

FORM 1

Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Riparian Areas Regulation: Assessment Report

Please refer to submission instructions and assessment report guidelines when completing this report.

Date

I. Primary QEP Information

First Name	Cynthia	Middle Name	L
Last Name	Hannah		
Designation	R.P.Bio.	Company	FishFor Contracting Ltd
Registration #	1275	Email	cindy.hannah@fishfor.ca
Address	110-1720 14 th Ave		
City	Campbell River	Postal/Zip	V9W 8B9
Prov/state	BC	Country	Canada
		Phone #	250-286-9908

II. Secondary QEP Information (use Form 2 for other QEPs)

First Name		Middle Name	
Last Name			
Designation		Company	
Registration #		Email	
Address			
City		Postal/Zip	
Prov/state		Country	
		Phone #	

III. Developer Information

First Name	Mike	Middle Name	
Last Name	Riesterer		
Company	Oyster Bay Investments Ltd.		
Phone #	604-315-2984	Email	G5management@shaw.ca
Address	811 Ash Street		
City	Richmond	Postal/Zip	V6Y 3B4
Prov/state	BC	Country	Canada

IV. Development Information

Development Type	Rural Residential: Outside of Municipality		
Area of Development (ha)	45	Riparian Length (m)	~800m
Lot Area (ha)	45	Nature of Development	New
Proposed Start Date	2009-10-15	Proposed End Date	2009-11-20

V. Location of Proposed Development

Street Address (or nearest town)	Old Island Highway, Oyster Bay		
Local Government	Strathcona Regional District	City	Campbell River
Stream Name	Mayfly Creek (local name)		
Legal Description (PID)	008-966-371	Region	1-Vancouver Island
Stream/River Type	Wetland, Stream, ditch	DFO Area	South Coast
Watershed Code	UTM Mayfly at downstream edge of property: 10N 344285 5529677		
Latitude	49	53	50.5
Longitude	125	9	52.7

Completion of Database Information includes the Form 2 for the Additional QEPs, if needed. Insert that form immediately after this page.

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Section 1. Description of Fisheries Resources Values and a Description of the Development proposal

Mayfly Creek Drainage Fisheries Resource Values:

Mayfly Creek, also known locally as Stream 5 flows into Oyster Bay ~1.5km northwest of the Oyster Bay Shoreline Park. It has been sampled and studied extensively by the Oyster Bay Streamkeepers Association. The Association has been involved in enhancement activities on the stream. A thorough assessment of the drainage was completed by the Oyster Bay Streamkeepers beginning in 1997. There are many wetlands associated with Mayfly Creek. One of the larger wetlands is located on the subject property.

Mayfly Creek supports coho salmon and both sea run and resident cutthroat trout. Coho salmon have been sampled in the reaches downstream of the large wetland. Cutthroat trout have been located in the stream reaches upstream of the wetland. There are several beaver dams and ongoing beaver activity within the wetland. The wetland provides seasonal rearing habitat for coho and cutthroat trout. The stream reaches provide both spawning and rearing habitat for coho and cutthroat trout. The riparian area around the wetland is variable. It is mostly intact on the north/northwest side with a mixed coniferous/deciduous forest and an understory of salmonberry, ferns. There is abundant blowdown along the east and southwest sides of the wetland.

Through the studies that were conducted by the Oyster Bay Streamkeepers, it was determined that Mayfly Creek has inadequate summer water flows (it was mostly dry in July 2006) as well as flashy winter flows. Several enhancement projects have been undertaken to try to alleviate some of the problems that face the drainage. An artificial beaver dam was constructed for water storage and winter flow regulation, after it was discovered that a natural beaver dam further upstream was degrading due to a lack of new beaver activity. Instream complexing of pool creation and bank protection was completed in the lowest reach of the stream. Effectiveness monitoring of the projects determined that although the summer base flows had improved, they were still inadequate. It was also determined that the water stored behind the artificial dam was overflowing during the winter and much of this was escaping the Mayfly Creek Watershed.

The previous owner of the property (Weyerhaeuser Company Limited) established a covenant along Mayfly Creek and the wetland. The covenanted areas were legally surveyed in March 2001. This covenant has and will protect the riparian area along Mayfly Creek from the construction of any building or mobile home as well as from any removal of vegetation. There has been some windfall of the riparian area. The wetland surrounding Mayfly Creek has expanded considerably and the covenant area no longer provides a sufficient buffer area.

Prior to the development of the Oyster Bay property, a restoration plan for Mayfly Creek was developed and approved in 2007 by Fisheries and Oceans Canada, Oyster Bay Streamkeepers, FishFor Contracting Ltd and Mike Riesterer (Oyster Bay Investments Ltd.).

The goal of the restoration plan was to restore the water supply by recapturing water that was being lost from the drainage through past activities on the property (ditching primarily). Six sites were noted in the restoration plan. The restoration works are complete and functioning as intended.

There is a ditchline on the property that connects to a non-fish bearing ditch that was created to convey seasonal flows to a constructed enhancement pond. This was done as part of the

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restoration works described above. The shallow ditch is vegetated predominantly in grasses, but there is some salal, salmonberry, fern and trailing blackberry. This ditchline does not trigger the requirement for an RAR assessment, as it is not directly connected to fish bearing water.

Development Proposal:

The proposed development is for the subdivision of the property into 3 lots. There will be two 20 acre lots and one 72 acre lot. There are no existing buildings on the property. Mayfly Creek flows through Lots 3 and 1 in a northeasterly direction. There is a restrictive covenant already in place along Mayfly Creek, although ongoing beaver activity has enlarged the wetland and it now extends to/past the covenant boundary.

Section 2. Results of Riparian Assessment (SPEA width)

Mayfly Creek has been assessed using the Simple Assessment. The SPEA is 30m.

Section 2. Results of Simple Riparian Assessment Mayfly Creek

Date:

Stream	<input checked="" type="checkbox"/>
Wetland	<input checked="" type="checkbox"/>
Lake	<input type="checkbox"/>
Area	<input type="checkbox"/>

Potential Riparian Width(m)

30	I, <u>Cynthia Hannah, R.P.Bio.</u> , hereby certify that:
30	a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ;
30	b) I am qualified to carry out this part of assessment of the development proposal made by the developer <u>Oyster Bay Investments Ltd</u> ;
30	c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
30	d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.
30	
30	
30	
30	
30	
30	
Average	30

Existing or Potential Vegetation Category

Fish bearing Yes No**

**If non fish-bearing, insert non-fish bearing status report

	I, <u>Cynthia Hannah, R.P.Bio.</u> , hereby certify that: a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Oyster Bay Investments Ltd</u> ; c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.
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Stream Flow Permanent Non Permanent*

*If non permanent flow, indicate how this was determined?

	I, <u>Cynthia Hannah, R.P.Bio.</u> , hereby certify that: a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation
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- made under the *Fish Protection Act*;
- b) I am qualified to carry out this part of the assessment of the development proposal made by the developer Oyster Bay Investments Ltd ;
 - c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
 - d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

SPEA Width (m)

Comments

Mayfly Creek has 2 road crossings, one is currently used and the other is deactivated. Other than these roads, there are no permanent structures within the Mayfly Creek SPEA.

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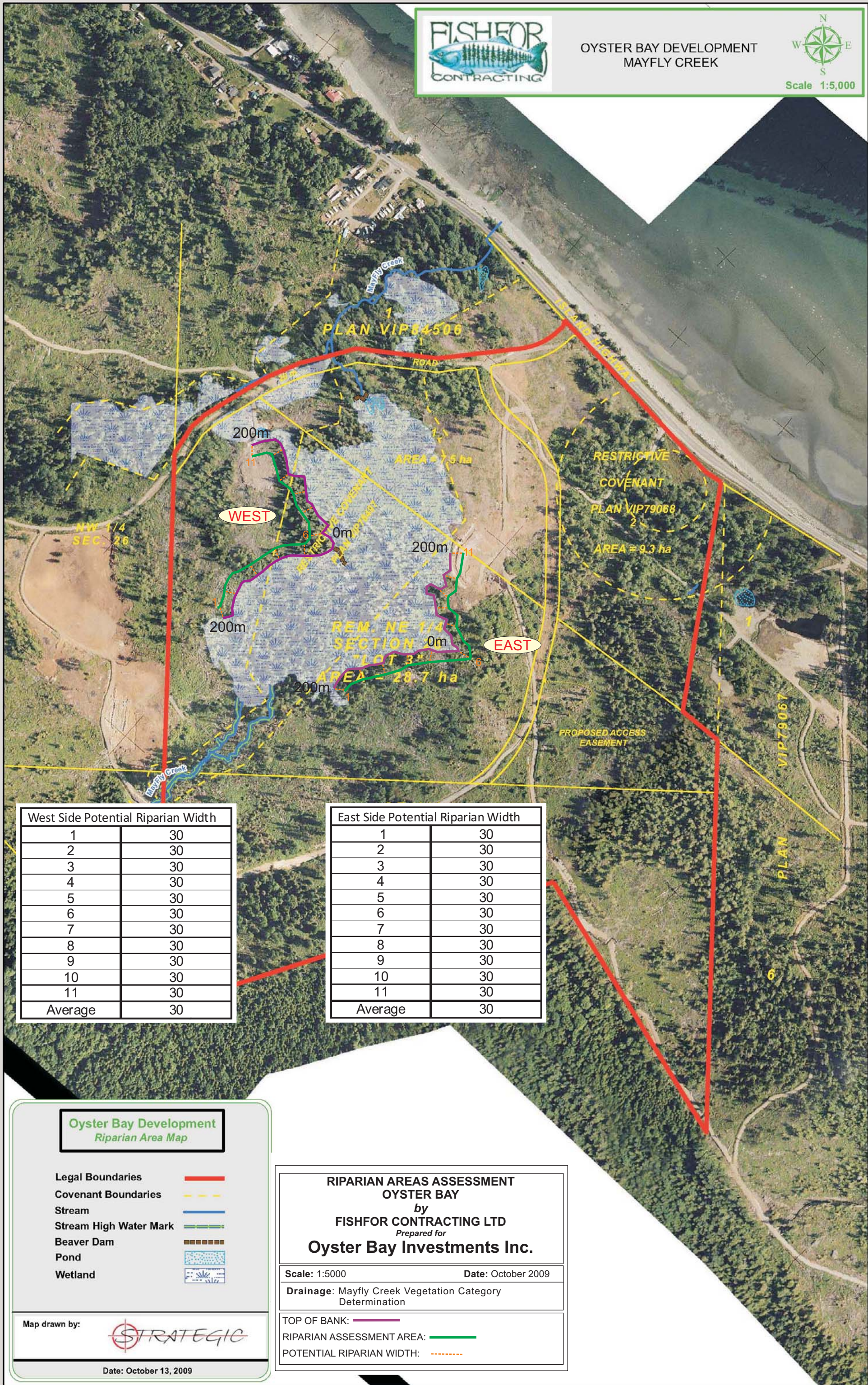
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Orthophoto showing assessment area

An orthophoto showing the assessment area follows this page.



OYSTER BAY DEVELOPMENT
MAYFLY CREEK



West Side Potential Riparian Width	
1	30
2	30
3	30
4	30
5	30
6	30
7	30
8	30
9	30
10	30
11	30
Average	30

East Side Potential Riparian Width	
1	30
2	30
3	30
4	30
5	30
6	30
7	30
8	30
9	30
10	30
11	30
Average	30

Oyster Bay Development
Riparian Area Map

- Legal Boundaries —
- Covenant Boundaries - - -
- Stream —
- Stream High Water Mark - - -
- Beaver Dam - - -
- Pond [Pattern]
- Wetland [Pattern]

**RIPARIAN AREAS ASSESSMENT
OYSTER BAY**
by
FISHFOR CONTRACTING LTD
Prepared for
Oyster Bay Investments Inc.

Scale: 1:5000 Date: October 2009

Drainage: Mayfly Creek Vegetation Category Determination

TOP OF BANK: —

RIPARIAN ASSESSMENT AREA: —

POTENTIAL RIPARIAN WIDTH: - - -

Section 3. Site Plan

Site Plan

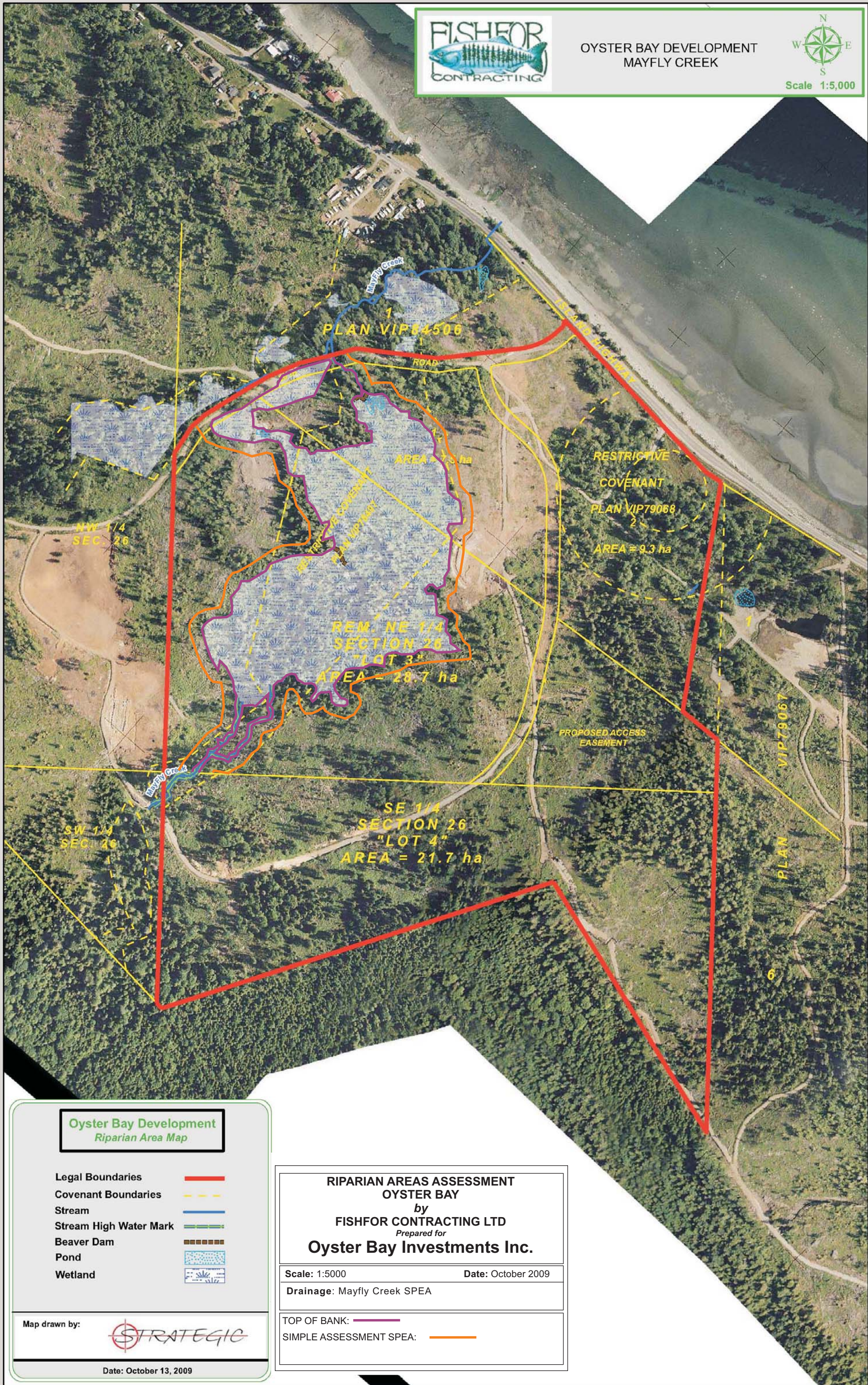
A site plan follows this page.



OYSTER BAY DEVELOPMENT
MAYFLY CREEK



Scale 1:5,000



Oyster Bay Development
Riparian Area Map

- Legal Boundaries
- Covenant Boundaries
- Stream
- Stream High Water Mark
- Beaver Dam
- Pond
- Wetland

**RIPARIAN AREAS ASSESSMENT
OYSTER BAY**
by
FISHFOR CONTRACTING LTD
Prepared for
Oyster Bay Investments Inc.

Scale: 1:5000 Date: October 2009

Drainage: Mayfly Creek SPEA

TOP OF BANK:

SIMPLE ASSESSMENT SPEA:

Map drawn by:



Date: October 13, 2009

Section 4. Environmental Monitoring

As these are large rural lots and the nature/location of any development in the vicinity of the stream/wetland in the future is unknown, it must be disclosed with the sale of the property that prior to the commencement of any construction works adjacent to the Mayfly drainage, the SPEAs must be located and marked on the ground. This disclosure will ensure that the SPEA is protected from future development/encroachment and they (future property owners) are responsible to demarcate it with a physical barrier that suits their proposed development. There are many options for demarcating the SPEA. A simple hedge can be planted along the SPEA boundary. Developments will require an RAR amendment to reflect the proposed developments, and at this point the barrier to encroachment can be discussed with the QEP.

For the subdivision of the property there are no environmental monitoring requirements. Once the property has been subdivided, the new property owner will require plans for isolation of the SPEA from their land use, sediment and erosion control plans and stormwater management plans prior to any development. The future property owner may require the services of an environmental monitor during development depending on the location and kind of development they plan. Environmental Monitoring requirements are site specific. If any works are proposed in the vicinity of the SPEA, an environmental monitor may be required to ensure that the SPEA is protected. An environmental monitor should be retained to ensure that any stormwater management and/or sediment and erosion control devices are installed correctly and are functioning as intended.

Any excavation on this property has the potential to divert water from the existing watercourses. Anyone excavating on site must be familiar with this sensitive hydrological system and should consult an environmental professional if there is potential that they may impact any of the existing drainages. The property owner will be required to pay for any restoration work required as a result of poorly planned excavation and/or building that diverts water.

If the proposed subdivision and property sale is delayed more than 2 years, the QEP will need to have a site visit to ensure there have not been any changes to the high water mark/top of bank and that the high water mark is still clearly marked at regular intervals.

The QEP will submit a final sign-off letter once she is satisfied that the subdivision has been completed in a manner that is in accordance with this assessment.

Section 5. Photos

Label

View of Mayfly Creek Wetland upstream of the manmade beaver dam. It dries during summer/fall.





Label

View of same wetland in the spring.



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Label	View of Mayfly Creek Wetland east side riparian area.
	
Label	View of Mayfly Creek. The stream offers spawning and rearing habitat for cutthroat trout and coho salmon.
	

Section 6. Professional Opinion**Assessment Report Professional Opinion on the Development Proposal's riparian area.**Date 1. I Cynthia Hannah, R.P.Bio.

hereby certify that:

- e) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
 - f) I am/We are qualified to carry out the assessment of the proposal made by the developer Oyster Bay Investments Ltd, which proposal is described in section 3 of this Assessment Report (the "development proposal");
 - g) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
 - h) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND
2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:
- a) if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, **OR**
(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)
 - b) if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

[NOTE: "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if

- (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
- (b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
- (c) the individual is acting within that individual's area of expertise.]