

Planet Consulting Group Inc. is an established community planning and land development consulting firm, based in Western Canada. We specialize in strategic planning and engineering, project team management, comprehensive development programs, highest and best land use assessments, and municipal development approvals. Our services are retained by municipal property departments and government agencies on land acquisition and disposal matters. We also manage land use and development approvals for private sector clients on daily basis.

Planet Group's expertise includes management of fisheries and wildlife, and riparian vegetation restoration. The following brief reviews five cases studies to demonstrate how the federal *Fisheries Act* (R.S.C., 1985, c. F-14), the corresponding *Land Development Guidelines* (LDG), and the provincial *Fish Protection Act* (S.B.C., 1997, c. 21), through the new *Streamside Protection Regulation* (SPR), impact land use. In particular, we examine how required stream and top of bank setbacks influence land use viability. Note that the new provincial Liberal government is currently reviewing the *Streamside Protection Regulation*, and have placed the legislation "on-hold."

DEFINITIONS

We begin by reviewing the definitions of "stream" and top of bank," as defined in the *Streamside Protection Regulation*:

stream

a watercourse or source of water supply, whether usually containing water or not, a pond, a lake, river, creek, brook, ditch and a spring or wetland that is integral to a stream and provides fish habitat; and

top of bank

- (a) the point closest to the boundary of the active floodplain of a stream where a break in the slope of the land occurs such that the grade beyond the break is flatter than 3:1 at any point for a minimum distance of 15 metres measured perpendicularly from the break, and
- (b) for a flood plain area not contained in a ravine, the edge of the active floodplain of a stream where the slope of the land beyond the edge is flatter than 3:1 at any point for a minimum distance of 15 metres measured perpendicularly from the edge.

The width of riparian protection areas (setbacks) can range from 5 metres to 50 metres. The widths are determined by existing or potential vegetation conditions, which are detailed in the SPR and the LDG. Setbacks are typically established based on type of use and thru the local Environmental Review Committee (ERC). The ERC is attended by staff from the local government, the provincial Ministry of Water, Land and Air Protection (MWLAP), and the federal Department of Fisheries and Oceans.

A number of local governments have established stream classification maps to identify watercourse sensitivity. The four stream classifications identified in local government fisheries watercourse classification mapping are:

Class A: (Red)	Inhabited by salmonids year-round, of potentially inhabited year-round.
Class A(0): (Red-dashed)	Inhabited by salmonids primarily during the overwintering period or potentially inhabited during the overwintering period with access enhancement.
Class B: (Yellow)	Significant food/nutrient value; No fish present.
Class C: (Green)	Insignificant food/nutrient value; No fish present.

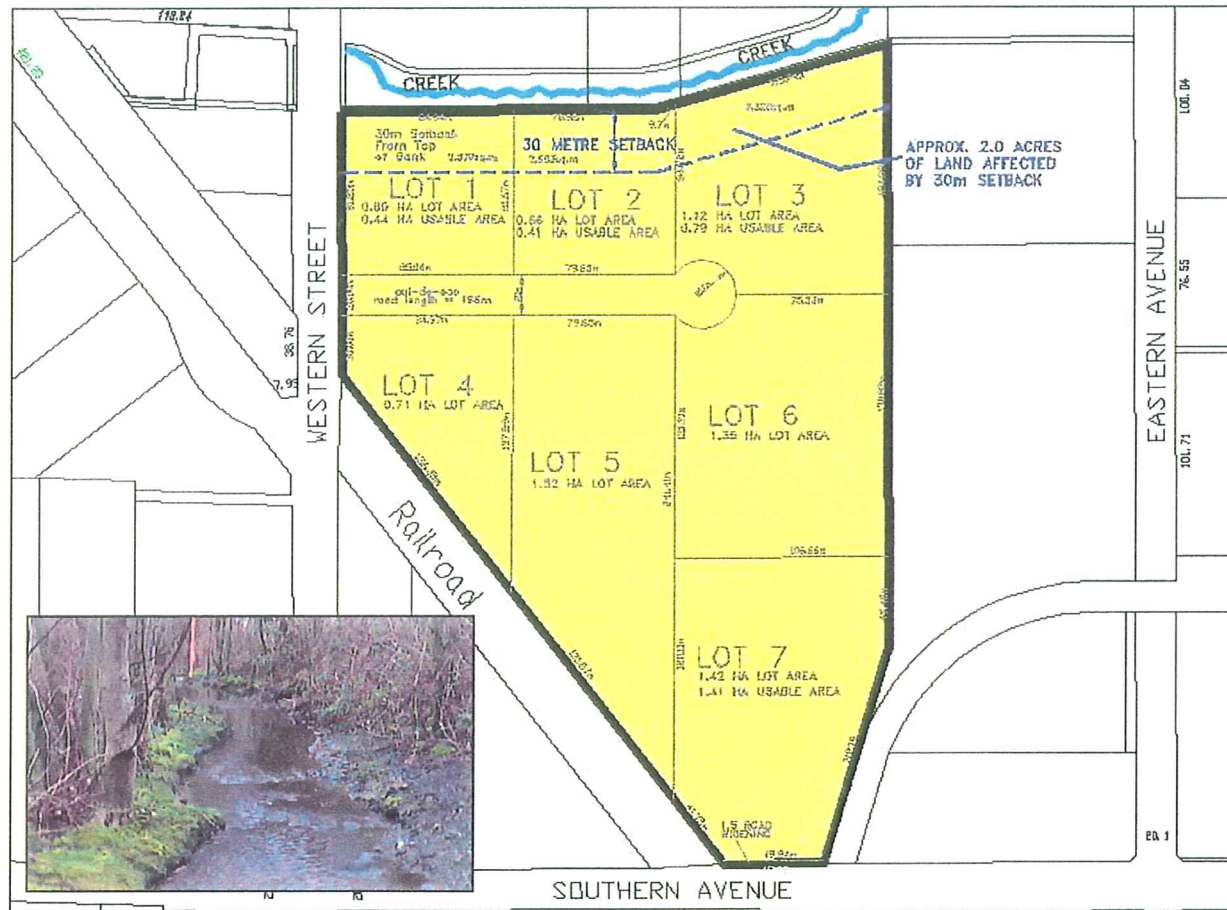
CASE STUDY 1

The first case involves a 7.89 hectares (19.49 acres) industrial property with an estimated value of \$990,000/ha (\$400,000/acre). The property was acquired over 20 years ago. A red-coded creek was relocated onto the subject property's northern boundary 10 years ago by the adjacent landowner with permission of then Ministry of Environment, Lands and Parks (see Figure 1). The landowner has applied now applied to subdivide the property.

The subdivision proposal was reviewed by the local ERC. Given the land use and riparian conditions, a minimum 30m top of bank setback was originally required. This would have eliminated approximately 0.6 ha (1.5 acres) along the property's northern boundary. It is noted that the adjacent development to the north has a restriction of only 3.0 metres.

A reduction of the standard setback was achieved by proposing in-stream and riparian enhancement works. The setback was reduced to an average of 20m,

Figure 1: Industrial Subdivision Adjacent to Relocated Creek

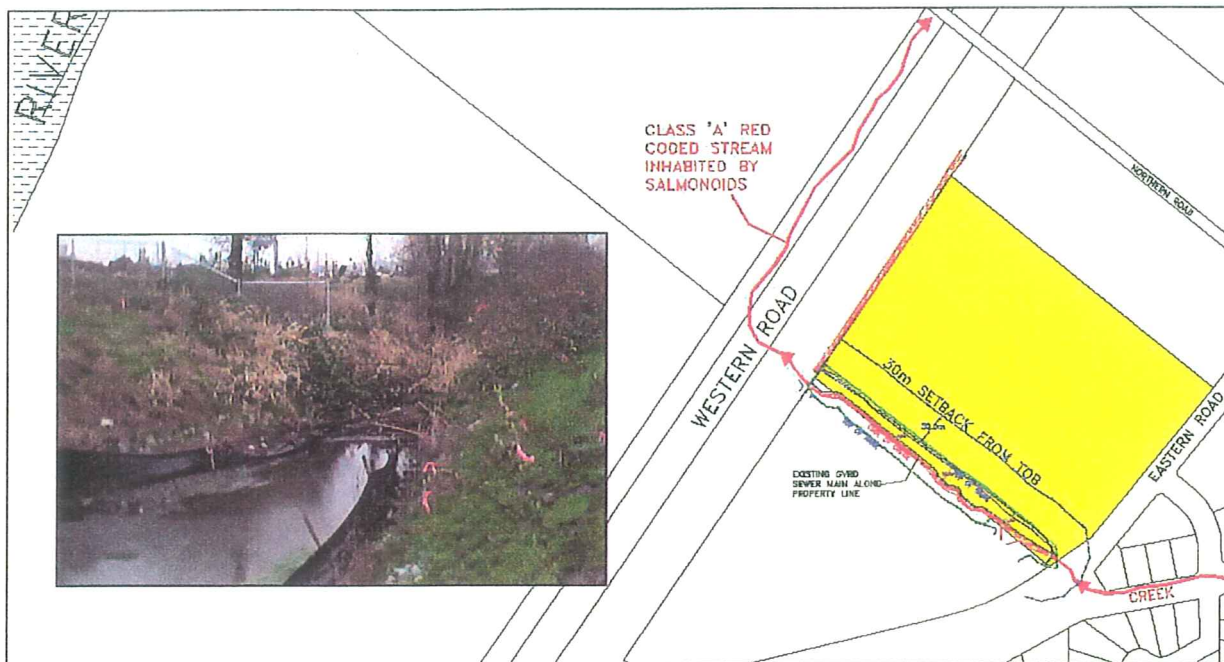


which translates to an additional ± 0.3 ha (0.75 acres) of developable/saleable land for the property owner. Enhancement costs totaled \$33,000.

CASE STUDY 2

The existing industrial property in this example does not require rezoning or subdivision. At the time of purchase, the current owner/user was aware that a 30m setback may be required from the red-coded watercourse (ditch), which parallels the southwestern boundary (see Figure 2). The anticipated impact was approximately 0.6 ha (1.5 acres) at an estimated overall land value of \$620,000/ha (\$250,000/acre).

Subsequent to its purchase, a topographic survey was conducted to confirm the creek's top of bank. The 30m riparian setback from the confirmed top of bank resulted in a loss of ± 1.05 ha (2.6 acres) of developable area, a 75%

Figure 2: Industrial Building Permit Application (Lot of Record)

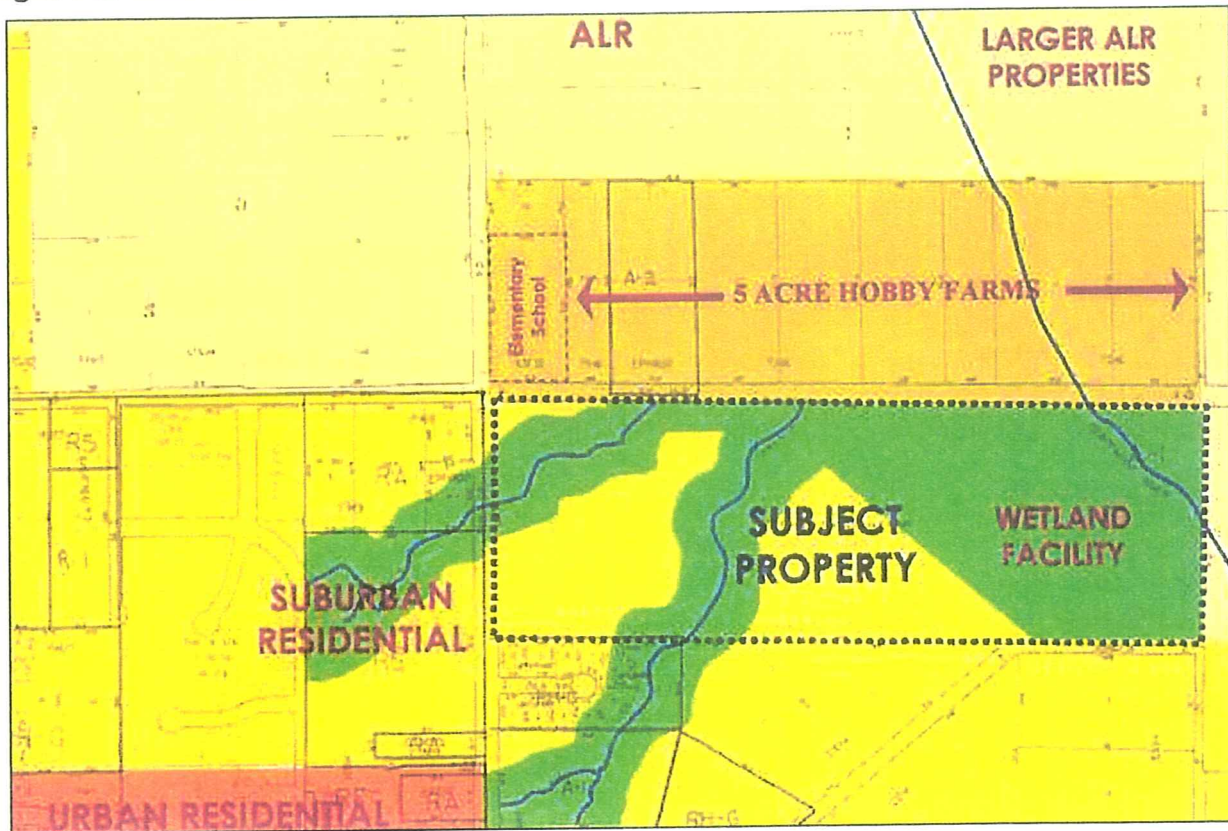
increase from initial estimates. In addition, a roadside ditch was identified with a potential setback area of ± 0.4 ha (1 acre). The possible area lost to riparian setback now totaled to approximately 1.46 ha (3.6 acres).

The potential ± 1.46 ha (3.6 acres) loss was reduced to approximately 0.85 ha (2.1 acres), a gain of ± 0.61 ha (1.5 acres) of saleable/usable land. This reduction was accomplished by removing an existing GVRD sewer access, improving in-stream habitat, revegetating approximately 0.45 ha (1.1 acres) of riparian area, and providing a $\pm 1,000$ m² (0.25 acre) biofiltration strip along the roadside ditch. The revegetation of the riparian area reduced the required 30m setback to an average of 19.5m.

CASE STUDY 3

The 50-acre property in this case study is impacted by 3 watercourses and a floodplain, thus impairing the site's maximum development potential (see Figure 3).

After four years of study and negotiations with all four levels of government, approximately 50% of the property was dedicated to the construction of a new wetland drainage facility, and another 15% was designated as park (compared to the minimum required 5%).

Figure 3: Residential Subdivision

The remaining lands yielded 52 single-family lots with an approved top of bank setback ranging from 10-15m along the native stream, compared to the standard SPR setback of 30m. The setback was achieved by providing a net setback gain, which included increased riparian areas adjacent to a constructed drainage channel.

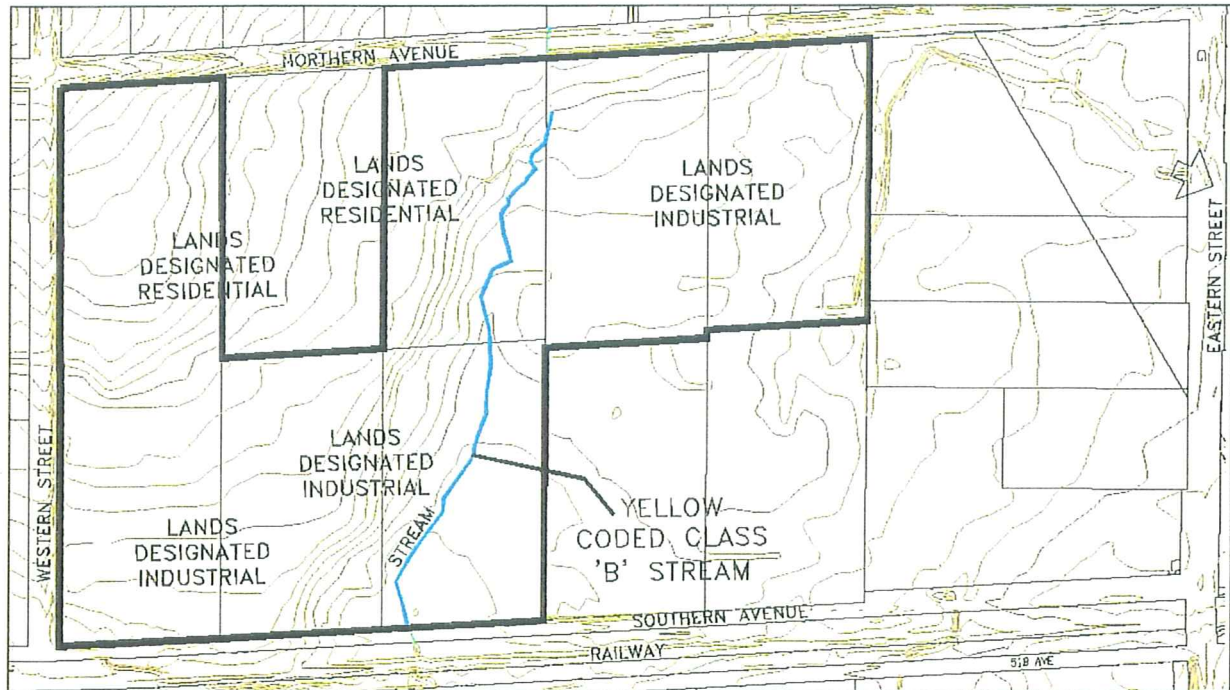
Approximately 8 lots would have been lost to the 30m setback, at a value of \$150,000 per lot.

CASE STUDY 4

The undeveloped lands in this scenario are divided by a small yellow-coded stream with designated residential uses to the west and industrial uses to the east (see Figure 4). Land values are estimated at \$740,000/ha (\$300,000/acre).

A standard industrial 30m setback from top of bank would eliminate up to 2.83 ha (7 acres) of developable land. Approval was obtained from MWLAP/DFO to relax the setback to 15m on both industrial and residential properties. This

Figure 4: Residential/Industrial Subdivision



relaxation reduced the affected area to ± 2.0 ha (5 acres), thus increasing the saleable value of the lands by \$1.5 million.

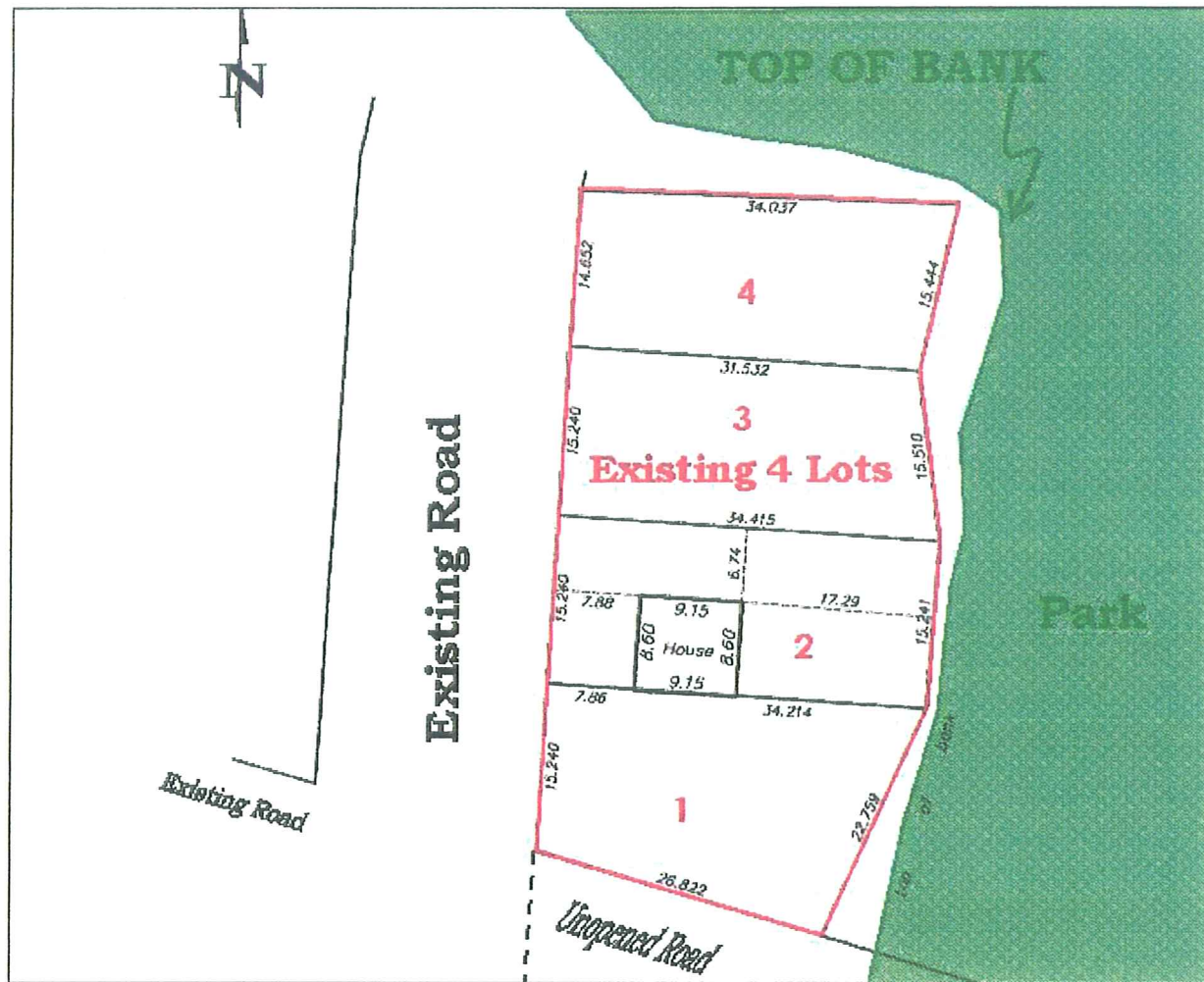
CASE STUDY 5

This example involves a property that consists of 4 lots of record. The property backs onto parkland containing a significant ravine and red-coded creek (see Figure 5). As neither a subdivision nor a rezoning is necessary, the development of the property would only require the improvement of existing road surfaces and municipal servicing connections to obtain building permits.

DFO/MWLAP have advised that a minimum 15m top of bank setback is required. This setback eliminates the development potential of 2 lots. While there is an opportunity for in-stream habitat compensation to relax the setback, this would come at the cost of the value of 1-2 lots, thereby nullifying any gains in developable area.

This Case is currently before the provincial Expropriation and Compensation Board.

Figure 5: Residential Building Permit Application (4 Lots of Record)



SUMMARY

Recent provincial legislation has made advances in improving and protecting streams and fish habitat. The price of protection rest with the current landowner and generally results in reducing usability and salability of lands.

Each case involving stream setbacks must be examined carefully as stream and riparian conditions vary considerably as circumstances dictate applicable setbacks. Thorough due diligence is very critical when considering property with or adjacent to stream(s). The risk of additional costs and/or the loss of developable area (increased setbacks) can vary significantly depending on land use and local conditions.