

Wetland Assessment for George Cook on DL7127

Summary

While the subject property is entirely within a mapped wetland in the Freshwater Atlas Wetlands layer, the soil profile and vegetation are indicative of an upland ecosystem, classified by the writer as an SBSdh-05(04) site series using the Biogeoclimatic Ecological Classification system. The site that the owner has chosen is on an elevated portion of the property, approximately 2m above the present water table as indicated on an adjacent excavation 30m north of the proposed building site.

Consultant Qualifications – John B. McGuire RFT #1912, ABCFP

The author is a Registered Forest Technologist with 30 years experience classifying areas using the Biogeoclimatic Ecosystem Classification (BEC) system while doing Silviculture Precriptions, site plans, and site series identification for proposed harvest areas and post-harvest silviculture surveys. Part of the process is identifying and protecting riparian values on the land.

I've also lived and worked as a forestry consultant in the Robson Valley since 1992, and province-wide since the mid-80's.

Property Description

Block A, DL7127, 7128. This property is a 66m by 500m strip adjacent and west of Highway 5, located some 0.6km south of Valemount. The property is flat with approximately 2m of relief and covers approximately 3.3 hectares.

History

While the subject property was partially within a wetland adjacent to what was then (prior to 1910) known as Cranberry Lake, the drainage diversion during the construction of the CN rail line some 100 years ago diverted the water source for the lake into the Canoe drainage. Water levels receded over the years and the construction of Highway 5 which bisects the former lakebed further lowered water levels.

In the late 1990's a series of drainage ditches and artificial islands were constructed to enhance waterfowl habitat in the eastern portion of the identified polygon, east of Highway 5. This further served to lower the water table west of the highway. Approximately 3 years ago the owner of the adjacent properties to the north built a drainage ditch along the west edge of the highway then west along the south boundary of BK F OF SE1/4 DL 7354. As of this writing in 2021, the hayfield on this property covers approximately 15ha of DL7354. The photo on the right shows the drainage ditch continuing to the west.



While the mapped Wetland polygon straddles it, Highway 5 is the western boundary of the wetland, where the terrain is covered by seasonally flooded wetlands populated by the normal marshy vegetation community. The photos below show the view from Hwy. 5 to the east on the left and to the west on the right.



Site Assessment

The subject property is covered by a Lodgepole Pine stand ranging from 20-40-yrs-old immediately east of the cleared area which is proposed as the site of a 40' by 80' pole barn built on either 4-foot concrete footings or screw piles. The timber on this clearing was a mature Lodgepole Pine stand in the 100-120 year-old range. Ground cover is dominated by Red-stemmed Feather moss (*Pleurozium Schreberi*) and Twinflower (*Linnaea borealis*), while the shrub layer, where it exists, is dominated by Labrador Tea (*Ledum groenlandicum*). No hydrophilic vegetation is in evidence on or near the timbered area.



Clearing looking east

Across Pond to Clearing looking south



Upland Plant community in clearing

Looking west from clearing.

Soils

Soils are coarse sandy loams and loamy sands, with historic evidence of gleying in some areas. However, the herb, shrub, and tree layers indicate that the soils are well-drained enough to support and mature Lodgepole Pine (PI) stand in the immediate area, and 20-50 year-old Aspen and PI in the surrounding area. The only portion of the property with imperfect drainage is the eastern edge adjacent to the highway.



2 Soil pit showing historic mottling.



Shovel indicating pit location.

Conclusion

While the mapping shows the area as part of a mapped wetland, drainage improvements and other interventions over the last century have removed the riparian and wetland values from the subject property. In my opinion, the proposed construction will not reduce wetland/riparian values on the immediate and surrounding area.

Submitted by:



John B. McGuire, RFT 1912

Date: May 17, 2021