

Toth and Associates Environmental Services

6821 Harwood Drive, Lantzville, B.C. V0R 2H0

Tel: (250) 390-7602

E-mail: stoth@shaw.ca

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Gordon Smith,

Via e-mail: gordon@cowichanwoodwork.com

Re: Assessment of a watercourse on 1441 Fisher Road (PID# 006-831-231).

1.0 INTRODUCTION

Toth and Associates Environmental Services conducted an assessment of a watercourse on 1441 Fisher Road on June 10, 2022. The 2.07 acre (0.83 ha) subject property is within Electoral Area C of the Cowichan Valley Regional District (CVRD) with the land use designated as “Village Residential” and zoning of Village Residential 3 (R-3). Development Permit Areas designated on the subject property include Riparian Protection (DPA 1), Aquifer Protection (DPA 4), and Wildfire Hazard (DPA 5).

The CVRD’s Webmap indicates a stream running northwest to southeast across the subject property and a statutory right-of-way (SRW) running on this same approximate alignment (Figure 1).

A review of the DPA information in Schedule C of the CVRD’s new Harmonized Official Community Plan (HOCP) Bylaw No. 4270 indicates that the area included in the Riparian Protection DPA is the “riparian assessment area” as defined by the *Riparian Areas Protection Regulation* under the *Riparian Areas Protection Act*.

1.1 Background Information Review

A review of recent air photos suggested that the watercourse no longer exists upstream and downstream of the subject property. The air photos also indicated that the CVRD’s mapped alignment of the watercourse has the watercourse running through houses, yards and roads. Review of historic air photos from 1963 – 1998 could not identify a watercourse in the area northwest of the subject property.

A review of the BC Great Blue Heron Management Team Atlas and Wildlife Tree Stewardship Atlas did not indicate the presence of any great blue heron or bald eagle nest sites in the vicinity of the subject property. A review of the BC Conservation Data Centre’s CDCIMap did not identify any known occurrences of rare species on or adjacent to the subject property.

The Statutory Right-of-Way documents indicate that SRW ED133642 was granted to the Ministry of Transportation & Highways in November 1990 for the unrestricted access to use the SRW area for the purpose of constructing, operating and maintaining a storm sewer system for the passage and carriage of drainage water.

1.2 Field Survey

The subject property consists of a largely forested parcel with an older single family dwelling, detached carport / shed, yard, fruit and nut trees and driveway in the southern portion of the property

(Photographs 1 & 2). Forest cover consists of mature western redcedar, with occasional red alder and western hemlock (Photographs 3 & 4). The understory is comprised of lady fern, sword fern, skunk cabbage, three-leaved foamflower, horsetail, Pacific water-parsley, salmonberry, water starwort, vanilla leaf, bracken fern, trailing blackberry, broad-leaved starflower, dull Oregon-grape, and red elderberry. Invasive species include herb-robert, spurge laurel, Himalayan blackberry and creeping buttercup.

Tree failure was noted in a couple of locations and appeared to be related to saturated root zones / storm events (Photograph 5). Overall the forested area consists of a relatively open setting of mature western redcedars with lush seasonal herb layer growth.

Topographically the property rises on the north and south sides from the low point of the watercourse / SRW, to the undeveloped grade of the Fairfield right-of-way adjacent to the north side of the property and to the relatively level area of the existing yard in the south end of the property.

The watercourse through the subject property appears to have been channelized historically. The watercourse discharges onto the property from a culvert at the intersection of Watson Avenue and Fairfield Road. There was no evidence of a surface watercourse upstream of the point of discharge onto the subject property.

The watercourse through the property consists of an approximately 1 m wide stream with low banks and muck substrates (Photographs 6 & 7). The winter channel width averages approximately 2.5 m. Channel gradient is approximately 1%. The channel is relatively uniform in width and format through the property, with no pools, riffles or habitat complexity. No fish, amphibians or other aquatic life were observed in the watercourse. An old well is located in the stream channel (Photograph 8).

Wildlife noted during the survey was limited to Pacific slope flycatcher, American robin, chestnut-backed chickadee and Swainson's thrush. Very little evidence of wildlife use was noted on the property.

3.0 DISCUSSION

The watercourse through the subject property does not support fish. The watercourse downstream of Fisher Road appears to be contained within a storm drain system for approximately 193 m before discharging to a wetland area in Watson Park. As the CVRD does not provide storm sewer network mapping, the alignment shown for the storm drain downstream of Fisher Road through the Twin Cedars development is approximate and was based on manhole and catch-basin locations.

The provincial RAPR applies to watercourses that contain fish, or that flow by surface flow to downstream fish bearing waters. As the watercourse through the subject property does not contain fish and does not connect by surface flow to downstream fish bearing waters, the RAPR does not apply to it.

Schedule C of the HOCP indicates that the area included in the Riparian Protection DPA is the "riparian assessment area" as defined by the *Riparian Areas Protection Regulation* under the *Riparian Areas Protection Act*. As the RAPR does not apply to the watercourse through the subject property, there is no riparian assessment area and it is our interpretation that there would also not be a CVRD Riparian Protection DPA.

The CVRD South Cowichan Zoning Bylaw No. 3520, 2012 defines a watercourse as “any natural drainage course or source of water, whether usually containing water or not, and includes any lake, river, creek, spring, wetland, the sea or source of ground water and includes portions that may be contained within a conduit or culvert”. We suspect based on the observed format of the watercourse that the watercourse has been channelized historically. The lack of channel complexity, uniform width / bank height and presence of a well in the channel all appear to support a history of modifications. The surrounding topography appears to indicate that this watercourse was once a natural drainage course, however we could find no evidence of a watercourse upstream of the subject property in the air photo record. Based on the CVRD’s mapping the streamline has not been updated since development of the Twin Cedars development was completed.

Section 5.4 of the Zoning Bylaw indicates that:

1. Notwithstanding any other provision of this Bylaw, and except where a larger setback may be specified in an Assessment Report prepared under the Riparian Areas Regulation, no building or structure shall be located:
 - a) within 30 metres of the natural boundary of the Koksilah River;
 - b) within 15 metres of the natural boundary of any watercourse, lake or the sea;

And further, all buildings and structures shall be elevated at least:

- a) 3 metres above the natural boundary of the Koksilah River;
- b) 1.5 metres above the natural boundary of any watercourse, lake or the sea.

The remaining open channel length of this watercourse measures approximately 112 m through the subject property. If this property had been developed at the same time as the upstream and downstream developments it is very likely that this remaining channel section would have also been placed in a storm drain.

Figure 1. Overview of existing and mapped streamlines



4.0 CONCLUSION & RECOMMENDATIONS

As the RAPR does not apply to the watercourse, it is our interpretation that submission of a RAPR report to the province will not be required for development of the subject property. As the RAPR does not apply, it is also our interpretation that there is no Riparian Protection DPA.

The RAPR was implemented in 2005 and the Twin Cedars development started in approximately 2006. The fact that the developer was allowed to place this watercourse in a storm drain suggests that the province did not consider it to be a natural watercourse under the provincial *Water Sustainability Act* (WSA). Whether or not the province would allow the remaining section of open channel to be placed in a storm drain now would appear to be the decision of the Ministry of Transportation and Infrastructure (the Grantee of the SRW).

In consideration of the relatively low habitat values associated with the remaining length of open channel through the subject property and if placing the watercourse in a storm drain is not an option, we would consider a variance application for a reduction in the watercourse setbacks required under the CVRD's Zoning Bylaw appropriate. As a comparison to the CVRD's 15 m watercourse setbacks, under the RAPR non fish bearing ditches receive 2 m setbacks and modified natural watercourses <3.3m average channel width receive 10 m setbacks.

As indicated previously, the majority of the property is forested with mature trees. Those trees in close proximity to the watercourse are located in saturated soils and will be prone to windthrow if the remainder of the property is cleared. Retention of mature trees within the watercourse setbacks would likely lead to significant windthrow and we would recommend that these trees be removed and replaced with seedling native trees.

During development, all reasonable attempts should be made to eradicate invasive plant species on the subject property. Gloves should be worn when handling spurge laurel as it is caustic.

Please contact us if you require additional information.

Sincerely,



Steve Toth, AScT, R.P.Bio.

Toth and Associates Environmental Services





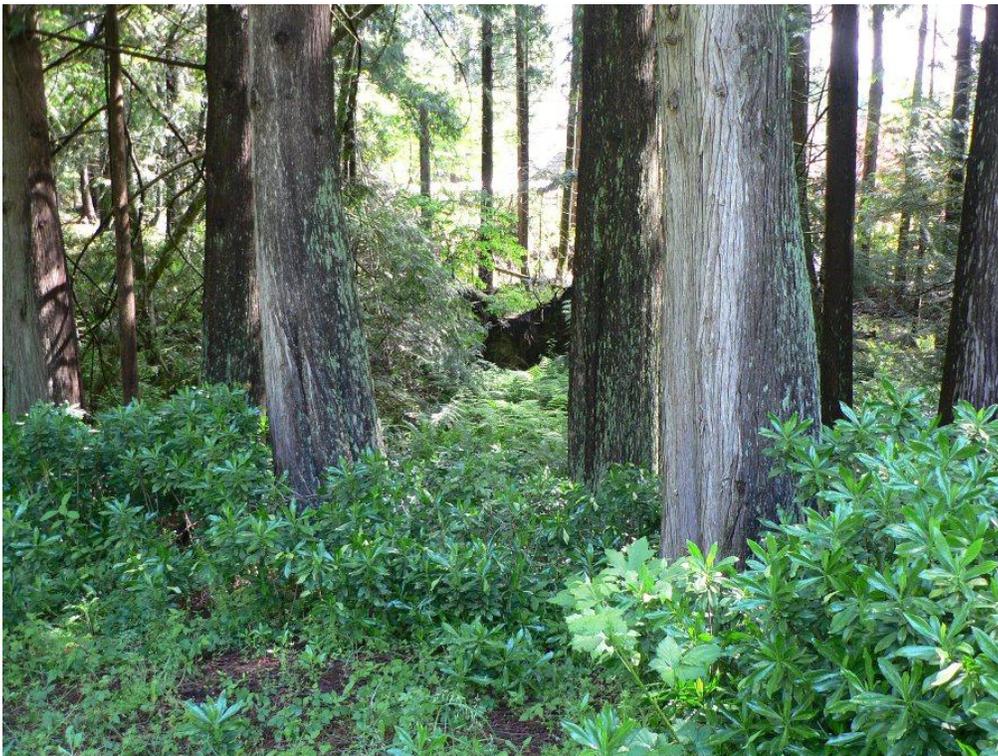
Photograph 1. June 10, 2022. View from driveway to existing single family dwelling.



Photograph 2. View from driveway to existing detached shed and carport.



Photograph 3. View of typical mature western redcedar dominated forest cover on the property.



Photograph 4. View of mature western redcedars with spurge laurel.



Photograph 5. View of partially fallen large diameter western hemlock on the property.



Photograph 6. View upstream on the watercourse.



Photograph 7. View downstream on the watercourse.



Photograph 8. View of old well in the stream channel.