Establishment of RCO District. The RCO is an overlay district. All other requirements of the underlying district, or another overlay district such as the Flood Hazard Overlay District, shall apply in addition to the provisions herein, unless it is otherwise so indicated. If there is a conflict with another such district, the stricter provision shall apply.

(2) RCO District Boundaries. The boundaries of the RCO District are as follows:

(a) All River Corridors as published by the Vermont Agency of Natural Resources (including the Statewide River Corridors and refinements to that data based on field-based assessments which are hereby adopted by reference).

(b) All land within one hundred (100) feet horizontal of the top of bank or top of slope, whichever is applicable given the stream’s fluvial geomorphology, along the reaches of the main stem of Potash
Brook where a mapped River Corridor has not been developed by the Vermont Agency of Natural Resources.

(c) All land within fifty (50) feet horizontal distance from the top of bank or top of slope, whichever is applicable given the stream’s fluvial geomorphology, of all other perennial rivers and streams.

(d) All land within ten (10) feet horizontal distance from the top of the bank or top of slope of a natural intermittent stream, whichever is applicable given the stream’s fluvial geomorphology.

(e) Requests to update a River Corridor map shall be in accordance with the procedure laid out in the ANR Flood Hazard Area and River Corridor Protection Procedure.

(3) RCO District – Classification. River Corridors shall be classified in the following manner per Section 12.01:

(a) River Corridors on Intermittent Streams. River Corridors on intermittent streams are Level II Resources.

(b) All Other River Corridors. River Corridors on all other streams shall be considered a Hazard resources.

(4) Jurisdictional Determination and Interpretation. The information presented on any maps, or contained in any studies, adopted by reference, is presumed accurate. If uncertainty exists with respect to the boundaries of the RCO the location of the boundary on the property shall be determined by the Administrative Officer (AO). If the applicant disagrees with the determination made by the AO or the river corridor as mapped, the applicant has the option to either:

(a) Hire a licensed land surveyor or registered professional engineer to stake out the RCO boundary on the property; or

(b) Request a letter of determination from ANR which shall constitute proof of the location of the river corridor boundary. In support of a letter of determination request, applicants must provide ANR a description of the physical characteristics that bring the river corridor delineation into question (e.g. the presence of bedrock or other features that may confine lateral river channel adjustment. When ANR receives a request for a letter of determination, ANR evaluates the site and existing data to see if a change to the river corridor delineation is justified, necessitating a river corridor map update. An ANR letter of determination will either confirm the existing river corridor delineation or will result in an update to the river corridor delineation for the area in question. If a map update is justified, an updated map will be provided with the letter of determination.

G. Prohibited, Exempted, and Permitted Development in River Corridors

(1) Prohibited Development in the RCO District. The following types of development are prohibited in the RCO District:

(a) All development, including new structures, structure additions, fill, accessory dwelling units, and any other development that is not expressly listed as at least one of the Exempted Activities or Permitted Development as described below;

(b) Creation of new lawn or landscaped areas; and

(c) Snow storage areas.
(2) **Exempted Activities.** The following activities do not require a permit under this section of the bylaw:

(a) The removal of a building or other improvement in whole or in part, so long as the ground elevations under and adjacent to the removed structure remain unchanged.

(b) Any changes, maintenance, repairs, or renovations to a structure that will not result in a change to the footprint of the structure or a change in use.

(c) Maintenance of existing sidewalks, roads, parking areas, or stormwater drainage; this does not include expansions.

(d) Maintenance of existing bridges, culverts, and channel stabilization activities; this does not include expansions.

(e) Construction or repair of stream crossing structures (bridges and culverts), associated transportation and utility networks (new transportation or utility development that runs parallel to the river is not exempt and shall meet the Development Standards in section 10.07(l) below), dams, dry hydrants, and other functionally dependent uses that must be placed in or over rivers and streams that are not located in a flood hazard area and that have coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder.

(f) Activities exempt from municipal regulation and requiring a permit under the State’s “Vermont Flood Hazard Area and River Corridor Rule” (Environmental Protection Rule, Chapter 29):

(i) State-owned and operated institutions and facilities.

(ii) Forestry operations or silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont or other accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation.

(iii) Agricultural activities conducted in accordance with the Vermont Agency of Agriculture, Food and Market's Required Agricultural Practices (RAPs). Prior to the construction of farm structures, the farmer shall notify the AO in writing of the proposed activity. The notice shall contain a sketch of the proposed structure including setbacks.

(iv) Public utility power generating plants and transmission facilities regulated under 30 V.S.A. § 248.

(v) Telecommunications facilities regulated under 30 V.S.A. § 248a.

(g) Planting projects which do not include any construction or grading activities in accordance with 24 V.S.A. § 4424(c).

(h) Subdivision of land that does not involve or authorize development.

(i) Establishment and maintenance of unpaved, non-motorized trails and puncheons not to exceed ten (10) feet in width.

(j) **Maintenance of Existing Gardens, Lawns, Driveways, and other public infrastructure.** Maintenance of existing gardens, landscaped areas/lawns, driveways and other public infrastructure within the River Corridor in existence as of the effective date of these regulations.

(k) **Invasive Species, Nuisance Plants, and Noxious Weeds Removal.** The removal of invasive species, nuisance plants, and noxious weeds, as identified by the Vermont Agency of Agriculture, Food & Markets, within the River Corridor is an exempt from these regulations.
(3) **Permitted Development.** The following development activities in the RCO District are permissible upon approval, provided they meet all other requirements of the LDRs and the standards of this section.

(a) Encroachments necessary to repair damage from a Federally-declared disaster and necessary for the protection of the public health, safety and welfare.

(b) Restricted Infrastructure Encroachment, upon demonstration of compliance with Section 12.10 and the standards of this section.

(c) Replacement of on-site septic systems.

H. **Development Review Classification & Referral to Outside Agencies**

(1) All land development proposed in the River Corridor is subject to review standards outlined in Section 12.01(D).

(2) **Referrals to outside agencies**

   (a) Upon receipt of a complete application for development in the River Corridor, the Administrative Officer shall submit a copy of the application and supporting information to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. § 4424. A permit may be issued only following receipt of comments from the Agency, or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner. The AO and DRB shall consider all comments from ANR.

   (b) If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be provided to the following entities: affected adjacent communities, the River Management Engineer at the Vermont Agency of Natural Resources, the Army Corps of Engineers, and the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner.

I. **Development Standards.** The criteria below are the minimum standards for development in the RCO District.

(1) **New development in the River Corridor, including the creation of new lawn areas, is generally prohibited.**

(2) **Natural Vegetation Requirement.** All lands within the River Corridor must be left in an undisturbed, naturally vegetated condition. The clearing of trees and other vegetation is generally prohibited. This standard also does not apply to forestry operations or silvicultural (forestry) activities exempt from local zoning regulation or the removal of trees that are dead, diseased, heavily damaged by ice storms or other natural events, or identified as an invasive species. The placing or storing of cut or cleared trees and other vegetation is also prohibited.

   (a) **Pre-existing Non-conforming Lawn Areas.** The following section pertains the applications for new development on lots with pre-existing non-conforming lawn areas located within the River Corridor.
(i) **Single-Household Dwelling and Two-Household Dwelling Land Uses.** Development on lots with existing single or two-household dwelling uses, and pre-existing non-conforming lawn areas in the River Corridor, shall not be required to brought into conformance with the natural vegetation requirement in these regulations.

(ii) **All Other Land Uses.** Development on lots with any other land use (beside a single or two-household dwelling), and that also includes pre-existing non-conforming lawn areas in the River Corridor, shall only be approved if the applicant removes at least 50% of the pre-existing non-conforming lawn area within the River Corridor and completes site remediation. Site remediation shall include re-seeding the subject area with a naturalized mix of grasses rather than standard lawn grass and returning the area to a natural state (no mowing).

(3) **Restricted Infrastructure Encroachment.** Restricted Infrastructure Encroachment may be allowed in the River Corridor provided the proposed land development conforms with the following standards:

(a) The facility shall comply with the standards in Section 12.10;

(b) The facility must be located at least twenty five (25) feet from the edge of the channel of the surface water for all water bodies listed in Section 10.07(F)(2)(b) above and ten (10) feet from the edge of channel of the surface water of all other streams. This standard shall not apply to the intake of municipal or community water system, or the outfall of a municipal wastewater treatment or stormwater treatment projects, all of which are functionally dependent upon access to surface waters. This standard shall also not apply to road crossings, driveway crossings, public sidewalks and recreation paths (including bridges and boardwalks) intended to connect parcels and neighborhoods, or provide recreational opportunities, approved under Section 12.10;

(c) Stream crossings shall provide sufficient space for the passage of small amphibian and mammalian wildlife typical to the environment in water and on land beneath the structure; and,

(d) The facility shall comply with Section 10.07(I)(5).

(4) **Landscaping and Fencing.** Landscaping and/or fencing shall be installed along the perimeter of the outside of the River Corridor to clearly identify and protect the River Corridor. The DRB may waive this requirement, if petitioned by the applicant, if there is existing forest and/or landscaping along the border of the River Corridor. The design and installation of any such landscaping or fencing must accommodate wildlife passage.

(5) All land development in the River Corridor shall also comply with the following standards:

(a) **Within Designated Centers.** Development within Vermont designated centers shall be only allowed within the River Corridor if the applicant can demonstrate that the proposed development will not be any closer to the river than existing adjacent development.

(b) **Outside Designated Centers.** Development outside of designated centers shall meet the following criteria:

   i. **Infill Development.** Infill development must be located no closer to the channel than the adjacent existing principal buildings, within a gap that is no more than 300 feet (see Figure 1); or,
ii. **Down River Shadow.** Development shall be located in the shadow area directly behind and further from the channel than the existing structure, or within 50 feet of the downstream side of the existing habitable structure and no closer to the top of bank or slope, as applicable. Below-ground utilities may also be placed within the same shadow dimensions of an existing below-ground system (see Figure 2); or,

iii. **River Corridor Performance Standard.** The proposed development shall:

(a) not be placed on land with a history of fluvial erosion damage or that is imminently threatened by fluvial erosion; and,

(b) not cause the river reach to depart from, or further depart from, the channel width, depth, meander pattern or slope associated with natural stream processes and equilibrium conditions; and,
(c) not result in an immediate need or anticipated future need for stream channelization that would increase flood elevations and velocities or alter the sediment regime, triggering channel adjustments and erosion in adjacent and downstream locations.

(d) In making its determination, the DRB may request or consider additional information to determine if the proposal meets the River Corridor Performance Standard, including a description of why the criteria for infill development above cannot be met, data and analysis from a consultant qualified in the evaluation of river dynamics and erosion hazards, and comments provided by the DEC Regional Floodplain Manager on whether the proposal meets the River Corridor Performance Standard.

J. Submission Requirements. In addition to all information required for permitted development, the application shall include:

(1) Plan. A plan that depicts the proposed development, all water bodies, all River Corridor Overlay District boundaries, the shortest horizontal distance from the proposed development to the top of bank (and/or top of slope, if applicable) of any river, any existing and proposed drainage, any proposed fill, pre- and post-development grades, and the elevation of the proposed lowest floor as referenced to the same vertical datum as the elevation on the current Flood Insurance Rate Maps;

(2) Supplemental Application Requirements.

(a) Information clearly demonstrating how the proposed development meets the requirements for infill development and certain non-habitable and accessory structures in subsection 10.07(I) Development Standards above; or

(b) A narrative and supporting technical information from a qualified consultant that demonstrates how the proposal meets the River Corridor Performance Standard in subsection 10.07(I) Development Standards above, or

(c) Evidence of an approved major or minor map update issued by ANR in accordance with the process outlined in the DEC Flood Hazard Area & River Corridor Protection Procedure, finding the proposed development is not located within the river corridor.

(3) Waiver of Application Requirements. Upon written request from the applicant, the Administrative Officer or DRB may waive specific application requirements when the data or information is not needed to comply with Section 10.07 of this bylaw.

K. Permit Conditions

(1) Permits for public water accesses and unimproved paths that provide access to the water for the general public and promote the public trust uses of the water shall include a condition prohibiting the permittee from actively managing the applicable section of river solely to protect the public water access from lateral river channel adjustment.

(2) The DRB may require mitigation, such as reduction or elimination of curbing to promote wildlife passage for any Restricted Infrastructure Encroachment projects approved within the River Corridor.
10.07 River Corridor Overlay District (RCO)

A. Purpose. It is the purpose of the River Corridor Overlay District to:

(1) Establish protection of the river corridor to provide rivers and streams with the lateral space necessary to maintain or reestablish floodplain access and minimize erosion hazards through natural, physical processes;

(2) Allow for wise use of property within river corridors that minimizes potential damage to existing structures and development from flood-related erosion;

(3) Discourage encroachments in undeveloped river corridors; and

(4) Reasonably promote and encourage infill and redevelopment of designated centers that are within river corridors.

B. Authority. In accordance with 24 V.S.A. Chapter 117, § 4424, and § 4414, there is hereby established a bylaw for areas at risk of erosion damage in the City of South Burlington, Vermont. These regulations shall apply to development in all areas in the City of South Burlington identified as within the River Corridor Overlay District designated in Section 3.01(B).

C. Comprehensive Plan. These regulations hereby implement the relevant portions of the City of South Burlington’s adopted Comprehensive Plan and are in accord with the policies set forth therein.

D. Warning of Disclaimer of Liability. This bylaw does not imply that land outside of the areas covered by this overlay district will be free from erosion damages. This regulation shall not create liability on the part of the City of South Burlington, or any municipal official or employee thereof, for any erosion damages that result from reliance on this regulation, or any administrative decision lawfully made hereunder.

E. Precedence of Bylaw. The provisions of this River Corridor Overlay District shall not in any way impair or remove the necessity of compliance with any other local, state, or federal laws or regulations. Where this regulation imposes a greater restriction, the provisions in these regulations shall take precedence.

F. District General Provisions

(1) Establishment of RCO District. The RCO is an overlay district. All other requirements of the underlying district or another overlay district such as the Flood Hazard Overlay District, shall apply in addition to the provisions herein, unless it is otherwise so indicated. If there is a conflict with another such district, the stricter provision shall apply.

(2) RCO District Boundaries

(a) Section 10.07 shall apply to the Statewide River Corridors in the City of South Burlington, Vermont, as published by the Agency of Natural Resources (ANR) including refinements to that data based on field-based assessments which are hereby adopted by reference.

(b) On perennial streams with a watershed size greater than half a square mile for which River Corridors have not been mapped by the State of Vermont, the standards in this Section shall apply to the area measured as fifty (50) feet from the top of the stream bank or slope, whichever is applicable.
based on a field determination consistent with the Vermont ANR Flood Hazard and River Corridor Protection Procedure.

(c) Requests to update a river corridor map shall be in accordance with the procedure laid out in the ANR Flood Hazard Area and River Corridor Protection Procedure.

(3) Jurisdictional Determination and Interpretation

The information presented on any maps, or contained in any studies, adopted by reference, is presumed accurate. If uncertainty exists with respect to the boundaries of the RCO the location of the boundary on the property shall be determined by the Administrative Officer (AO). If the applicant disagrees with the determination made by the AO or the river corridor as mapped, the applicant has the option to either:

(a) Hire a licensed land surveyor or registered professional engineer to stake out the RCO boundary on the property; or

(b) Request a letter of determination from ANR which shall constitute proof of the location of the river corridor boundary. In support of a letter of determination request, applicants must provide ANR a description of the physical characteristics that bring the river corridor delineation into question (e.g. the presence of bedrock or other features that may confine lateral river channel adjustment. When ANR receives a request for a letter of determination, ANR evaluates the site and existing data to see if a change to the river corridor delineation is justified, necessitating a river corridor map update. An ANR letter of determination will either confirm the existing river corridor delineation or will result in an update to the river corridor delineation for the area in question. If a map update is justified, an updated map will be provided with the letter of determination.

G. Prohibited, Exempted, and Permitted Development in River Corridors

(1) Prohibited Development in the RCO District

The following are prohibited in the RCO District

(a) New structures, fill, accessory dwellings and any other development that is not expressly listed as at least one of the Exempted Activities or Permitted Development as described below.

(2) Exempted Activities

The following activities do not require a permit under this section of the bylaw:

(a) The removal of a building or other improvement in whole or in part, so long as the ground elevations under and adjacent to the removed structure remain unchanged.

(b) Any changes, maintenance, repairs, or renovations to a structure that will not result in a change to the footprint of the structure or a change in use.

(c) Maintenance of existing sidewalks, roads, parking areas, or stormwater drainage; this does not include expansions.

(d) Maintenance of existing bridges, culverts, and channel stabilization activities; this does not include expansions.

(e) Construction or repair of stream crossing structures (bridges and culverts), associated transportation and utility networks (new transportation or utility development that runs parallel to the river is not exempt and shall meet the Development Standards in section 10.07(i) below), dams, dry hydrants,
and other functionally dependent uses that must be placed in or over rivers and streams that are not locate in a flood hazard area and that have coverage under a Stream Alteration Permit, if required, under 10 V.S.A. Chapter 41 and the rules adopted thereunder.

(f) Activities exempt from municipal regulation and requiring a permit under the State’s “Vermont Flood Hazard Area and River Corridor Rule” (Environmental Protection Rule, Chapter 29):

(i) State-owned and operated institutions and facilities.

(ii) Forestry operations or silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont or other accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation.

(iii) Agricultural activities conducted in accordance with the Vermont Agency of Agriculture, Food and Market’s Required Agricultural Practices (RAPs). Prior to the construction of farm structures, the farmer shall notify the AO in writing of the proposed activity. The notice shall contain a sketch of the proposed structure including setbacks.

(iv) Public utility power generating plants and transmission facilities regulated under 30 V.S.A. § 248.

(v) Telecommunications facilities regulated under 30 V.S.A. § 248a.

(g) Planting projects which do not include any construction or grading activities in accordance with 24 V.S.A. § 4424(c).

(h) Subdivision of land that does not involve or authorize development.

(3) Permitted Development. The following development activities in the RCO District are permissible upon approval, provided they meet all other requirements of the LDRs—

(a) Construction of or additions to accessory structures that do not exceed, cumulatively, 500 square feet, and are not used for habitation.

(b) Improvements to existing utilities that are within or immediately adjacent to an existing right-of-way and serve a building.

(c) Replacement of on-site septic systems.

(d) Construction of or additions to an unenclosed deck or patio attached to an existing structure, where such construction or additions are cumulatively 200 square feet or less and are located no less than 100 feet from the top of bank (or top of slope, if applicable).

(e) River or floodplain restoration projects that do not involve fill, structures, utilities, or other improvements, and which the ANR Regional Floodplain Manager has confirmed in writing are designed to meet or exceed the applicable standards in this bylaw.

H. Development Review Classification & Referral to Outside Agencies

(1) A zoning permit is required from the Administrative Officer for all development, as defined in Section 2.03 (Floodplain and River Corridor Definitions), in the River Corridor Overlay District. All permits shall require that a permittee have all other necessary permits from state and federal agencies before work may begin.
(a) If a permitted development activity listed in subsection G(3) above meets the criteria for infill development and/or certain non-habitable and accessory structures in subsections I(2)(a) or I(2)(b), below, then the activity shall require an administrative review by the AO and may receive a Zoning Permit from the AO.

(b) If permitted development activity listed in subsection G(3) above does not meet the criteria for infill development and certain non-habitable and accessory structures in subsections I(2)(a) or I(2)(b) then the proposal shall be reviewed by the Development Review Board as a Conditional Use and the DRB must find that the proposed development meets the River Corridor Performance Standard outlined in subsection I(2)(c) prior to issuance of a Zoning Permit by the AO.

(2) Referrals to outside agencies

(a) Upon receipt of a complete application for new construction or a substantial improvement, the Administrative Officer shall submit a copy of the application and supporting information to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. § 4424. A permit may be issued only following receipt of comments from the Agency, or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner. The AO and DRB shall consider all comments from ANR.

(b) If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be provided to the following entities: affected adjacent communities, the River Management Engineer at the Vermont Agency of Natural Resources, the Army Corps of Engineers, and the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner.

I. Development Standards.

The criteria below are the minimum standards for development in the RCO District. Where more than one district is involved, the most restrictive standard shall take precedence.

(1) Development within designated centers shall be allowed within the river corridor if the applicant can demonstrate that the proposed development will not be any closer to the river than existing adjacent development.

(2) Development outside of designated centers shall meet the following criteria:

(a) Infill Development must be located no closer to the channel than the adjacent existing principal buildings, within a gap that is no more than 300 feet (see Figure 1); or,
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(b) Down River Shadow: A non-habitable addition (garage, deck, patio, stairs, etc.) to an existing habitable structure, or an accessory structure that is adjacent to an existing structure, shall be located in the shadow area directly behind and further from the channel than the existing structure, or within 50 feet of the downstream side of the existing habitable structure and no closer to the top of bank or slope, as applicable. Below-ground utilities may also be placed within the same shadow dimensions of an existing below-ground system (see Figure 2); or,

(c) River Corridor Performance Standard:

(i) The proposed development shall:

a. not be placed on land with a history of fluvial erosion damage or that is imminently threatened by fluvial erosion; and,

b. not cause the river reach to depart from, or further depart from, the channel width, depth, meander pattern or slope associated with natural stream processes and equilibrium conditions; and,
c. not result in an immediate need or anticipated future need for stream channelization that would increase flood elevations and velocities or alter the sediment regime, triggering channel adjustments and erosion in adjacent and downstream locations.

(ii) In making its determination, the DRB may request or consider additional information to determine if the proposal meets the River Corridor Performance Standard, including:

a. Description of why the criteria for infill development and certain non-habitable and accessory structures in subsection 10.07(I)(a) and (b) above cannot be met;

b. Data and analysis from a consultant qualified in the evaluation of river dynamics and erosion hazards;

c. Comments provided by the DEC Regional Floodplain Manager on whether the proposal meets the River Corridor Performance Standard.

J. Submission Requirements. In addition to all information required for permitted development, the application shall include:

1. Plan. A plan that depicts the proposed development, all water bodies, all River Corridor Overlay District boundaries, the shortest horizontal distance from the proposed development to the top of bank (and/or top of slope, if applicable) of any river, any existing and proposed drainage, any proposed fill, pre- and post-development grades, and the elevation of the proposed lowest floor as referenced to the same vertical datum as the elevation on the current Flood Insurance Rate Maps;

2. Project Review Sheet. A Vermont Agency of Natural Resources Project Review Sheet. The Project Review Sheet shall identify all State and Federal agencies from which permit approval is required for the proposal and shall be filed as a required attachment to the municipal permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Administrative Officer and attached to the zoning permit before work can begin.


   a. Information clearly demonstrating how the proposed development meets the requirements for infill development and certain non-habitable and accessory structures in subsection 10.07(I) Development Standards above; or

   b. A narrative and supporting technical information from a qualified consultant that demonstrates how the proposal meets the River Corridor Performance Standard in subsection 10.07(I) Development Standards above, or

   c. Evidence of an approved major or minor map update issued by ANR in accordance with the process outlined in the DEC Flood Hazard Area & River Corridor Protection Procedure, finding the proposed development is not located within the river corridor.

4. Waivers. Upon written request from the applicant, the Administrative Officer or DRB may waive specific application requirements when the data or information is not needed to comply with Section 10.07 of this bylaw.

K. Permit Conditions

Permits for public water accesses and unimproved paths that provide access to the water for the general public and promote the public trust uses of the water shall include a condition prohibiting the permittee from actively managing the applicable section of river solely to protect the public water access from lateral river channel adjustment.
12 ENVIRONMENTAL PROTECTION STANDARDS

[NOTE TO DRAFT: ARTICLE 12 IS SHOWN AS A COMPLETE REPLACEMENT OF THE EXISTING TEXT. THE EXISTING TEXT IS SHOWN WITH A STRIKETHROUGH FOLLOWING THE ARTICLE].

12.01 General Protection Standards and Review Procedures
12.02 Reserved
12.03 Wetland Protection Standards and Review Procedures
12.04 Reserved
12.05 Habitat Blocks
12.06 Habitat Connectors
12.07 Habitat and Disturbance Assessment
12.08 Stormwater Management
12.09 Steep Slopes
12.10 Restricted Infrastructure Encroachment

12.01 General Protection Standards, Classifications and Review Procedures
A. Purpose. It is the purpose of this Article to implement, from a regulatory perspective, the Comprehensive Plan’s goal of “emphasizing sustainability for long-term viability of a clean and green South Burlington” and objective to “promote conservation of identified important natural areas, open spaces, aquatic resources, air quality, arable land and other agricultural resources, historic sites and structures, and recreational assets” in balance with the overall goals and objectives of the Comprehensive Plan.

This Article establishes application requirements and development standards designed to avoid or minimize undue adverse effects on these natural resources. The natural resources regulated in this article may also be subject to specific subdivision or planned unit development standards. Where there is conflict between subdivision or planned unit development standards, and the standards in this article, the standard that imposes the greater restriction shall apply.

B. Classification. For the purposes of these Regulations, resources are grouped into Hazards, Level I and Level II resource areas.

<table>
<thead>
<tr>
<th>Table 12-01 – Classification of Natural Resources</th>
</tr>
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<tbody>
<tr>
<td><strong>Hazard</strong></td>
</tr>
<tr>
<td>Floodplain (1% and 0.2% B2), Floodway</td>
</tr>
<tr>
<td>River Corridor except intermittent streams</td>
</tr>
<tr>
<td>Class I, II Wetlands, Buffers</td>
</tr>
<tr>
<td>Very Steep Slopes (25+%)</td>
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<tr>
<td><strong>Level I Resources</strong></td>
</tr>
<tr>
<td>Habitat Blocks</td>
</tr>
<tr>
<td>Habitat Connectors</td>
</tr>
<tr>
<td><strong>Level II Resources</strong></td>
</tr>
<tr>
<td>Floodplain (0.2% Zone B1)</td>
</tr>
</tbody>
</table>
C. **Applicability of Standards.** All development must comply with the provisions of this Article, unless otherwise exempted, in order to prevent undue adverse effects on ecological resources, water quality and working lands, unless explicitly waived or amended in this section. Exemptions include:

1. Uses and structures exempt from local regulation pursuant to 24 V.S.A. §4413.

2. Construction of fences (i) that enclose cleared areas, such as lawn areas surrounding a residence, provided the clearing occurred prior to [effective date of this provision] or was approved by the DRB in accordance with this Article; or (ii) erected for standard agricultural purposes or, (iii) lower than 4 feet and that have at least 16 inches of clearance between the lowest horizontal part of the fence and the ground. In all cases, proposed fences must comply with section 13.17 (Fences) of these Regulations.

3. Exemptions as specified elsewhere in these Regulations.

D. **Development Review Process.** All development that may encroach upon a natural resource regulated in Article 12 shall be subject to Site Plan Review by the Development Review Board (see Article 14). However, if the encroachment is proposed as a part of a subdivision or Planned Unit Development application, the proposed encroachment shall be reviewed under those procedures instead of Site Plan Review. Other exceptions include:

1. Applications for proposed development that solely include development related to stormwater management (Section 12.08) may be reviewed via administrative Site Plan Review (Section 14.09).

2. Applications involving development on Steep Slopes between 15% and 25% grade (Section 12.09) shall be reviewed via administrative Site Plan Review (Section 14.09), unless the application is for a single-household dwelling or two-household dwelling or associated accessory structures, in which case the application may be approved via a zoning permit reviewed by the Administrative Officer.

3. Applications involving an Environmental Restoration Project may be reviewed via administrative Site Plan Review (Section 14.09).

### 12.03 Wetland Protection Standards

#### A. **Purpose.** It is the purpose of this Section to protect the City’s wetland resources in order to protect wetland functions and values related to surface and ground water protection, stormwater treatment, wildlife habitat, and flood control. The City intends to strictly protect Class I wetlands, Class II wetlands, and their respective buffers via the standards of this section. The City also intends to provide protection that offers limited flexibility for larger class III wetlands (over 300 square feet in size) and their respective buffers, and to Class II wetlands and their respective buffers in specific identified areas of the city.

#### B. **Applicability.** All development in the City of South Burlington shall comply with the requirements of this section. The requirements of this Section will apply to all lands described as follows, collectively referred to as Wetlands Areas and Related Buffers:

1. **Class I Wetlands and Related Buffers.**
(a) In all City Center Form-Based Code, Commercial, Industrial and Airport, and Other (Institutional and Agricultural and Municipal only) zoning districts, as established in Section 3.01 of these Regulations, all Class I wetlands, and their related buffer areas as measured in horizontal distance from the boundary of the wetland one-hundred (100) feet, are subject to the provisions of this section.

(b) **Residential Districts and the Park and Recreation Districts.** In all Residential and Other (excepting those enumerated in Subsection B(1)(a)) zoning districts, as established in Section 3.01, all Class I wetlands, and their related buffer areas as measured in horizontal distance from the boundary of the wetland two hundred (200) feet, are subject to the provisions of this section.

(2) **Class II Wetlands and Related Buffers.**

(a) In all City Center Form-Based Code, Commercial, Industrial and Airport, and Other (Institutional and Agricultural and Municipal only) zoning districts, as established in Section 3.01 of these Regulations, all Class II wetlands, and their related buffer areas as measured in horizontal distance from the boundary of the wetland fifty (50) feet, are subject to the provisions of this section.

(b) In all Residential and Other (excepting those enumerated in Subsection B(1)(a)) zoning districts, as established in Section 3.01, all Class II wetlands, and their related buffer areas as measured in horizontal distance from the boundary of the wetland one hundred (100) feet, are subject to the provisions of this section.

(3) **Class III Wetlands.** All Class III wetland areas 300 square feet or larger in size, and their related fifty (50) foot buffer areas measured in horizontal distance from the boundary of the wetland, are subject to the provisions of this section. Class III wetlands less than 300 square feet in size are not regulated by the City.

**C. Application Submittal Requirements.** Submittal of a preliminary and/or complete Site Conditions Map (as applicable to the stage of application) pursuant to Appendix E.

(1) Per Section 17.08, the DRB may require independent technical review of any field delineation and wetlands report.

(2) For applications involving Class I and/or Class II wetlands, the applicant’s application may include a wetlands delineation approved by the Vermont Agency of Natural Resources as a part of the State Wetlands Permit. The DRB may defer to this delineation in their review of the application instead of requiring an additional or separate delineation.

**D. Standards for Wetlands Protection**

(1) **Class I and Class II Wetlands.** Development is generally prohibited within Class I wetlands, Class II wetlands, and their associated buffers. All lands within a Class I wetlands, Class II wetlands, and their associated buffers, shall be left in an undisturbed, naturally vegetated condition. However, an applicant may seek approval for a Limited Infrastructure Encroachment under this section or to modify this standard per the regulations in Section 12.03(E).

(2) **Class III Wetlands.** Development in a Class III wetland (meeting 300 square foot threshold), and associated buffer within all zoning districts, is generally prohibited and shall be left in an undisturbed,
naturally vegetated condition. However, an applicant may seek approved for a Limited Infrastructure Encroachment under this section or to modify this standard where allowable per the regulations in Section 12.03(E).

(3) **Landscaping and Fencing.** Landscaping and/or fencing shall be installed along the outside perimeter of the wetlands buffer to clearly identify and protect wetlands buffer. The DRB may waive this requirement, if petitioned by the applicant, if there is existing forest and/or landscaping along the border of wetland buffer or other clear, existing demarcation. The design and installation of any such landscaping or fencing must accommodate wildlife passage.

(4) **Restricted Infrastructure Encroachment.** Restricted Infrastructure Encroachment may be allowed within Class I, Class II, or Class III wetlands, and their associated buffers, without a waiver or modification provided that the applicant demonstrates the project’s compliance with Section 12.10 and the following supplemental standards:

(a) Roadway paved surfaces shall be no wider than 20 feet; and,

(b) Roads that bifurcate a wetland or wetland buffer shall propose appropriate mitigation, such as reduction or elimination of curbing and installation of cross culverts, to enable wildlife passage.

E. **Modifications**

(1) An applicant may request a modification, in writing, from the rules of this section for any development in the following areas only:

(a) Development in a Class II wetland and associated buffer within the Form-Based Code Zoning Districts.

(b) Development in a Class III wetland exceeding 300 square feet in area and associated buffer within all zoning districts.

(2) The DRB may grant a modification from the rules of this Section only if all the following standards are met:

(a) The modification shall be the minimum required to accommodate the proposed development;

(b) The proposed development will not have an undue adverse effect on the planned character of the area, as defined by the purpose statement of the zoning district within which the project is located, or on public health and safety;

(c) The proposed development will not have an undue adverse effect on the ability of the property adequately treat stormwater from the site; and,

(d) The proposed development will not have an undue adverse effect upon specific wetland functions and values identified in the field delineation.

12.04 [Reserved]

12.05 Habitat Blocks

A. **Purpose.** It is the purpose of these Habitat Block standards to avoid undue adverse effects from development on these resources, promote the natural succession of vegetated areas of native vegetation
in order to support wildlife habitat and movement, promote carbon sequestration, filter air, and increase infiltration and base flows in the City’s streams and Lake Champlain.

B. **Applicability.** The requirements of this Section apply to all development proposed in areas indicated as “Habitat Blocks” on the Natural Resources Map, except as follows:

1. On lots or parcels of less than one (1) acre in size existing as of the effective date of these Regulations;
2. On land located within 50’ horizontal distance of a principal building on the subject parcel existing as of the effective date of these regulations;
3. On land authorized by the Development Review Board to be removed from or added to a Habitat Block pursuant to the modification options of this section or as part of a Conservation Planned Unit Development.

C. **Application Submittal Requirements.** Submittal of a preliminary and/or complete Site Conditions Map (as applicable to the stage of application) pursuant to Appendix E. Where an applicant elects to perform a Habitat Disturbance Assessment, the submittal requirements of Section 12.07 shall apply.

D. **Modification of Habitat Block.** An applicant may request approval from the Development Review Board to modify a mapped Habitat Block in any of the following manners. An applicant may select any one of the options three modification methods below. A development application may not include more than one option for any application.

Land located within the SEQ-NRP zoning subdistrict, Hazards, Level I resources, previously approved as open space or conserved land, subject to a deed restriction prohibiting development, subject to a conservation or density reduction easement, or owned by a public entity shall not be eligible for any of the modification methods for habitat blocks subject to this section.

1. **Minor Habitat Block Boundary Adjustment.** An applicant may apply to modify the boundary of a mapped Habitat Block by up to fifty (50) feet in any direction to account for site-specific conditions, upon written request by the applicant as part of the requisite application. Any proposed modification in Habitat Block area must be offset with an equal addition elsewhere within the same subject parcel or Planned Unit Development that is contiguous to the Habitat Block. In no case shall the Development Review Board approve a net reduction of a Habitat Block.

2. **Small On-Site Habitat Block Exchange.** An applicant may apply to exchange a mapped Habitat Block area not to exceed two (2) acres or ten (10) percent of the application’s total land area, whichever is less, for an equal amount of land within the same Planned Unit Development or Site Plan upon written request, without requiring a Habitat and Disturbance Assessment. Such land exchange must not include Core Habitat Areas and shall not eliminate existing Habitat Connectors. To approve a small on-site habitat block exchange, the Development Review Board shall require the applicant to:
   a. Retain a similar or greater quality and maturity of vegetation within the proposed areas for exchange; and
   b. Retain mature and/or prominent tree stands.

3. **Larger Area Habitat Block Exchange.** An applicant may apply to exchange a mapped Habitat Block area in exchange for an equal amount of land within the same Habitat Block upon written request, and pursuant to the standards of this Section. The exchange of land within the same Habitat Block may occur within one parcel or on separate parcels.
   a. **Supplemental submittal requirements.**
(i) Indicate, on the Master Plan and all subsequent plans, all proposed alterations to the Habitat Block.

(ii) Submit, as part of the preliminary plat application, a Habitat and Disturbance Assessment (HDA) pursuant Section 12.07 and a written assessment of compliance with the standards contained within this subsection.

(b) **Supplemental Standards of Review.** The Development Review Board may approve a re-designation of a portion of a Habitat Block if it finds all of the criteria below to be met:

   (i) The HDA demonstrates that the alteration will not result in a reduction in the Habitat Block's function as a significant wildlife habitat as defined in these Regulations;

   (ii) Wildlife movement connectivity is retained between mapped Habitat Blocks; and,

   (iii) Proposed adjacent development and infrastructure must be designed to have no undue adverse effects on habitat functions.

(c) **Exchanged Land.** Land to be added to the Habitat Block pursuant to this section must be set aside and identified on the subdivision plat, and in associated legal documents, as one or more “Conservation Lots” as established in Section 15A, to be maintained and managed in single or common ownership, or under a conservation easement held by the City or qualified third party, such as an established land trust, that is contiguous to the habitat block and unseparated by roadways, railways, or other impeding infrastructure.

   (i) Land located with the SEQ-NRP zoning subdistrict, Hazards, Level I resources, previously approved as open space or conserved land, subject to a deed restriction prohibiting development, subject to a conservation or density reduction easement, or owned by a public entity shall not be eligible to be used for a land exchange.

   (ii) Any land proposed to be added / conserved shall be accompanied by a restoration plan, prepared by a landscape architect, professional wildlife biologist, or equivalent, that will result in the land functioning as a significant wildlife habitat such that within a period of ten (10) years and being classified as transitional forest / forest by a land use / land cover assessment at that time.

E. **Substantially-Habitat Block-covered lots.** A lot or parcel containing a combination of Hazards and Level I resources exceeding seventy (70) percent of the total lot area is eligible for relief from Habitat Block standards as follows:

(1) [Reserved]

(2) The Development Review Board may approve exclusion of an area of land within the Habitat Block not to exceed thirty (30) percent of the total lot area. Where applicable, land shall be excluded in the following order:

- First: Land not a Hazard or Level I resources;

- Second: Land that is not characterized by a preponderance of mature trees;

- Third: Land within Habitat Blocks, excluding Core Habitat Block areas or which would sever a Habitat Connector.

- Fourth: Land within Habitat Blocks, avoiding core habitat block areas to the greatest extent possible;
(a) **Calculation:** Land shall be selected from first to fourth if all applicable land on the lot or parcel from one category is excluded, and the thirty (30) percent allotment of excluded land has not been reached, then land from the next category land shall be selected next.

(b) **Special Circumstances:** Where the DRB finds that exclusion of land pursuant to the priority order above is in conflict with the purposes of this section, or where it finds that strict adherence to the priority order does not allow for a unified PUD consistent with the purposes of intent of these regulations, it may approve modifications to the land selected. Any such modifications shall be minimized in terms of land area and modification to the priority order.

(c) Any land excluded from Habitat Blocks regulated under this subsection shall remain subject to all other provisions of these Regulations.

**F. Standards for Habitat Block Protection.**

(1) **General standards.** Except as specifically exempted pursuant to Subsection (2) below, approved by the DRB pursuant to subsection (3) below, or modified in accordance with Section (D) above, all lands within a Habitat Block must be left in an undisturbed, naturally vegetated condition. Specifically:

(a) The clearing of trees and understory vegetation is prohibited except as specified in this section.

(b) The creation of new lawn areas within Habitat Blocks is prohibited.

(d) Snow storage areas within Habitat Blocks are prohibited.

(e) Building envelopes shall not contain any land within Habitat Blocks.

(f) Supplemental planting and landscaping with appropriate species of vegetation to achieve the objectives of this Section is permitted.

**G. Exempted Uses and Activities.** The following uses and activities are exempt from review under this section:

(1) Establishment and maintenance of unpaved, non-motorized trails not to exceed ten (10) feet in width, or their width prior to adoption of these regulations, whichever is greater;

(2) Removal of invasive species, removal of diseased vegetation, and removal of dead or dying trees posing an imminent threat to buildings or infrastructure; and,

(3) Uses and activities enumerated in Section 12.01C.

Nothing in this subsection shall be construed to modify the boundary of a Habitat Block as shown on the Natural Resources Map.

**H. Development within Habitat Blocks.** The encroachment of new development activities, clearing of vegetation, establishment of lawn, or other similar activities into Habitat Blocks and Habitat Block buffers is prohibited. However, the DRB may allow the following types of development within a Habitat Block where a modification option has been approved pursuant to 12.05(D) and subject to the standards in Section 12.05(F):

(1) Restricted Infrastructure Encroachment, pursuant to Section 12.10 and the following supplemental standards:

(a) The facility shall be strictly limited to be minimum width necessary to function for its intended purposes;
(b) The clearing of vegetation adjacent to the facility shall be strictly limited to the minimum necessary width to function for its intended purposes. Street tree requirements shall not apply in these areas. Street lighting shall be prohibited in these areas except as necessary to meet State or Federal law; and,

(c) Appropriate measures shall be taken to promote safe wildlife passage, including the reduction or elimination of curbs, reduced speed limits, and/or signage altering users, and underpass or culverts.

(2) Outdoor recreation uses, provided any building, parking and/or driveways appurtenant to such use is located outside the habitat block.

(a) Within a public park, structures not exceeding 500 square feet gross floor area are permitted. All such structures must be consistent with the adopted management plan for the park, if one exists. Where a management plan has been adopted for the park, the

(3) Research and educational activities provided any building or structure (including parking and driveways) appurtenant to such use is located outside the Habitat Block.

(a) Research and educational structures not exceeding 500 square feet gross floor area, such as seating areas made of natural materials, storage sheds, or climbing structures, may be allowed within a Habitat Block or Habitat Block buffer.

12.06 Habitat Connectors

A. Purpose. It is the purpose of this Section to maintain the functionality of identified Habitat Connectors, allowing species to travel between identified Habitat Blocks, wetland areas, water bodies, and other natural resources within and adjacent to the City.

B. Applicability. The requirements of this Section will apply to all areas indicated as “Habitat Connectors” on the Habitat Blocks and Connectors map, except as follows:

(1) Lots or parcels of less than one (1) acre existing as of the effective date of these Regulations.

(2) Land located within 50 feet horizontal distance of a principal building existing on the same parcel as of the effective date of these regulations.

C. Standards.

(1) The applicant shall retain a 150-foot wide Habitat Connector where indicated on the Habitat Blocks and Connection Map.

(2) Contiguous Hazards, or other contiguous protected natural resources regulated in Article 12, may be used to count towards the connector width.

(3) Habitat Connectors shall be subject to the provisions of 12.05(F) Habitat Blocks Standards.

(4) Relocation of Habitat Connector. An applicant may apply to relocate a Habitat Connector from its location on the Habitat Blocks and Connection Map but must connect to mapped Habitat Connectors or Habitat Blocks on adjacent parcels. Any relocated portion shall be accompanied by a restoration plan, prepared by a qualified consultant (e.g. landscape architect, professional wildlife biologist or
equivalent). The restoration plan shall consist of planting native tree species (at least 2 inches in caliper) within areas of the relocated Habitat Connector and shall result in the land functioning as wildlife habitat within a period of ten (10) years time.

5. Restoration of Habitat Connector. The DRB shall require restoration of a Habitat Connector on parcels where development is proposed and pre-existing conditions consist of Habitat Connectors that are less than 150 feet in width along their entire length of the Habitat Connector. Restoration shall consist of planting native tree species (at least 2 inches in caliper) within areas of the Habitat Connector less than 150 feet wide. The applicant may request, in writing, to waive this requirement. The DRB may grant a waiver only if restoration of the Habitat Connector is not possible due to the placement of pre-existing structures on the subject parcel.

12.07 Habitat and Disturbance Assessment (HDA)

A. Purpose. The Habitat and Disturbance Assessment (HDA) is a tool to inventory and quantify significant wildlife habitat, and the existence of rare, threatened and endangered species (RTEs), within subject properties with mapped Habitat Blocks and Habitat Connectors (Section 12.05 and Section 12.06) where an applicant is seeking to relocate a portion of the Habitat Block or Habitat Connector.

B. HDA Content Requirements. Where an HDA is required by these regulations, the applicant shall contract with a qualified wildlife biologist or ecologist to prepare the HDA. The HDA prepared for the Development Review Board shall include the following information:

1. Site Conditions Map including all Habitat Blocks and Habitat Connectors as indicated on the Habitat Block and Connectors map on or within 200 feet of the project site.

2. An inventory of existing (pre-development) wildlife habitat found on the site, including the presence of rare, threatened, and/or endangered species and significant wildlife habitat, and an inventory of the specific types of habitat found on the parcel and their relative importance to the various wildlife species that rely on that habitat for one or more life-cycle function;

3. An assessment of the relationship of the habitat found on the site relative to other significant wildlife habitat present in the City (e.g., does habitat found on the parcel provide for connectivity between mapped habitat blocks; is the parcel located contiguous to other significant wildlife habitat, or part of a habitat block);

4. Identification of the distance of all proposed development activities (as permitted), including clearing, driveways and infrastructure, and areas of disturbance, from the significant wildlife habitat and, if significant habitat is proposed to be disturbed, the total area of disturbance and the total area of the remaining (undisturbed) habitat;

5. An assessment of the likely impact of the proposed development, including associated activities (e.g., introduction of domestic pets, operation of vehicles and equipment, exterior lighting, introduction of non-native species for landscaping) on the ecological function of the significant wildlife habitat found on the site. This shall include an assessment of whether travel between areas of core habitat will be disrupted;

6. An assessment of the anticipated functionality of the Habitat Block with proposed mitigation measures and a statement identifying specific mitigation measures taken to avoid or minimize the proposed development’s impact on the habitat, including buffers of habitat for specific identified species, possible replacement or provisions for substitute habitats that serve a comparable ecological
function to the impacted habitat, and/or physical design elements to incorporate into the project.

12.08 Stormwater Management

A. **Purpose.** The purpose of this section is:

1. To promote stormwater management practices that maintain pre-development hydrology through site design, site development, building design and landscape design techniques that infiltrate, filter, store, evaporate and detain stormwater close to its source;

2. To protect water resources, particularly streams, lakes, wetlands, floodplains and other natural aquatic systems on the development site and elsewhere from degradation that could be caused by construction activities and post-construction conditions;

3. To protect other properties from damage that could be caused by stormwater and sediment from improperly managed construction activities and post-construction conditions on the development site;

4. To reduce the impacts on surface waters from impervious surfaces such as streets, parking lots, rooftops and other paved surfaces; and

5. To promote public safety from flooding and streambank erosion, reduce public expenditures in removing sediment from stormwater drainage systems and natural resource areas, and to prevent damage to municipal infrastructure from inadequate stormwater controls.

B. **Applicability**

1. These regulations will apply to all development within the City of South Burlington where one-half acre or more of impervious surface area exists or is proposed to exist on an applicant’s lot or parcel.

2. If the combination of new impervious surface area created and the redevelopment or substantial reconstruction of existing impervious surfaces is less than 5,000 s.f. then the application is exempt from requirements in this Section 12.08.

3. Applications meeting the criteria set forth in section 12.08(B)(1), and not exempt under section 12.08(B)(2), shall meet the application requirements in Section 12.08(C) and the site design requirements in section 12.08(D) as follows:

   a. If the area of the lot or parcel being redeveloped or substantially reconstructed is less than 50% of the lot’s existing impervious surface area, then only those portions of the lot or parcel that are being redeveloped or substantially reconstructed must comply with all parts of Section 12.08(D). All new impervious surface area must meet the site design requirements of section 12.08(D).

   b. If the area of the lot or parcel that is being redeveloped or substantially reconstructed exceeds 50% of the lot or parcel’s existing impervious surface area then all of the lot or parcel’s impervious surfaces must comply with all parts of Section 12.08(D). All new impervious surface area must meet the site design requirements of Section 12.08(D).

C. **Application Requirements.** Applicants required to comply with Section 12.08 shall provide the following information in their application:

1. Sub-watershed boundaries and drainage area delineations for all stormwater treatment practices.

2. Location, type, material, size, elevation data, and specifications for all existing and proposed stormwater collection systems, culverts, and stormwater treatment practices.
(3) Soil types and/or hydrologic soil group, including the location and results of any soil borings, infiltration testing, or soil compaction testing. Infiltration testing shall be completed using methods identified in the VSMM (see section 4.3.3.2 in the 2017 VSMM, or as updated).

(4) A brief written description of the proposed stormwater treatment and management techniques. Where Tier 1 practices are not proposed (see Section 12.08(C)(1)(a)), the applicant shall provide a full justification and demonstrate why the use of these practices is not possible before proposing to use Tier 2 or Tier 3 practices.

(5) A detailed maintenance plan for all proposed stormwater treatment practices.

(6) Modeling results that show the existing and post-development hydrographs for the WQV storm event, the one-year, twenty-four hour rain event, and the twenty-five year, twenty-four hour storm event (rainfall amounts to be determined using NOAA, Atlas 14 data and a type II rainfall distribution). Any TR-55 based model shall be suitable for this purpose. The intent of the twenty-five year storm event analysis is to ensure the proposed project does not overload an existing downstream drainage structure(s) and result in damage to private or public infrastructure or property. The analysis is also intended to ensure that stormwater infrastructure installed as a part of a development can accommodate future upstream development.

(7) The applicant’s engineer must provide such information as the stormwater superintendent or designee deems necessary to determine the adequacy of all drainage infrastructure.

D. Design Requirements - On-Site Treatment. Applicants shall meet the following standards for on-site treatment of stormwater:

(1) The Water Quality Volume (WQV) as defined in the Vermont Stormwater Management Manual (VSMM) for the lot or parcel’s impervious surfaces shall not leave the lot via overland runoff and shall be treated using Tier 1 practices as detailed in the VSMM.

(a) If it is not possible to treat the volume of stormwater runoff using a Tier 1 practice as specified in Section 12.08(D)(1) due to one or more of the following constraints:

(i) Seasonally high or shallow groundwater,

(ii) Shallow bedrock,

(iii) Soil infiltration rates of less than 0.2 inches per hour,

(iv) Soils contaminated with hazardous materials, as that phrase is defined by 10 V.S.A. §6602(16), as amended,

(v) The presence of a “stormwater hotspot” as defined in the VSMM, or

(vi) Other site conditions prohibitive of on-site infiltration runoff subject to the review and approval of the Development Review Board,

then the WQV shall be treated on the lot using Tier 2 practices as described in the most recently adopted version of the VSMM. A site with an existing Tier 3 practice is allowed to evaluate retrofitting/expanding this practice to meet the requirements of Section 12.08(D)(2). Existing Tier 3 practices shall only be used to satisfy the requirements of Section 12.08(D)(1) in accordance with the Water Quality Practice Selection Flowchart in the VSMM.

(2) The post-construction peak runoff rate for the one-year, twenty-four hour (rainfall amounts to be determined using NOAA, Atlas 14 data and a type II rainfall distribution) rain event shall not exceed the
existing peak runoff rate for the same storm event from the site under conditions existing prior to submittal of an application.

(3) Applicants who demonstrate that the required control and/or treatment of stormwater runoff per section 12.08(D)(1) and 12.08(D)(2) cannot be achieved for areas subject to these regulations per Section 12.08(B) may utilize Site Balancing as defined in these Regulations.

(4) New drainage structures shall comply with the following standards:

(a) All drainage structures must be designed to safely pass the twenty-five year, twenty-four hour (4.0 inch) rain event (rainfall amounts to be determined using NOAA, Atlas 14 data and a type II rainfall distribution);

(b) Concrete risers, not brick and mortar, must be used to achieve the necessary drainage structure elevation.

(c) Driveway culverts must have a minimum diameter of 18” and 12” of cover above them.

E. Design Requirements – Impacts to Municipal System. Stormwater runoff from sites meeting the requirements of Section 12.08(D), or sites that are exempt from §12.08(D), may discharge to the municipal stormwater system, or a stormwater system within a proposed future municipal right-of-way, provided that the stormwater system has adequate capacity to convey the twenty-five year storm event from the contributing drainage area. All applicants shall meet the following standards if it is determined that their project may have impacts to municipal stormwater system:

(1) New drainage structures connected to the municipal stormwater system, or a stormwater system within a proposed future municipal right-of-way, shall comply with the following standards:

(a) New drainage structures should be located within the street right-of-way.

(b) All drainage structures must be designed to safely pass the twenty-five year, twenty-four hour (4.0 inch) rain event (rainfall amounts to be determined using NOAA, Atlas 14 data and a type II rainfall distribution);

(c) Drainage pipes must have a minimum diameter of 15” and be connected to drainage structures using booted connections.

(d) Concrete risers, not brick and mortar, must be used to achieve the necessary drainage structure elevation.

(e) House footing drains shall only be connected to drainage facilities located in the street right-of-way when a suitable location to daylight the footing drain cannot be found.

(f) Footing drains must not be connected to road underdrain.

(g) Any footing drains connected to drainage facilities in the street right-of-way shall be provided with a backflow preventer.

(h) Driveway culverts must have a minimum diameter of 18” and 12” of cover above them.

(2) Drainage Structures To Accommodate Upstream Development. Culverts, pipes, or other drainage facilities shall be of sufficient size to accommodate potential runoff from the entire upstream drainage area, whether or not all or part of the upstream area is on the applicant’s lot or the parcel subject to the application. In determining the anticipated amount of upstream runoff for which drainage facilities must be sized, the applicant shall design the stormwater drainage system assuming the total...
potential development of upstream drainage areas. All drainage structures shall be designed to, at a minimum, safely pass the twenty-five year, twenty-four hour rain event (rainfall data to be determined using NOAA, Atlas 14 and a type II rainfall distribution).

(3) **Responsibility for Downstream Drainage Structures.** In instances where the Stormwater Superintendent anticipates that additional runoff incident from a proposed development may overload an existing downstream drainage structure(s) and result in damage to private or public infrastructure or property, the DRB shall impose conditions requiring the applicant to incorporate measures to prevent these conditions, notwithstanding whether such improvements are located on or off the applicant’s property.

F. **Intermittent Stream Alteration and Relocation Standard.**

(1) **Alteration of Intermittent Streams.** When a development incorporates Tier 1 or Tier 2 stormwater treatment practices (as defined in the VSMM) to manage the stormwater that an intermittent stream is conveying in pre-development conditions, the intermittent stream may be altered or relocated as part of stormwater treatment, provided the stormwater management system meets all standards in this Section. An alteration or relocation of an intermittent stream is exempt from the Vermont Stream Alteration Rule.

**12.09 Steep Slopes**

A. **Purpose.** It is the purpose of this Section to protect the City’s areas of steep and very steep slopes, as mapped and delineated for this purpose, in order to:

(1) Prevent erosion and avoid stream sedimentation that may cause undue adverse effects on water quality.

(2) Prevent hazards to life and property resulting from slope instability or failure, including rock falls, slides, slumps and other downslope movements of materials or structures.

(3) Maintain and re-establish vegetation on steep slopes to stabilize soils.

(4) Ensure that development on steep slopes is constructed and maintained in conformance with best management practices for construction, stormwater management and erosion control.

B. **Applicability.** All development is subject to the standards below where steep slopes or very steep slopes are present.

C. **Application Submittal Requirements.** Submittal of a preliminary and/or complete Site Conditions Map (as applicable to the stage of application) pursuant to Appendix E. An analysis of slope stability prepared by a licensed engineer shall also be submitted to ensure that no erosion hazards are created that would have an undue adverse effect on surface waters, wetlands, areas of special flood hazards, or downstream facilities, and any recommended mitigation measures.

D. **Review Process.** Per Section 12.01(D), applications involving development on Steep Slopes between 15% and 25% grade shall be reviewed via administrative Site Plan Review (Section 14.09), unless the application is for a single-household dwelling or two-household dwelling, in which case the application may be approved via a zoning permit reviewed by the Administrative Officer.
E. Standards.

(1) **Very Steep Slope Standards.** Development other than Restricted Infrastructure Encroachment is prohibited on slopes greater than 25%.

(2) **Steep Slope Standards.** All development must be designed to avoid undue adverse effects on slopes between 15% and 25%. Clearing of vegetation, excavation and filling on steep slopes shall be minimized. All recommendations of the slope stability analysis submitted with the application shall be required by the DRB or Administrative Officer.

F. Exemptions.

(1) **Removal of Earth Products.** Slopes exceeding 15 percent that are created by an approved earth products removal use shall be exempt from the regulations of this subsection.

12.10 Restricted Infrastructure Encroachment

A. Purpose. The purpose of this section is to define specific types of “restricted infrastructure” that may be allowed to encroach upon a natural resource regulated in Article 12 and to define the standards that shall be met in order for an encroachment to be allowed.

B. Types of Development. Restricted Infrastructure Encroachments are limited to the types of development listed in this subsection:

(1) Underground public utilities systems (e.g. water, wastewater, stormwater, electric, broadband, telephone).

(2) Public sidewalks and recreation paths (including bridges and boardwalks) intended to connect parcels and neighborhoods, or provide recreational opportunities within areas containing Hazards, Level I, and Level II resources.

(3) Public and Private Street crossings designed to cross Hazards, Level I, and Level II resources.

(4) Public and Private Driveway crossings designed to cross Hazards, Level I, and Level II resources.

(5) Stormwater Facilities specifically identified as a part of an Environmental Restoration Project.

C. Qualifying Criteria. Encroachment into the resource may only be allowed if there is a finding that the proposed Restricted Infrastructure Encroachment meets one or more of the following qualifying criteria:

(1) Is necessary to repair impacts from a Federally declared disaster, mitigate the future impacts of hazards, and/or necessary for the protection of the public health, safety and welfare;

(2) Is for a functionally dependent purpose or use;

(3) Is a part of an Environmental Restoration Project;

(4) Is for purposes of crossing a natural resource area to gain access to land on the opposite side of the area; or

(5) For purposes of providing safe access in accordance with City roadway and connectivity standards to an approved use.
D. Development Review Process. Applications involving Restricted Infrastructure Encroachments shall be subject to the development review process outlined in Section 12.01(D).

E. Standards. All Restricted Infrastructure Encroachments shall meet the following standards:

1. The encroachment shall not have an undue adverse effect on the subject natural resource and meet all specific, applicable standards for Restricted Infrastructure Encroachments into River Corridors (Section 10.07), Wetlands Buffers (Section 12.03), and Habitat Blocks (Section 12.05).

2. Street and Driveway Crossings Not On Official Map. Restricted Infrastructure Encroachment projects involving streets and/or driveways crossings of River Corridors (Section 10.07), Wetlands Buffers (Section 12.03), and/or Habitat Blocks (Section 12.05) that are not shown on the City Official Map may be allowed only upon a determination by the Development Review Board that all resource-specific standards and following standards have been met:

   (a) There is no feasible alternative for providing safe access to the developable portion of the property;
   (b) Alternative accesses through adjacent properties have been considered and, where fewer or no constraints exist, property owners have been contacted;
   (c) The requirements of the applicable restriction will cause unnecessary or extraordinary economic hardship;
   (d) The area served by the encroachment represents more than thirty (30) percent of the total developable land on the parcel; and,
   (e) The encroachment represents the least impact feasible to the specific resource.

12 SURFACE WATER PROTECTION STANDARDS

12.01 General Stream and Surface Water Protection Standards

A. Purpose. It is the purpose of this Section to provide for the protection and improvement of the surface waters and streams within the City of South Burlington, Lake Champlain and Shelburne Bay, and the watersheds contained wholly or partially within the City. These regulations and standards are intended to lead to the establishment and protection of natural areas along the City’s surface waters to provide improved protection for water quality and the provision of open space areas and wildlife habitat. It is the further purpose of this Section to provide for the retention of preexisting residential neighborhoods located along Lake Champlain and Potash Brook in a manner consistent with the resource protection goals of this Section and the Comprehensive Plan.

B. Comprehensive Plan. These regulations hereby implement the relevant provisions of the City of south Burlington adopted comprehensive plan and are in accord with the policies set forth therein.

C. Surface Water Buffer Standards ("Stream Buffers")

(1) Applicability. The requirements of this Section shall apply to all lands described as follows:

(a) All land within one hundred (100) feet horizontal distance of the centerline of Muddy Brook and the main stem of Potash Brook.
(b) All land within one hundred (100) feet horizontal distance of the edge of the channel of the Winooski River.

(c) All land within fifty (50) feet horizontal distance of the centerline of any minor stream.

(d) All land within ten (10) feet horizontal distance of the centerline of a drainage way.

(e) Land within or abutting the high-water elevation of Lake Champlain, which for the purposes of these regulations shall be one hundred two (102) feet above mean sea level datum.

(2) **General standards.** It is the objective of these standards to promote the establishment of heavily vegetated areas of native vegetation and trees in order to reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the City's streams and Lake Champlain. Therefore, except as specifically permitted by the DRB pursuant to the standards in Section 12.01(C)(3), (C)(4), (D) and/or (E) below, all lands within a required stream buffer defined above shall be left in an undisturbed, naturally vegetated condition. Supplemental planting and landscaping with appropriate species of vegetation to achieve these objectives shall be permitted. The specific standards for the vegetation and maintenance of stream buffers are as follows:

(a) The clearing of trees that are not dead, heavily damaged by ice storms or other natural events, or diseased, and the clearing of any other vegetation other than invasive species, is permitted only in conjunction with DRB approval pursuant to (3) or (4) below.

(b) Any areas within a required stream buffer that are not vegetated or that are disturbed during construction shall be seeded with a naturalized mix of grasses rather than standard lawn grass, and shall not be mowed.

(c) The creation of new lawn areas within stream buffers is not permitted after the effective date of these regulations.

(d) Snow storage areas designated pursuant to site plan or PUD review shall not be located within stream buffers unless the applicant can demonstrate that:

   (i) There is no reasonable alternative location for snow storage on the same property.

   (ii) Measures such as infiltration areas have been incorporated into the site plan and/or stormwater treatment system to reduce the potential for erosion and contaminated runoff entering the associated stream as a result of snow melt.

(e) The placing or storing of cut or cleared trees and other vegetation within the stream buffer is prohibited.

(3) **Expansion of pre-existing structures within stream buffers.** The expansion of pre-existing structures within stream buffers, except as provided in Section D below, shall be permitted only in accordance with the standards for non-complying structures in Article 3, Section 3.11 of these Regulations.

(4) **New uses and encroachments within stream buffers.** The encroachment of new land development activities into the City's stream buffers is discouraged. The DRB may authorize the following as conditional uses within stream buffers, subject to the standards and conditions enumerated for each use. The DRB may grant approvals pursuant to this section as part of PUD review without a separate conditional use review.

(a) Agriculture, horticulture and forestry including the keeping of livestock, provided that any building or structure appurtenant to such uses is located outside the stream buffer.
(b) Clearing of vegetation and filling or excavating of earth materials, only to the extent directly necessitated for the construction or safe operation of a permitted or conditional use on the same property and where the DRB finds that:

(i) There is no practicable alternative to the clearing, filling or excavating within the stream buffer; and

(ii) The purposes of this Section will be protected through erosion controls, plantings, protection of existing vegetation, and/or other measures.

(c) Encroachments necessary to rectify a natural catastrophe for the protection of the public health, safety and welfare.

(d) Encroachments necessary for providing for or improving public facilities.

(e) Public recreation paths, located at least twenty-five (25) feet from the edge of channel of the surface water.

(f) Stormwater treatment facilities meeting the Vermont Agency of Natural Resources stormwater treatment standards, and routine maintenance thereof, including necessary clearing of vegetation and dredging. Evidence of a complete application to the VANR for coverage under the applicable permitting requirements shall be required to meet this criterion for encroachment into a stream buffer.

(g) Roadways or access drives for purposes of crossing a stream buffer area to gain access to land on the opposite side of the buffer, or for purposes of providing safe access to an approved use, in cases where there is no feasible alternative for providing safe access and the roadway or access drive is located at least twenty-five (25) feet from the edge of the channel of the surface water for all water bodies listed in section 10.01(C)(1)(a) and (b) and ten (10) feet from the edge of channel of the surface water of all other streams.

(h) Utility lines, including power, telephone, cable, sewer and water, to the extent necessary to cross or encroach into the stream buffer where there is no feasible alternative for providing or extending utility services.

(i) Outdoor recreation, provided any building or structure (including parking and driveways) appurtenant to such use is located outside the stream buffer.

(j) Research and educational activities provided any building or structure (including parking and driveways) appurtenant to such use is located outside the stream buffer.

(k) Hydro-electric power generation

D. Erosion control measures and water-oriented development along Lake Champlain.

The installation of erosion control measures and water-oriented development within or abutting the high-water elevation of Lake Champlain, may be approved by the DRB as a conditional use provided the following standards are met:

(a) The improvement involves, to the greatest extent possible, the use of natural materials such as wood and stone.

(b) The improvement will not increase the potential for erosion.

(c) The improvement will not have an undue adverse impact on the aesthetic integrity of the lakeshore. In making a determination pursuant to this criterion, the DRB may request renderings or
other additional information relevant and necessary to evaluating the visual impact of the proposed improvement.

(d) A landscaping plan showing plans to preserve, maintain and supplement existing trees and ground cover vegetation is submitted and the DRB finds that the overall plan will provide a visual and vegetative buffer for the lake and/or stream.

E. Potash Brook Tributary 3 Requirements. For lands located within one hundred fifty (150) feet horizontal distance of Tributary 3 of Potash Brook, as delineated in the Potash Brook Watershed Restoration Plan, the DRB shall have the authority to invoke technical review of proposed land development activities requiring DRB approval. Such technical review shall have the specific purpose of recommending site plan, stormwater and landscaping measures that will ensure that land development activities are consistent with the City’s overall plan for ecosystem restoration in the Tributary 3 watershed.

F. Landscaping and Maintenance Standards within Stream Buffers [reserved]

G. Watercourse Alteration and Relocation.

(1) The alteration or relocation of a watercourse is permitted subject to the approval of the Development Review Board provided the alteration or relocation:

(a) Is needed to accomplish a clear public purpose or objective;

(b) Will not reduce the ability of the watercourse to carry or store flood waters adequately;

(c) Will not have an adverse impact on downstream or upstream water quality;

(d) Will not affect adversely the use and enjoyment of adjacent properties;

(e) Will not affect adversely the habitat value of the watercourse or immediately adjacent areas or wetlands.

(2) In making findings relative to these criteria, the DRB shall be authorized to invoke technical review by a professional in hydrology or geomorphology, and/or to rely on the issuance of a Stream Alteration Permit issued by the Vermont Department of Environmental Conservation as evidence that the above criteria have been met.

(3) The South Burlington Natural Resources Committee shall in a timely manner review and make advisory comments to the DRB on any application made pursuant to this section.

12.02 Wetland Protection Standards and Review Procedures

A. Purpose. It is the purpose of this Section to provide appropriate protection of the City’s wetland resources in order to protect wetland functions and values related to surface and ground water protection, wildlife habitat, and flood control.

B. Comprehensive Plan. These regulations hereby implement the relevant provisions of the City of South Burlington adopted comprehensive plan and are in accord with the policies set forth therein.

C. Wetlands Map and Applicability of Standards.

(1) All wetland areas within the City of South Burlington, whether identified on the map entitled “Wetlands Map” as set forth in Section 3.02 of these regulations or as identified through field delineation,
and a buffer area fifty (50) feet horizontal distance surrounding the boundary of any such wetland, shall be subject to the provisions of this section.

(2) In the absence of site-specific delineations, the City’s Wetlands Map shall control as to the location of wetlands and wetland buffer areas subject to the provisions of this section.

D. Submittal and Review of Field Delineation and Wetlands Report

(1) For all properties for which any application for development requiring DRB review is made, and on which any wetland areas are indicated on the Wetlands Map, applicants are strongly encouraged to submit site-specific field delineations indicating the location, classification, functions and values of all wetland areas (Class I, II and III) and an associated fifty (50) foot buffer area. In the absence of such site-specific delineations and information, the City’s Wetlands Map shall control.

(2) Applicants are encouraged to submit a field delineation and wetlands report as early in the development review process as possible.

(3) The DRB shall have the authority to invoke technical review by a qualified wetlands consultant of any field delineation and wetlands report. The City’s wetlands consultant shall submit an evaluation of the field delineation and wetlands report addressing the proposed development’s consistency with the standards in (D) above, and outlining the following:

   (a) Measures that can be taken to improve the overall effect of the project on wetland resources without altering the layout of the proposed project.

   (b) Measures that can be taken to improve the overall effect of the project on wetland resources that involve altering the layout of the proposed project.

E. Standards for Wetlands Protection

(1) Consistent with the purposes of this Section, encroachment into wetlands and buffer areas is generally discouraged.

(2) Encroachment into Class II wetlands is permitted by the City only in conjunction with issuance of a Conditional Use Determination (CUD) by the Vermont Department of Environmental Conservation and positive findings by the DRB pursuant to the criteria in (3) below.

(3) Encroachment into Class II wetland buffers, Class III wetlands and Class III wetland buffers, may be permitted by the DRB upon finding that the proposed project’s overall development, erosion control, stormwater treatment system, provisions for stream buffering, and landscaping plan achieve the following standards for wetland protection:

   (a) The encroachment(s) will not adversely affect the ability of the property to carry or store flood waters adequately;

   (b) The encroachment(s) will not adversely affect the ability of the proposed stormwater treatment system to reduce sedimentation according to state standards;

   (c) The impact of the encroachment(s) on the specific wetland functions and values identified in the field delineation and wetland report is minimized and/or offset by appropriate landscaping, stormwater treatment, stream buffering, and/or other mitigation measures.
12.03 Stormwater Management Standards

A. Purpose. The purpose of this section is:

(1) To promote stormwater management practices that maintain pre-development hydrology through site design, site development, building design and landscape design techniques that infiltrate, filter, store, evaporate and detain stormwater close to its source;

(2) To protect water resources, particularly streams, lakes, wetlands, floodplains and other natural aquatic systems on the development site and elsewhere from degradation that could be caused by construction activities and post-construction conditions;

(3) To protect other properties from damage that could be caused by stormwater and sediment from improperly managed construction activities and post-construction conditions on the development site;

(4) To reduce the impacts on surface waters from impervious surfaces such as streets, parking lots, rooftops and other paved surfaces; and

(5) To promote public safety from flooding and streambank erosion, reduce public expenditures in removing sediment from stormwater drainage systems and natural resource areas, and to prevent damage to municipal infrastructure from inadequate stormwater controls.

B. Scope and Applicability

(1) These regulations shall apply to all land development within the City of South Burlington where one-half acre or more of impervious surface area exists or is proposed to exist on an applicant’s lot or parcel.

(2) If the combination of new impervious surface area created and the redevelopment or substantial reconstruction of existing impervious surfaces is less than 5,000 s.f. then the application is exempt from requirements in this Section 12.03.

(3) Applications meeting the criteria set forth in section 12.03(B)(1) and not exempt under section 12.03(B)(2) shall meet the requirements in section 12.03(C) as follows:

(a) If the area of the lot or parcel being redeveloped or substantially reconstructed is less than 50% of the lot’s existing impervious surface area, then only those portions of the lot or parcel that are being redeveloped or substantially reconstructed must comply with all parts of Section 12.03(C). All new impervious surface area must meet the requirements of section 12.03(C).

(b) If the area of the lot or parcel that is being redeveloped or substantially reconstructed exceeds 50% of the lot or parcel’s existing impervious surface area then all of the lot or parcel’s impervious surfaces must comply with all parts of Section 12.03(C). All new impervious surface area must meet the requirements of Section 12.03(C).

C. Site Design Requirements For New Development

(1) The Water Quality Volume (WQv) as defined in the Vermont Stormwater Management Manual for the lot or parcel’s impervious surfaces shall not leave the lot via overland runoff, and shall be infiltrated using Low Impact Development (LID) practices including, but not limited to, practices detailed in the “South Burlington Low Impact Development Guidance Manual”.

(a) If it is not possible to infiltrate the volume of stormwater runoff specified in Section 12.03(C)(1) due to one or more of the following constraints:
(i) Seasonally high or shallow groundwater as defined in Appendix D1 of the Vermont Stormwater Management Manual;

(ii) Shallow bedrock as defined in Appendix D1 of the Vermont Stormwater Management Manual;

(iii) Soil infiltration rates of less than 0.2 inches per hour,

(iv) Soils contaminated with hazardous materials, as that phrase is defined by 10 V.S.A. §602(16), as amended,

(v) The presence of a “stormwater hotspot” as defined in Section 2.6 of the Vermont Stormwater Management Manual, or

(vi) Other site conditions prohibitive of on-site infiltration runoff subject to the review and approval of the Development Review Board,

then the WQv shall be retained on the lot using other LID strategies and practices such as those detailed in the “South Burlington Low Impact Development Guidance Manual”, or treated by stormwater treatment practices meeting the Water Quality Treatment Standard as described in the most recently adopted version of the Vermont Stormwater Management Manual.

(2) The post-construction peak runoff rate for the one-year, twenty-four hour (2.1 inch) rain event shall not exceed the existing peak runoff rate for the same storm event from the site under conditions existing prior to submittal of an application. LID practices shall be incorporated into the design as necessary to achieve the maximum allowed runoff rate. If constraints prevent the use of LID practices (see Section 12.03(C)(1)(a)), stormwater treatment practices detailed in the Vermont Stormwater Management Manual may be used to achieve the required post-construction runoff rate.

(3) Applicants who demonstrate that the required control and/or treatment of stormwater runoff per section 12.03(C)(1) and 12.03(C)(2) cannot be achieved for areas subject to these regulations per section 12.03(B) may utilize “site balancing”.

D. Additional Site Plan Requirements

(1) Applicants required to comply with Section 12.03(C) must include the following information in their site plan submission:

(a) Sub-watershed boundaries and drainage area delineations for all stormwater treatment practices.

(b) Location, type, material, size, elevation data, and specifications for all existing and proposed stormwater collection systems, culverts, detention basins, LID installations, and other stormwater treatment practices.

(c) Soil types and/or hydrologic soil group, including the results of any soil borings, infiltration testing, or soil compaction testing.

(d) A brief written description of the proposed stormwater treatment and management techniques. Where LID design approaches are not proposed (see Section 12.03(C)(1)(a)), the applicant shall provide a full justification and demonstrate why the use of LID approaches is not possible before proposing to use conventional structural stormwater management measures.

(e) A detailed maintenance plan for all proposed stormwater treatment practices.
(f) Modeling results that show the existing and post-development hydrographs for the WQv (0.9-inch) and the one-year, twenty-four-hour (2.1-inch) rain event. Any TR-55-based model shall be suitable for this purpose.

E. Drainage Structures

(1) Removal of Runoff — The applicant shall remove any impervious surface runoff that exists as a result of the proposed land development. Drainage facilities shall be located in the street right-of-way where feasible. All drainage facilities shall be designed in accordance with Public Works Standards and Specifications. Drainage facilities shall also conform to the provisions of Section 12.01 Surface Water Buffer Standards ("Stream Buffers").

(2) Drainage Structures To Accommodate Upstream Development — Culverts or other drainage facilities shall be of sufficient size to accommodate potential runoff from the entire upstream drainage area, whether or not all or part of the upstream area is on the applicant’s lot or the parcel subject to the application. In determining the anticipated amount of upstream runoff for which drainage facilities must be sized, the applicant shall design the stormwater drainage system assuming the total potential development of upstream drainage areas. All drainage structures shall be designed to, at a minimum, safely pass the twenty-five year, twenty-four hour (4.0 inch) rain event. The applicant’s engineer shall provide such information as the Stormwater Superintendent or his designee deems necessary to determine the adequacy of all drainage structures.

(3) Responsibility for Downstream Drainage Structures — The applicant shall provide the Stormwater Superintendent or his designee with such information as the Superintendent deems necessary to determine the effects of the application on drainage structures located downstream of the applicant’s lot or the parcel subject to the application, notwithstanding whether these structures are located on land owned or controlled by the applicant. This analysis shall be conducted using the twenty-five year, twenty-four hour (4.0 inch) storm event. In instances where the Superintendent anticipates that additional runoff incident to the application may overload an existing downstream drainage structure(s) and result in damage to private or public infrastructure or property, the DRB shall impose conditions requiring the applicant to incorporate measures to prevent these conditions, notwithstanding whether such improvements are located on or off the applicant’s property.

12.04 Stormwater Management Overlay District (SMO) [Reserved]
15 SUBDIVISION and PLANNED UNIT DEVELOPMENT REVIEW

15.02 Authority and Required Review

A. Authority

(1) Pursuant to Section 4413 through Section 4421 of 24 VSA Chapter 117, as amended, the Development Review Board shall have the authority to review and approve, approve with conditions or deny an application for subdivision of land pursuant to the standards in these Regulations.

(2) In accordance with the provisions of Subsections (3) and (12) of Section 4407 of Title 24 VSA Chapter 117, the Development Review Board shall have the authority to review and approve, approve with modifications, or deny Planned Unit Developments and Planned Residential Developments (PUDs). Planned Unit Developments shall not be permitted within The City Center FBC District.

(3) In conjunction with PUD review, the modification of these Land Development Regulations is permitted subject to the conditions and standards in this Article and other applicable provisions of these Regulations.

(4) Notwithstanding section 15.02(A)(3), however, the following standards shall apply to all PUDs:

(a) in no case shall the DRB permit the location of a new structure less than five (5) feet from any property boundary, and, in no case shall the DRB permit the location of a structure not in compliance with Section 15.03(D).

(b) In no case shall the DRB allow land development creating a total site coverage exceeding the allowable limit for the applicable zoning district in the case of new development, or increasing the coverage on sites where the pre-existing condition exceeds the applicable limit.

(c) In no case shall the DRB permit the location of parking not in compliance with Section 14.06 (B)(2).

(d) PUD review does not provide for modification of standards related to Hazards, Level I Resources, or Level II Resources beyond those specifically enumerated in Articles 10 and 12 of these Regulations.

(5) Pursuant to this Article, the South Burlington Development Review Board shall have the further authority to review and approve, approve with modifications, or deny a Master Plan reviewed in conjunction with a PUD. A Master Plan shall be a binding sub-part of a PUD approval and shall not be construed as a separate land development review procedure from the PUD procedures set forth in this Article.

(6) The modification of the maximum residential density for a zoning district shall be permitted only as provided in the applicable district regulations and/or for the provision of affordable housing pursuant to Section 18.01 and 18.02 of these Regulations.

15.18 Criteria for Review of PUDs, Subdivisions, Transect Zone Subdivisions, and Master Plans

A. General Standards. In all zoning districts of the City, the DRB shall make findings of fact on a PUD, subdivision Transect Zone subdivision, and/or Master Plan in keeping with the standards for approval of subdivisions in Article 15 and/or site plans and conditional uses in Article 14 For PUD, subdivision and/or
Master Plan applications within the SEQ, IO and R1-Lakeshore districts, the DRB shall also make positive findings with respect to the project’s compliance with the specific criteria in this section.

The general standards applicable to all PUDs, subdivisions, Transect Zone subdivisions, and Master Plans are, except as noted below:

... 

(4) The project’s design respects and will provide suitable protection to Hazards, Level I Resources, and Level II Resources wetlands, streams, wildlife habitat as identified in the Open Space Strategy, and any unique natural features on the site. In making this finding the DRB shall utilize the provisions of Articles 10 and 12 of these Regulations related to Hazards, Level I Resources, and Level II Resources wetlands and stream buffers, and may seek comment from the Natural Resources Committee with respect to the project’s impact on natural resources.

... 

(6) Open space areas on the site have been located in such a way as to maximize opportunities for creating contiguous open spaces between adjoining parcels, habitat blocks, habitat connectors, wetlands, and/or river corridors stream buffer areas. For Transect Zone subdivisions, this standard shall apply only to the location of natural resources identified in Articles 10 and 12 of these Regulations and proposed open spaces to be dedicated to the City of South Burlington.
## APPENDIX E SUBMISSION REQUIREMENTS

### LANDSCAPE FEATURES

<table>
<thead>
<tr>
<th>All Districts Except City Center FBC</th>
<th>City Center FBC District</th>
<th>Submittal requirement</th>
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<tbody>
<tr>
<td>Site Plan</td>
<td>Sketch Plan</td>
<td>Master Plan</td>
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- **Existing water courses & buffers, wetlands & buffers, base flood elevations**, if located in an area of special flood hazard, wooded areas, ledge outcrops, and other natural features.
- **Initial Site Conditions Map**
  - Surface waters & buffers. Existing mapped data for permanent surface waters; estimates for top of bank/stream; estimated locations of intermittent streams.
  - Wetland areas and buffers. Existing mapped data from Vermont Significant Wetland Inventory, Vrmont Significant Wetland Inventory Advisory Layer, Hydric Soils, and other known sources. Applicant-estimated areas for potential Class III areas.
  - Habitat Blocks: City-Mapped Habitat Blocks.
  - Habitat Connectors: City-Mapped Habitat Connectors.
  - Steep Slopes: Existing mapped data of steep and very steep slopes.

- **Complete Site Conditions Map**
  - Surface waters & buffers. Field verification/ delineation of top of bank / top of slope for permanent and intermittent surface waters by a qualified professional.
  - Wetland areas and buffers. Field delineation and report of functions and values of all wetland areas prepared by a qualified wetlands consultant.
  - Habitat Blocks: Mapped Habitat Blocks or Habitat and Disturbance Assessment if applicable.
  - Habitat Connectors: Mapped Habitat Connectors or Habitat and Disturbance Assessment if applicable.
  - Steep Slopes: Mapped data of unaffected steep or very steep slopes; Field or LiDAR-derived delineation of steep and very steep slopes with a vertical drop exceeding three (3) feet proposed to be impacted.
Natural Resources Map
South Burlington, Vermont
Effective INSERT DATE

Disclaimer:
This map is for planning purposes. The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for delineation of features on the ground. This map identifies the presence of features, and may not indicate relationships between features. This map is not a replacement for surveyed information or engineering studies.

Data Sources:
- Special Flood Hazard Area
- Wetland
- River Corridor
- Very Steep Slopes (25% + Slope)

All Data is in VT State Plan NAD 1983.

Map Prepared by M. Needle using ArcGIS Pro.

Legend

Level I Resources
- Habitat Block
- Habitat Connector

Level II Resources
- B1: 500 Year Flood/0.2% Annual Chance of Flood Hazard
- B2: 500 Year Flood/0.2% Annual Chance of Flood Hazard
- Steep Slopes (15% to 25%)
- Very Steep Slopes (25% + Slope)

Date:3/24/2021
DRAFT