



# Toth and Associates Environmental Services

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### Re-vegetation plan for the 5.0m setback from top of ravine bank on PID# 004596374, Vancouver Avenue, Nanaimo

As a condition of issuance of a Development Permit (DP #000949) for construction of a new house on PID# 004596374 the City of Nanaimo has indicated that “a native re-vegetation plan of trees and shrub plantings is required within the 5.0m setback from top of bank in order to provide a wildlife buffer between the ravine and the house”.

In order to fulfill this requirement I offer the following re-vegetation plan for the 5.0m setback from top of ravine bank on the subject property. The 5.0m setback area is already vegetated with a mix of nursery variety small tree, shrub, and herb plantings contained within a rectangular courtyard area bordered by a cedar hedge, as well as along the slope fronting Vancouver Avenue. These existing plantings will be incorporated into the re-vegetation plan and augmented with native plant species. In order to allow more sunlight into the planting area the line of cedar hedging running along the top of ravine bank on the subject property will need to be removed. I would also recommend removal of the purple-leaf plum tree and the Leyland cypress (Figure 1).

There is no space available within the re-vegetation area for planting of full size native tree species, without the trees eventually shading out the rest of the re-vegetation area or becoming a hazard to the new house. There are several dwarf non-native tree species on site that over time will become substantial, but manageable small trees.

The proposed re-vegetation area is approximately 80m<sup>2</sup> in size. Existing nursery plants occupy approximately 50% of the re-vegetation area, leaving approximately 40 m<sup>2</sup> for re-vegetation with native species. At a planting density of 1 shrub per 1 square metre there is room for 40 plantings. Recommended plantings are indicated in Table 1, below and shown on Figure 2.

Table 1.

Common name	Scientific name	Mature height (m)	Best Growth conditions	Purchase Size	Quantity
Red elderberry *	<i>Sambucus racemosa</i>	to 6	m-w	1 gal.	2
Common snowberry *	<i>Symphoricarpos albus</i>	0.5-2	d-m	1 gal.	8
Dull Oregon grape*	<i>Mahonia nervosa</i>	0.5	d	1 gal.	6
Evergreen huckleberry*	<i>Vaccinium ovatum</i>	to 4	d-m	1 gal.	3
Indian plum*	<i>Oemlaria cerasiformis</i>	1.5-2.5	d-m	1 gal.	3
Red-flowering currant*	<i>Ribes sanguineum</i>	1-3	d-m	1 gal.	3
Saskatoon*	<i>Amelanchier alnifolia</i>	to 4	d-m	1 gal.	4
Tall Oregon-grape*	<i>Mahonia aquifolium</i>	0.5-1.5	d	1 gal.	8
Gummy gooseberry*	<i>Ribes lobbii</i>	0.5-1.5	d	1 gal.	3

d = dry, m = moist, w = wet, \* = fruit / berry producer

## Planting Criteria

- All plantings should be based on 1 shrub per 1 square metre density.
- All tree/shrub species should be of guaranteed nursery stock.
- The botanical name should be used when ordering stock to ensure that the desired native species is being purchased. Each specimen should be tagged with the botanical name and the tag should be left attached after planting.
- Stock planted during the fall (Sept - Oct) and spring (Mar - Apr) has the greatest likelihood of surviving. Additional advice on proper planting procedures should be obtained from the nursery supplying the stock (see [http://members.shaw.ca/nativeplants/streamside\\_home.html](http://members.shaw.ca/nativeplants/streamside_home.html)).
- A minimum of 50% of trees and shrubs planted should be fruit-bearing species.
- All invasive species within the re-vegetation area should be removed prior to planting.

## Maintenance

- Regular watering may be required during the first growing season until the plants are established.
- Planting on a given area being enhanced must be successful to an 80% take. If more than 20% die over one year, replanting is required.
- Most of the species listed do well (particularly red elderberry) with annual pruning during the dormant season.
- Many of the woody-stemmed species indicated in Table 1 can be propagated by stem cuttings (see below).

## Procedures for Rooting Stem Cuttings

- Cuttings should be taken during the dormant season of current or past season's growth.
- While terminal parts of the stem are best, a long shoot can be divided into several cuttings. Cuttings are generally 10 to 16 inches long.
- Remove any leaves or side shoots from the lower 1/2 to 2/3 of the cutting.
- Dip cuttings in rooting hormone.
- Insert the cuttings 1/2 to 2/3 their length into standard 1 or 2 gallon black planters filled with sterile potting soil. Space cuttings just far enough apart to allow all leaves to receive sunlight. Water after inserting the cuttings and place in indirect light.

Sincerely,  
Steve Toth, AScT, R.P.Bio.



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Figure 1. Revegetation Area



Figure 2. Re-vegetation area with suggested planting arrangement

