



BOARD REPORT

TO:

Chair and Directors

File No:	BL 825-34 BL 800-26 BL 650-11 BL 2064 BL 701-83
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SUBJECT:

Electoral Areas C, E, and F: Housekeeping Amendments – Floodplain Management, Intersection Sightlines, and Panhandle lots (CSR D Zoning Bylaws)

DESCRIPTION:

Report from Dan Passmore, Senior Planner, dated April 12, 2017.

**RECOMMENDATION
#1:**

THAT: "Scotch Creek Zoning Amendment (CSR D) Bylaw No. 825-34" be read a second time, as amended, this 15th day of June, 2017;

**RECOMMENDATION
#2:**

THAT: "Magna Bay Zoning Amendment (CSR D) Bylaw No. 800-26" be read a second time, as amended, this 15th day of June, 2017;

**RECOMMENDATION
#3:**

THAT: "Anglemont Zoning Amendment (CSR D) Bylaw No. 650-11" be read a second time, as amended, this 15th day of June, 2017;

**RECOMMENDATION
#4:**

THAT: "Rural Sicamous Land Use Amendment (CSR D) Bylaw No. 2064" be read a second time, as amended, this 15th day of June, 2017;

**RECOMMENDATION
#5:**

THAT: "South Shuswap Zoning Amendment (CSR D) Bylaw No. 701-83" be read a second time, as amended, this 15th day of June, 2017;

**RECOMMENDATION
#6:**

THAT: a public hearing to hear representations on Scotch Creek Zoning Amendment (CSR D) Bylaw No. 825-34, Magna Bay Zoning Amendment (CSR D) Bylaw No. 800-26, Anglemont Zoning Amendment (CSR D) Bylaw No. 650-11, Rural Sicamous Land Use Amendment (CSR D) Bylaw No. 2064, and South Shuswap Zoning Amendment (CSR D) Bylaw No. 701-83, be held;

AND FURTHER THAT: notice of the public hearing be given by staff of the Regional District on behalf of the Board in accordance with Section 466 of the Local Government Act;

AND FURTHER THAT: the holding of the public hearing be delegated to Director Rhona Martin, as Chairman of the Board of the CSR D, or Director Paul Demenok, if Director Martin is absent, and the Director give a report of the public hearing to the Board.

SHORT SUMMARY:

Amendments are proposed to the floodplain management provisions of Anglemont Zoning Bylaw No. 650, Magna Bay Zoning Bylaw No. 800, Scotch Creek/Lee Creek Zoning Bylaw No. 825, Rural Sicamous Land Use Bylaw No. 2000, and South Shuswap Zoning Bylaw No. 701. The proposed amendments would change the location of measurement for floodplain setbacks in Bylaw Nos. 650, 800, 825 and 2000 from the natural boundary of Shuswap Lake to the 348.3 m GSC datum and edit the list of exemptions for structures that are not required to meet the floodplain setback and flood construction level in all of the bylaws so that the regulations are consistent for all areas. General housekeeping amendments are also proposed for the floodplain management sections of these bylaws.

Staff have amended the bylaws to include additional exemptions from the floodplain setbacks. Staff are proposing to exempt detached accessory buildings that are not used for human habitation, electrical or mechanical equipment, stairways not connected to other structures, and storage of goods not damageable by floodwater.

Staff are also proposing the addition of regulations for subdivision of panhandle lots to the bylaw amendments.

The Board gave Bylaws No. BL 825-34, BL 800-26, BL 650-11, BL 2064, and BL 701-83 first readings at the March 17, 2016 regular meeting, and directed staff to utilize the simple consultation process. No development notice was required to be posted in accordance with Development Services Procedures Bylaw No. 4001. Staff has referred the bylaw to affected Ministries, agencies and First Nations and comments received have been summarised in this report. It is now appropriate for the Board to consider second readings, as amended, and to delegate Public Hearings.

VOTING:

Unweighted
Corporate ☐

LGA Part 14 ☒
(Unweighted)

Weighted
Corporate ☐

Stakeholder ☐
(Weighted)

BACKGROUND:

Section 524 of the Local Government Act allows the CSRD to designate floodplains by bylaw. Such bylaws allow the CSRD to specify the flood level for waterbodies, which regulates the flood construction levels to be met for new construction adjacent to waterbodies, and the setbacks required from the waterbodies. The Province allows the CSRD to consider a number of factors to establish these flood construction levels and floodplain setbacks, as follows;

- (a) different areas of a flood plain;
- (b) different zones;
- (c) different uses within a zone or an area of a flood plain;
- (d) different types of geological or hydrological features;
- (e) different standards of works and services;
- (f) different siting circumstances;
- (g) different types of buildings or other structures and different types of machinery, equipment or goods within them;
- (h) different uses within a building or other structure

There are currently five separate zoning bylaws regulating land use surrounding Shuswap Lake. All of these bylaws designate floodplains for Shuswap Lake and Bylaw No. 2000 for Mara Lake. South Shuswap Zoning Bylaw No. 701 requires that floodplain setbacks be measured from the 348.3 m contour, which is the mean annual high water mark for Shuswap Lake established by the Ministry of Environment (MoE). The remaining four bylaws require that floodplain setbacks for Shuswap Lake be measured from the natural boundary of the lake. This bylaw amendment proposes to amend Anglemont Zoning Bylaw No. 650, Magna Bay Zoning Bylaw No. 800, Scotch Creek Zoning Bylaw No. 825 and Rural Sicamous Land Use Bylaw No. 2000 to create consistency in how setbacks are measured across all areas of Shuswap Lake, i.e.: from the mean annual high water mark of 348.3m GSC Datum.

While consistency is the goal, it is also difficult to justify requiring developers and landowners in the North Shuswap and Rural Sicamous areas to hire a BC Land Surveyor to establish the natural boundary of Shuswap or Mara Lake in order to apply the floodplain specifications. Whereas a developer or land owner in the South Shuswap can hire a survey technician to find a contour and measure floodplain specifications from the contour.

Additionally, over time, the exact location of the natural boundary can vary as natural shoreline processes occur. In a significant numbers of cases, staff has noted that natural boundaries established by surveyor for legal purposes no longer reflects the current natural boundary, as re-development of lots occurs, and development along the lake front alters the shorelines. Use of an elevation to measure floodplain specifications from eliminates any variability. Should the mean annual high water mark change, as established by the MoE, then a simple amendment to the bylaw can adjust for the new contour level, creating greater flexibility.

Within the various zoning bylaws the regulations differ with regard to which types of structures may be exempted from meeting the required floodplain setback. With this in mind, staff have added some additional items to be considered for exemption. Staff are proposing amendments to create consistency between all of the bylaw areas. The proposed amendments will also address some minor housekeeping issues within the floodplain specifications of the various bylaws.

In addition to the proposed amendments to the floodplain specifications, staff have included amendments to these zoning bylaws to establish a set of regulations for subdivision of panhandle lots. Panhandle lots are lots created by using a narrow neck of land between the main body of the lot and the fronting highway. These bylaws all lack such regulations and since the Approving Authority does not have regulations, have resulted in approval of subdivisions which are extremely irregular.

POLICY:

Staff presented applicable floodplain regulations from each Zoning Bylaw proposed to be amended in the report previously viewed by the Board, at the March 17, 2016 regular meeting.

There are no current regulations included in any of the Bylaws proposed to be amended that regulate panhandle lots. Visual clearance regulations at intersections are only currently within South Shuswap Zoning Bylaw No. 701.

FINANCIAL:

This bylaw amendment is not the result of bylaw enforcement action. There are no financial implications associated with this bylaw amendment.

KEY ISSUES/CONCEPTS:Measurement of Flood Construction Level and Floodplain Setback

Staff are proposing to amend Bylaw No. 650, 800, 825, and 2000 whereby the floodplain setback and flood construction level would be required to be measured from the mean annual high water mark of Shuswap Lake rather than the natural boundary. The mean annual high water mark for Shuswap Lake is defined as 348.3 m Geodetic Survey of Canada Datum (GSC Datum) which is a contour line that runs around the perimeter of Shuswap Lake. Staff are also proposing to amend Bylaw No. 2000 to include floodplain specifications to be measured from the 348.4 m GSC Datum contour for Mara Lake.

'Natural boundary' is defined as: "*the visible high water mark of any lake, river, stream or other body of water where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the body of water a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself*". The only persons able to determine the location of the Natural Boundary are BC Land Surveyors (BCLS). However, this definition is open to interpretation and may mean that different surveyors could come up with different locations for natural boundary. Also, since the location is subject to natural processes, it is highly variable.

In contrast, a geodetic elevation is a discreet value and is consistent via survey. This makes it clear for a surveyor, or a survey technician as to how to establish the correct floodplain setback and have consistency for such setbacks from one property to another. It also gives homeowners and developers flexibility in who they hire to illustrate compliance with the floodplain setback requirement. A BCLS is licensed in the Province, by the Surveyors General Office to create and re-survey legal parcels, and a survey technician is only able to provide building location certificates.

Owners/developers will still have their choice who they hire, but will have greater flexibility in the choice depending on which is available, or provides the better price to do the work.

Currently, South Shuswap Zoning Bylaw No. 701 is the only bylaw in the CSRD that requires that floodplain setbacks be measured from the mean annual high water mark (HWM), however, from a practical perspective it appears that most surveyors are defaulting to the 348.3 m (or 348.4 m in the case of Mara Lake) contour when preparing surveys in other areas as well. In a letter to the CSRD dated August 12, 2009, Fisheries and Oceans Canada (DFO) advised that the mean annual high water marks for Shuswap Lake and Mara Lake being used by both the Ministry of Environment and DFO were 348.3 m and 348.4 m GSC datum respectively. The letter notes that the use of these standardized elevations has reduced uncertainty caused by the previous, highly variable "natural boundary" standard. Staff recommend that all of the zoning bylaws for areas surrounding Shuswap and Mara Lakes be amended to reflect this practice in order to create a consistent and level playing field for all waterfront property owners on these lakes.

Exemptions from Flood Construction Level and Floodplain Setback Requirements

The types of structures that are listed in the exemptions from flood construction level requirements are fairly consistent across all of the bylaws, but there are some differences in wording as to what types of structures are exempt from the floodplain setback requirements.

For example, works constructed to stabilize the shoreline of a waterbody or the banks of a watercourse are exempted under Bylaw No. 800, 825 and 2000, but are not exempted under Bylaws 650 and 701. This means that property owners in Anglemont and the South Shuswap wishing to construct flood proofing works to protect their property from flooding must apply for a Floodplain Exemption and have a report completed by a Geotechnical Engineer prior to proceeding with construction, while property owners in Magna Bay, Scotch Creek, and Rural Sicamous do not need to make this type of application.

Further, on-loading and off-loading facilities associated with water-oriented industry and portable sawmills are exempted under Bylaw No. 701 but are not exempt under any of the other bylaws. Roof overhangs and cantilevered decks where no supporting structural components are located within the setback area, and ground level patios are not currently exempted in any of the bylaws and at the present time would trigger the need for a floodplain exemption application although they would typically not either be subject to damage from inundation or be compromised structurally themselves by the erosive effects and wave action of flooding.

Similarly, staff are also proposing amendments at second reading to exempt the following from floodplain setbacks:

- Detached accessory buildings or structures that do not include human habitation;
- Exterior stairway not forming part of a building or attached in any way to another structure, provided it does not extend below the parcel boundary, or the natural boundary
- Electrical or mechanical equipment; and,
- Storage of goods not subject to damage from floodwaters.

Some of the bylaws currently exempt carports and garages that are attached to a principal building. The proposed changes would allow detached accessory structures like these, as well as storage sheds, provided there is no habitation within these structures. Electrical or mechanical equipment, like lighting, pumps and lift stations, would also be exempt.

Staff are proposing to include these in the list of exemptions and amend all of the bylaws covering lands abutting Shuswap Lake and Mara Lake so that the list of exemptions from both setbacks and flood construction levels is consistently measured across all bylaw areas.

Flood Proofing Works and Retaining Structures

Bylaw No. 701 currently makes a distinction between Retaining Structures and Landscape Retaining Structures. The distinction was made to clear up some setback interpretation issues. Retaining structures are subject to zone setbacks except when they are physically and structurally connected to the principal building and landscape retaining structures are exempted. Landscape retaining structures are defined as a particular type of retaining structure which is under 1.2 m in height. The chief difference is that the retaining structure requires structural engineering under the BC Building Code while the landscape retaining structure does not.

Homeowners currently use both types of these structures to provide flood proofing for their properties. These types of structures are particularly useful where the homeowner is trying to create more yard space on sloped properties. However, as a structure designed to retain earth, they are subject to the effects of earth pressure behind them as they tend to be more vertical facing. This

means that they are more susceptible to toppling due to soil erosion at their base and the effects of wave action at their toe. Water pressure from groundwater behind the face of the wall is also a factor in toppling.

Other methods of flood proofing are also used such as reinforced earth or rip-rapping placed over an earthen bank to protect the natural earthen slopes from erosive damage. These types of flood proofing works are less structural in nature than retaining structures, and do not usually benefit the homeowner in creating additional level yard areas, except for retaining existing yard areas. Also, armoring is not typically subject to water pressure from groundwater behind the structure. So there is rationale to exempt such flood proofing methods from the floodplain specifications.

In order to foster an exemption for specific flood proofing structures, a new definition will need to be added to Bylaw No. 701, as follows;

"FLOOD PROOFING PROTECTION means the installation of improvements provided they are upland of the current natural boundary, that are specifically designed to prevent damage to existing earthen banks caused by erosive effects of water and wave action by armouring the soil surface through the use of geotextile materials and some combination of rip-rap or other protective surfacing materials. *Retaining Structures* and *Landscape Retaining Structures* are not included under this definition."

Additionally the definitions for *flood proofing protection*, *retaining structures*, and *landscaping retaining structures* are being added to all bylaws, other than Bylaw No. 701 for consistency of application. Since, flood-proofing protection is not considered a structure, they are not subject to zone setbacks in any of the bylaws.

Definition of Watercourse

It is important to include a definition for "watercourse" to ensure clarity in terms of what the floodplain specifications apply to and what they do not apply to, i.e.: a ditch vs. a creek. There are some minor differences between the various bylaws regarding the definition of "watercourse" as noted in the policy section above. It is proposed to amend each of the bylaws to include the following definition in order to foster a clear and consistent approach between all bylaw areas. This would include deleting the definition of "water body" in Bylaws No. 800 and No. 2000.

"WATERCOURSE is a natural depression with banks and a bed of 0.6 m (1.97 ft.) or more below the surrounding land and 1 of the following, a) serving to give direction to a current of water for at least 6 months of the year, b) having a drainage area of 2 km² (494 ac.) or more, c) an area designated as a watercourse by the Province, and includes lake, pond, river, stream, creek, spring, ravine, swamp, and wetland."

Because of the impact of the Province's Riparian Area Regulation, the duty to determine if a given water feature is a waterbody, would be determined by a Qualified Environmental Professional (QEP).

Setback Exceptions

With the proposed addition of definitions for Retaining Structure, Landscape Retaining Structure, and Flood Proofing Protection, the siting exceptions provided in the General Regulations sections in Bylaws No. 650, No. 800, No. 825, and No. 2000 will also need to be amended.

HWM vs. Natural Boundary vs. Property Boundary

As indicated earlier, the goal of the proposed bylaw amendments is to provide a consistent measurement for the HWM, and to measure the floodplain setback from this discreet measurement, as opposed to the Natural Boundary. Establishment of property boundaries through the subdivision process relies on the BCLS to establish a current natural boundary. Once this has been established it becomes the mark from which compliance with setbacks is determined. Since natural boundary is something that can, and often does change over time due to natural processes, it can be difficult to determine if an intended flood proofing work is actually within the confines of the legal parcel. Unfortunately, it is critical to do so, because the CSRD does not have jurisdiction to approve improvements below the natural boundary, which can be variable. For this reason the exemption proposed must be subject to the works being constructed upland of the natural boundary.

Vision Clearance at Intersections

The definition for Sight Triangle and General Regulations for Sight Triangles are proposed to be added to the other bylaws for consistency. This will enhance safety at intersections by ensuring that sight obstructions, such as trees and bushes, retaining walls and fences are not placed in these areas.

Panhandle Lots and Subdivision

Currently the only Provincial Regulation describing standards for panhandle subdivision proposals is under the Local Services Act, Subdivision Regulations (BC Reg. 262/70). The following regulations can act as a guideline when the Provincial Approving Officer is reviewing an application for subdivision:

Panhandle lots

6.09

Without limiting the generalities of section 4.01 and notwithstanding the requirements of section 6.08, where a parcel is a panhandle lot capable of further subdivision, the approving officer shall be satisfied that the panhandle is adequate to provide a future highway.

Panhandle not part of minimum parcel area

6.10

Notwithstanding the requirements of sections 6.01 to 6.05, inclusive, where a parcel is a panhandle lot, the access strip or panhandle shall not be calculated as part of the minimum parcel area.

However, the regulations do not apply to subdivisions occurring where the Local Government has a Subdivision Servicing Bylaw. There is an exemption which applies to a Subdivision Servicing Bylaw that advises that where such a bylaw does not regulate a matter then the Regulation applies. However, in the case of panhandle lots, the ability to regulate the shape, dimensions and area, and minimum parcel sizes can only be enacted by a Regional District under a Zoning Bylaw and not a Subdivision Servicing Bylaw.

The proposed amendments will add these two areas of established regulation into the bylaws to ensure that they are regulated. Additionally, other matters, including the following are proposed to be addressed:

- Minimum width of 10.0 m for the panhandle driveway
- restrictions on building within the panhandle driveway;
- configuration of the panhandle; and,
- the proximity of occurrence of such lots (no more than 2 panhandle driveways adjacent to each other.

Staff are proposing to add these regulations through a combination of definitions and general regulations, together with a diagram which illustrates the intent.

Minor Housekeeping

Staff are also proposing additional minor amendments to ensure consistency between the floodplain regulations in all of the Shuswap area zoning bylaws, e.g. amend language to 'gender neutral' and tidy up the formatting.

SUMMARY:

Staff are recommending that the Board consider the bylaws, as amended for second readings, and delegate public hearings.

IMPLEMENTATION:

Consultation Process

Considering the minor and technical nature of these amendments, as per CSRD Policy No. P-18 regarding Consultation Processes-Bylaws, staff recommended the simple consultation process. Property owners will first become aware of these bylaw amendments when a notice is placed in the newspapers regarding the public hearings.

COMMUNICATIONS:

If the Board supports second readings, as amended, of the bylaws, and delegates a Public Hearing in accordance with the staff recommendation for one all-encompassing joint Public Hearing for all bylaw amendments, staff will proceed with advertising the Public Hearings in Electoral Areas C, E, and F, as set out in the Local Government Act.

Referral agencies have provided their comments, they are attached as Appendix A to this report.

DESIRED OUTCOMES:

That the Board endorse staff recommendations.

BOARD'S OPTIONS:

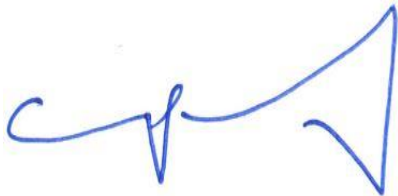
1. *Endorse the recommendations. Bylaw No. 701-83, Bylaw No. 825-34, Bylaw No. 800-26, Bylaw 650-11, and Bylaw 2064 will be given second readings, as amended and a single Public Hearing for all bylaws will be delegated.*

2. *Decline second readings, as amended, Bylaw No. 701-83, Bylaw No. 825-34, Bylaw No. 800-26, Bylaw 650-11 and Bylaw 2064 will be defeated. The current measurement standards for floodplain setbacks will continue to apply.*
3. *Defer.*
4. *Any other action deemed appropriate by the Board.*

Report Approval Details

Document Title:	2017-06-15_Board_DS_FloodplainAmendments_CSRD.docx
Attachments:	<ul style="list-style-type: none">- APPENDIX-A-AgencyReferralResponses.docx- Bylaw 650-11 Second.docx- Bylaw 800-26 - Second.docx- Bylaw 825-34 - Second.docx- Bylaw 2064 Second.docx- Bylaw 701-83 Second.docx
Final Approval Date:	Jun 5, 2017

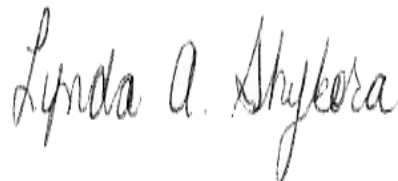
This report and all of its attachments were approved and signed as outlined below:



Corey Paiement - May 24, 2017 - 3:16 PM



Gerald Christie - May 30, 2017 - 9:11 AM



Lynda Shykora - May 30, 2017 - 9:57 AM



Charles Hamilton - Jun 5, 2017 - 11:06 AM