

Attachment 1: Draft Spill Flood Hazard Policies

Draft Policy	Draft Rationale	Corresponding Spill Flood Hazard Technical Companion Document Sections
<p>Preamble</p> <p>There are several areas within Conservation Halton’s (CH) jurisdiction where <i>spill flood hazards</i> occur.</p> <p><i>Spills are flood hazards that occur when flood waters leave the valley and flood plain of a watercourse and “spill” into surrounding lands, rejoining the watercourse downstream or moving into another watershed. Spill flood hazards generally do not follow the watercourse and often move through areas by complex pathways where inundation may not be anticipated. Spills can be caused by backwatering (e.g., upstream of watercourse crossings) or by ground conditions that slope away from the valley and flood plain.</i></p> <p><i>Spills are distinct from a flood plain and can be considered a type of hazardous lands. Spill flood hazards that could be unsafe for development activities are regulated, and a risk-based approach to regulating and permitting development activity within spills is applied. There is no regulatory allowance applied to spills.</i></p> <p>The following policies set out the criteria that must be met to eliminate, alter, and develop in <i>spill flood hazards</i>. Wherever reasonable, the applicant is encouraged to relocate <i>development activity</i> to an area outside of the <i>spill flood hazard</i> or to an area of lower flood depths and velocities. Conservation Halton’s Spill Flood Hazard Technical Companion Document supports the interpretation and implementation of CH’s regulatory policies related to <i>development activities</i> within <i>spill flood hazards</i>.</p>	<ul style="list-style-type: none"> Structure of the proposed <i>spill flood hazard</i> policies is generally based on CH’s current <i>flood plain</i> policies with added flexibility for new development. Some key differences between flood plain and spill policies include permitting new buildings within the spill flood hazard and removing size limits for additions to existing development and accessory structures. Technical guidance criteria also offer added flexibility (e.g., permitting minor flood elevation increases as a result of development). The proposed <i>spill flood hazard</i> policies are more flexible and may allow for more types of <i>development activities</i> than current <i>flood plain</i> policies in CH’s watershed because <i>spill flood hazards</i> are distinct from <i>flood plains</i> in that: <ul style="list-style-type: none"> <i>spill flood hazards</i> occur where inundation may not be anticipated and may be distant from a <i>watercourse</i>, valley and <i>flood plain</i>, <i>spills</i> often traverse public road right-of-ways (ROWs) which are designed to function as overland flow paths for local stormwater/runoff, <i>spills</i> generally occur less frequently and for a shorter duration, and usually have shallower depths, slower flow velocities and less ability to move heavier objects, and Provincial technical guidance supports the prevention of <i>spills</i> moving into an adjacent watershed (where feasible and the benefits outweigh the related impacts and associated costs) and the Provincial technical guidance does not identify requirements for maintaining flood storage within the <i>spill flood hazard</i> when a <i>spill</i> can be eliminated. 	<p>CH has prepared a Draft Spill Flood Hazard Policy: Technical Companion Document to support the interpretation and implementation of CH’s spills flood hazard policies.</p> <p>The companion document must be read in its entirety and the relevant sections are to be applied to the development activity scenario. Notwithstanding, this table identifies key sections of the companion document that can be referred to for additional policy interpretation and implementation guidance.</p> <ul style="list-style-type: none"> See Sections 2 & 3 for additional background on spill flood hazards, and for information on how spills are identified, modelled and mapped.
<p>1. General Spill Flood Hazard Policies</p> <p>All works permitted under the specific <i>spill flood hazard</i> policies (Policies 3.1-3.5) must also meet the requirements of the general <i>spill flood hazard</i> policies (Policies 1.1 and 1.2).</p> <p>1.1. Applications for <i>development activities</i> within <i>spill flood hazards</i>, including supporting technical studies, must be completed by a qualified professional(s) in accordance with Conservation Halton’s Spill Flood Hazard Technical Companion Document.</p>	<ul style="list-style-type: none"> To avoid repetition throughout policies, the general policies include standard criteria, consistent with provincial policy and technical guidance, that apply to all development activity and flood hazard alterations within spills: <ul style="list-style-type: none"> Consistent with Ontario Regulation 41/24 and with the PPS, changes in flood elevations and velocities must not result in an unacceptable risk to life or property, as informed by the technical guidance document. Consistent with provincial technical guidance and the PPS, access (ingress and egress) appropriate for the nature of the proposed development must be provided, as informed by the technical guidance document. 	<ul style="list-style-type: none"> See Section 5.2.1 (Hydraulic Modelling and Flood Storage Assessments), for further direction on what constitutes significantly impeding flood conveyance or storage, and assessing unacceptable risk to flood depths, velocities, and storage, including study scoping and waiving. See Section 5.2.2 (Access) for guidance on access that is appropriate for the nature of the development activity.

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<p>1.2. <i>Development activities</i> may be permitted within a <i>spill flood hazard</i> where the following is demonstrated by a study that includes hydraulic modelling and a flood storage assessment:</p> <ul style="list-style-type: none"> a) The <i>development activity</i> does not significantly impede flood conveyance or storage, and changes in flood depths, velocities and storage will not result in an unacceptable risk to life or property; and, b) The <i>development activity</i> meets <i>access standards</i> that are appropriate for the nature of the <i>development activity</i>. <p>Notwithstanding 1.2 above, CH may scope or waive the need for hydraulic modelling and flood storage assessment based on the level of risk associated with the nature of the proposed works and the characteristics of the <i>spill flood hazard</i>. Cumulative impacts of previous <i>development activities</i> or <i>flood hazard</i> alterations within the <i>spill flood hazard</i> on the subject site will also be considered.</p>	<ul style="list-style-type: none"> ○ Flood conveyance and storage and related modelling assessment requirements are also identified in the general policy. To be reasonable to applicants proposing works that CH staff do not believe will have an unacceptable impact (e.g. development such as decks, sheds and minor additions), we have indicated scoping and waiving may occur. The technical companion document provides further detailed guidance on when scoping and waiving will occur. 	
<p>Specific Policies</p> <p>2. Eliminating or Reducing Spill Flood Hazards at its Source</p> <p>Where feasible and where flood risk can be reduced, CH generally encourages the elimination or reduction of <i>spill flood hazards</i> at their source by maintaining flood flows within the valley and <i>flood plain</i> through infrastructure improvements or other means. To reduce flood risk, the extent of <i>spill flood hazards</i> may be altered on a single site or across multiple sites through grading, filling or other means. Site-specific or localized alterations to eliminate or reduce the <i>spill flood hazard</i> are evaluated under Policies 1.1, 1.2, and 3.5</p> <p>2.1. The elimination or reduction of a <i>spill flood hazard</i> at or near the source of the spill may be permitted provided it is supported by a <i>comprehensive study</i> that demonstrates, but is not limited to, the following:</p> <ul style="list-style-type: none"> a) changes to flood depths and velocities will not result in an unacceptable risk to life or property based on a detailed risk assessment; b) geotechnical (i.e. slope stability) issues are adequately addressed; c) fluvial processes are not adversely impacted; and, d) natural channel design principles are used, to the extent possible. <p>The <i>comprehensive study</i> must be completed by a qualified professional(s) in accordance with Conservation Halton's Spill Flood Hazard Technical Companion Document. Notwithstanding the above, CH may scope or waive the <i>comprehensive study</i> requirements based on the nature of the proposed works and the characteristics of the <i>spill flood hazard</i>.</p>	<ul style="list-style-type: none"> • Proposed policy is intended to address situations where a <i>spill flood hazard</i> can be eliminated at or near its source. Proposed policy recognizes the general difference between <i>spill flood hazards</i> that are disconnected from the natural, riparian system and <i>flood plains</i> that are part of the riparian system. • Proposed policy aligns with provincial direction in <i>Technical Guide for River and Stream Systems: Flooding Hazard Limit (2002)</i>, that “the effect of spills moving into another watershed should be assessed to determine the potential flood risks. Alternative measures should be investigated to prevent the spill from moving into the adjacent watershed”. • Comprehensive study technical requirements are consistent with CH’s existing alteration to watercourses and flood plain policies. • Eliminating or reducing <i>spill flood hazards</i> allows development to proceed with reduced risk by preventing the <i>spill flood hazard</i>, or a portion there of, from occurring and ensuring flood flows remain in the valley and <i>flood plain</i>. • Downstream <i>flood plain</i> mapping typically accounts for spill flows so typically spill elimination is consistent with Provincial guidelines. • Eliminating or reducing <i>spill flood hazards</i> is supported when it is in the public interest of providing more benefit than harm from a public health and safety perspective (e.g., removing maximum number of properties/people from the <i>flood hazard</i>). 	<ul style="list-style-type: none"> • See Section 5.3 (Eliminating or Reducing Spills) for further guidance on eliminating and reducing spills, including assessing unacceptable risk to life or property as a result of changes to flood depths and velocities, and details on completing a risk assessment.

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	<ul style="list-style-type: none"> Proposed policy reflects feedback received through public and stakeholder engagement to include policy direction for eliminating and/or altering <i>spill flood hazards</i> where feasible as the preferred management approach, especially in undeveloped/greenfield development scenarios (also see proposed Land Use Policy in Section 5 below). 	
<p>3. Development Activities in Spill Flood Hazards</p> <p>All works permitted under Policies 3.1-3.5 must also meet the requirements of the General Policies.</p>	<ul style="list-style-type: none"> The proposed policies in Section 3 seek to permit new development activities in spill flood hazards where flood risk is low, risks can be mitigated, and impacts resulting from development are acceptable. All proposed development must meet the general policies in addition to the specific policies for the proposed development type. As outlined in the preamble, while some development is permitted within the spill flood hazard, the relocation of <i>development activity</i> to an area outside of the <i>spill flood hazard</i> or to an area of lower flood depths and velocities is encouraged wherever feasible. 	
<p>3.1 Replacement Buildings</p> <p>The replacement of a building (same size and use) may be permitted in a <i>spill flood hazard</i> where it is demonstrated that the building:</p> <ul style="list-style-type: none"> a) was not previously damaged or destroyed by <i>spill flood hazards</i>; b) will be replaced in the same location or in an area of lower flood depths and/or velocities; and, c) meets the required <i>floodproofing</i> standards. <p>Replacement buildings that are not the same size and use and/or are in an area of higher flood depths and/or velocities will be subject to Policy 3.2, related to new buildings and additions.</p>	<ul style="list-style-type: none"> The proposed policy allows for like-for-like replacement of a building within a spill, generally in keeping with CH's existing policy allowing replacement of buildings in the flood plain. 	<ul style="list-style-type: none"> See Sections 5.2.1 (Hydraulic Modelling and Flood Storage Assessments), 5.2.2 (Access), and 5.2.3 (Floodproofing).
<p>3.2 New Buildings and Additions</p> <p>New residential, commercial, industrial, office, mixed use, agricultural, and accessory buildings, and additions to existing buildings, may be permitted in a <i>spill flood hazard</i> where it is demonstrated that:</p> <ul style="list-style-type: none"> a) flood depths are less than one (1) metre and velocities are less than one metre per second (1 m/s) under <i>regulatory event</i> conditions; b) new buildings and additions meet the required <i>floodproofing standards</i>; c) the proposed building will not contain a <i>sensitive or vulnerable use</i>. 	<ul style="list-style-type: none"> The proposed policies for new buildings and additions in <i>spill flood hazards</i> offer more flexibility than current <i>flood plain</i> policies as <i>spill flood hazards</i> are distinct from <i>flood plains</i> in that: <ul style="list-style-type: none"> o <i>spill flood hazards</i> occur in areas where inundation may not be anticipated and may be distant from a <i>watercourse</i>, valley and <i>flood plain</i>, and o <i>spills</i> generally occur less frequently and usually have shallower depths, slower flow velocities and less ability to move heavier objects. As per Policy 1.2, modelling and flood storage requirements may be scoped or waived where flood conveyance is not significantly impacted. This will typically be applied to minor additions and small 	<ul style="list-style-type: none"> See Sections 5.1 (Prohibitions), 5.2.1 (Hydraulic Modelling and Flood Storage Assessments), 5.2.2 (Access), and 5.2.3 (Floodproofing).

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	<p>new buildings and structures. This is generally consistent with current flood plain addition policies and practices. More direction on when modelling and flood storage requirements may be waived is provided in CH's Spill Flood Hazard Technical Companion Document.</p> <ul style="list-style-type: none"> • Consistent with the PPS, new sensitive or vulnerable uses are not permitted within spill flood hazards. 	
<p>3.3 Non-habitable Accessory Structures</p> <p>Decks, gazebos, pools and other similar non-habitable structures may be permitted in a <i>spill flood hazard</i> where it is demonstrated that:</p> <p>a) the structure is securely anchored using standard construction techniques.</p>	<ul style="list-style-type: none"> • The proposed policies for new accessory structures and swimming pools are adapted from the current <i>flood plain</i> policies with more flexibility to allow for larger accessory buildings. • Further to Policy 1.2, modelling and flood storage requirements may be waived where flood conveyance is not significantly impacted. This will typically be applied to minor additions and small new buildings and structures. This is generally consistent with current flood plain addition policies and practices. More direction on when modelling and flood storage requirements may be waived is provided in CH's Spill Flood Hazard Technical Companion Document. 	<ul style="list-style-type: none"> • See Sections 5.2.1 (Hydraulic Modelling and Flood Storage Assessments)
<p>3.4 Stormwater Management Facilities</p> <p>Stormwater management facilities may be permitted in a <i>spill flood hazard</i> where it is demonstrated that:</p> <p>a) The function of the facility will not be impacted by the <i>spill flood hazard</i>, and, b) The facility is designed in accordance with Conservation Halton Guidelines for Stormwater Management Engineering Submissions.</p>	<ul style="list-style-type: none"> • The proposed policies for stormwater management facilities are adapted from the current <i>flood plain</i> policies and allow for SWM facilities provided the facility's functions are not impacted by the spill flood hazard and the facility is designed in accordance with CH guidelines. 	<ul style="list-style-type: none"> • See Sections 5.2.1 (Hydraulic Modelling and Flood Storage Assessments), and 5.2.4 (Stormwater Management Facilities).
<p>3.5 Other Development Activities</p> <p>The following <i>development activities</i> may be permitted in a <i>spill flood hazard</i>:</p> <p>a) Construction of public infrastructure, utilities, trails, and transportation services such as watermains, storm and sanitary sewers, natural gas or oil pipelines, hydro and communication corridors, footpaths/trails, roads, culverts and crossings; b) Surface parking lots and private access roads (e.g., driveways); and, c) <i>Spill flood hazard</i> alterations (e.g., grading and filling).</p>	<ul style="list-style-type: none"> • Policy 3.5 a): The proposed policy is based on a scoped version of CH's current Board approved infrastructure policy that applies to all regulated areas and is intended to address discussion paper feedback from several municipalities regarding the policy approach for public infrastructure works in <i>spill flood hazards</i>. Given the tendency for spills to occur along public right-of-ways, the proposed policy is intended to provide clarity for municipally-initiated infrastructure projects that require formal CH permission in <i>spill flood hazards</i>. • Policy 3.5 b): The proposed policies for surface parking lots and access roads, are adapted from the current Board approved <i>flood plain</i> policies. • Policy 3.5 c): The <i>spill flood hazard</i> alteration policy is intended to address general grading and filling works within a <i>spill flood hazard</i>. 	<ul style="list-style-type: none"> • See Sections 5.2.1 (Hydraulic Modelling and Flood Storage Assessments) and 5.2.2 (Access)

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	<p>Altering a <i>spill flood hazard</i> may include filling and/or grading a site or several sites to remove the <i>spill flood hazard</i> and/or alter its flow path. The <i>spill</i> still persists at its source but the extent of the <i>spill flood hazard</i> has been altered locally. The proposed policies are more flexible than current <i>flood plain</i> alteration policy as it may permit alterations that result in minor increases in flood elevation and losses of flood storage as per the general <i>spill flood hazard</i> policies and technical companion/guidance document.</p>	
<p>4. Area Specific Spill Flood Hazard Policy</p> <p>Area specific policies for <i>development activity</i> in <i>spill flood hazards</i> may be created by CH and the municipality, and where a <i>comprehensive</i> and area specific <i>flood hazard</i> study has been completed by CH and the municipality. Area specific policies will be based on the unique characteristics and risks associated with the subject <i>spill flood hazard</i>.</p>	<ul style="list-style-type: none"> Policy enables the creation of area specific policies following completion of a comprehensive study. Addresses Discussion Paper feedback from majority of stakeholders that CH should have area specific policies for <i>spill flood hazards</i> that have been studied. 	<ul style="list-style-type: none"> See Section 5.4 (Area Specific Policies)
<p>5. Land Use Planning Policy</p> <p>Through the review of subwatershed studies prepared in support of Secondary Plans/Area Specific Plans, and subsequent large-scale studies (e.g., MESP, SIS, EIR, etc.), CH will generally recommend that:</p> <ol style="list-style-type: none"> a) <i>Spill flood hazards</i> be identified; and, b) If identified and where feasible, that management recommendations be developed to: <ol style="list-style-type: none"> i) Eliminate <i>spill flood hazards</i> by directing flood flows back to the floodplain; and/or, ii) Contain <i>spill flood hazards</i> within a publicly owned block with compatible land uses (e.g., parkland, overland conveyance path). <p>Where elimination or containment is not feasible or practical, or introduces undesirable flood risks in other locations, other strategies to minimize risk and address public safety should be assessed and implemented, where feasible.</p>	<ul style="list-style-type: none"> Proposed land use policy provides guidance for Secondary Plans/Area Specific Plans (e.g., greenfield areas, Strategic Growth Areas). The policy recommends the identification of (i.e., modelling and mapping) and elimination and/or containment of spill flood hazards wherever feasible and provided undesirable flood risks are not introduced in other locations. The land use policy approach for spill flood hazards introduces more flexibility when compared to CH's flood plain policies, consistent with the risk-based approach taken for spills. 	<ul style="list-style-type: none"> See Section 3 (Delineating Regulated Spill Flood Hazards) See Section 5.3 (Eliminating or Reducing Spills)

New Definitions

COMPREHENSIVE STUDY (Existing Definition Amended)	Means a detailed study that fully assesses existing conditions and the potential impacts of proposed <i>development activity</i> with respect to, at a minimum, hydrology, hydraulics, hydrogeology, fluvial processes, erosion, and slope stability. Comprehensive studies may necessitate public consultation, depending on the study scope.
SENSITIVE OR VULNERABLE USE	Means institutional uses where there is a threat to the safe evacuation of vulnerable populations such as older persons, persons with disabilities, and those who are sick or young, during an emergency as a result of flooding, failure of floodproofing measures or protection works, or erosion; and essential emergency services which would be impaired during an emergency as a result of flooding, the failure of floodproofing measures and/or protection works, and/or erosion; and uses associated with hazardous substances that are normally considered to pose a danger to public health, safety and the environment.

SPILL	means where flood waters leave the valley and <i>flood plain</i> of a watercourse and “spill” into surrounding lands, either rejoining the watercourse at a distance downstream, flowing into an adjacent watershed, or remaining within the spill area (if there is no outlet). Spills typically flow in multiple directions, often in complex patterns, and generally do not follow the watercourse.
SPILL FLOOD HAZARDS	Means a <i>spill</i> or portion of a <i>spill</i> that could be unsafe for <i>development activity</i> .

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