



**NOTICE OF
ELECTORAL AREA SERVICES COMMITTEE MEETING**

Tuesday,
September 21, 2010
Regional District Board Room
175 Ingram Street, Duncan, BC

3:00 pm

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10. **PUBLIC/PRESS QUESTIONS**

11. **CLOSED SESSION**

Motion that the meeting be closed to the public in accordance with the Community Charter Part 4, Division 3, Section 90(1), subsections as noted in accordance with each agenda item.

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12. **NEXT MEETING**

Tuesday, October 5, 2010

13. **ADJOURNMENT**

NOTE: A copy of the full agenda package is available at the CVRD website www.cvrld.bc.ca

Director B. Harrison
Director K. Cossey
Director I. Morrison

Director M. Marcotte
Director G. Giles
Director K. Kuhn

Director L. Iannidinardo
Director L. Duncan
Director M. Dorey

Minutes of the Electoral Area Services Committee Meeting held on Tuesday, September 7, 2010 at 3:00 pm in the Regional District Board Room, 175 Ingram Street, Duncan, BC.

PRESENT

Director B. Harrison, Chair
 Director K. Kuhn
 Director M. Dorey
 Director G. Giles
 Director L. Iannidinardo
 Director L. Duncan
 Director I. Morrison
 Director K. Cossey
 Absent: Director M. Marcotte

CVRD STAFF

Tom R. Anderson, General Manager
 Mike Tippet, Manager
 Rob Conway, Manager
 Brian Farquhar, Manager
 Maddy Koch, Planning Assistant
 Ann Kjerulf, Planner III
 Nino Morano, Bylaw Enforcement Official
 Brian Duncan, Chief Building Inspector
 Cathy Allen, Recording Secretary

APPROVAL OF AGENDA

The Chair noted changes to the agenda which included adding four items of New Business, removing agenda item D1 (to be dealt with at the next meeting) and removing agenda item D10 (dealt with at the August 25, 2010, Special Board meeting).

It was Moved and Seconded
 That the agenda, as amended, be accepted.

MOTION CARRIED

M1 - MINUTES

It was Moved and Seconded
 That the minutes of the August 3, 2010 EASC meeting, be accepted.

MOTION CARRIED

BUSINESS ARISING

There was no business arising.

For Information: Director Duncan displayed Glenora parks kiosk signs which were prepared by GIS staff and noted the information is stored in a data base that can be used to make similar signs for parks elsewhere in the CVRD.

DELEGATIONS

D1 - Jarvis

Agenda item D1 (File No. 7-A-10BE – Jarvis, 1695 Sandy Beach Road Notice on Title) will be dealt with at the next EASC meeting.

D2 - Hockridge

Nino Morano, Bylaw Enforcement Officer, reviewed File No. 9-A-06BE (Robert and Lan Hockridge) to register Notice Against Land Title, for structures built without a building permit at 780 Kilmalu Road.

Robert Hockridge, property owner, was present and provided further information.

The Committee directed questions to the delegate.

It was Moved and Seconded

That a Notice against Land Title be filed for the property owned by Robert and Lan Hockridge and Satellite Holdings Ltd. located at 780 Kilmalu Road legally described as: PID 002-285-991, Lot 5, Sections 4 & 5, Range 9, Shownigan District, Plan 28093, Except part in Plan VIP52025 (File No. 9-A-06BE).

MOTION CARRIED

D3 - Brammall

Nino Morano, Bylaw Enforcement Officer, reviewed File No. 36-B-04BE (Roger Brammall) to register Notice Against Land Title for non-permitted buildings at 2200 Sylvester Road.

Roger Brammall, property owner, was present and provided further information

The Committee directed questions to the delegate and staff.

It was Moved and Seconded

That legal action against the land owner of 2200 Sylvester Road be continued, and that a Notice against Land Title be filed for the property owned by Roger Brammall located at 2200 Sylvester Road legally described as Lot A, District Lot 49, Malahat District, Plan 33779, PID 000-257-630 and, District Lot 49, Malahat District, Except in Plan 33779, PID 003-952-576 (File No. 36-B-04BE).

MOTION CARRIED

D4 - Partridge

Application No. 1-B-09RS was referred from the August 3, 2010 EASC meeting.

Rob Conway, Manager, reviewed Application No. 1-B-09RS (Craig Partridge) to permit a four lot subdivision at 2868 and 2872 Renfrew Road in Shawnigan Lake.

Craig Partridge, applicant, was present and provided further information to the application.

The Committee directed questions to the applicant.

It was Moved and Seconded

1. That Application No. 1-B-09RS (Craig Partridge) proceed and that the applicant be requested to provide a wildland urban interface assessment and confirm commitments with respect to park land dedication.
2. That application referrals to the Ministry of Transportation and Infrastructure, the Central Vancouver Island Health Authority, the Ministry of Environment, Ministry of Forests; Malahat First Nations, Cowichan Tribes, School District 79, and Shawnigan Lake Fire Improvement District, be accepted.
3. That draft bylaws be prepared and presented at a future EASC meeting for review.

MOTION CARRIED

D5 - Zanatta

Rob Conway, Manager, reviewed Application No. 1-E-10DP (Ivo Zanatta/Cowichan Terrazzo and Ceramic Tile Ltd.) to allow an addition and exterior alterations to existing light industrial building at 2890 Allenby Road.

The Committee directed questions to staff.

Ivo Zanatta, applicant, was present and provided further information.

That Application No. 1-E-10DP be approved, and that a development permit be issued to Cowichan Terrazzo and Ceramic Tile Ltd. for Lot 1, Section 13, Range 7, Quamichan District, Plan VIP87500 for an addition and exterior alterations, subject to :

- a. Installation of underground wiring;
- b. Landscaping installed in accordance with BCSLA standards, including an underground irrigation system;
- c. Receipt of an irrevocable letter of credit in a form suitable to the CVRD equal to 125% of the value of the landscaping as depicted on the August 18, 2010 site plan; and an assessment of the value of the landscaping be done by a qualified landscape architect for bonding purposes.

MOTION CARRIED

D6 – Perrey

Application No. 6-G-10DP (Susan Perrey) to legalize and finish construction of a retaining wall at 11101 Chemainus Road, within the Ocean Shoreline DPA.

The applicant was not present.

It was Moved and Seconded

That Application No. 6-G-10DP be approved, and that a development permit be issued to Sue Perrey for Lot 1, District Lot 34, Oyster District, Plan 22516 to legalize and finish construction of a retaining wall and landscape the area atop the retaining wall, subject to:

- Compliance with the recommendations noted in the June 26, 2010 report by Ground Control Geotechnical Engineering Ltd.

MOTION DEFEATED

It was Moved and Seconded

That Application No. 6-G-10DP be approved, and that a development permit be issued to Sue Perrey for Lot 1, District Lot 34, Oyster District, Plan 22516 to legalize and finish construction of a retaining wall and landscape the area atop the retaining wall, subject to:

- Compliance with the recommendations noted in the June 26, 2010 report by Ground Control Geotechnical Engineering Ltd.
- Receipt of an irrevocable letter of credit in a form suitable to the CVRD, equivalent to 125% of the landscape costs, to be refunded upon completion of the landscaping plan; and landscape plans not to include ivy or periwinkle.

MOTION CARRIED

D7 - Penney

Application No. 1-D-10DP (Lew Penny/Wooden Boat Society) to permit construction of additional workshop space, display area and wheelchair accessible washroom facilities at 1761 Cowichan Bay Road.

It was Moved and Seconded

That application No. 1-D-10DP be approved, and that a development permit be issued to the Cowichan Wooden Boat Society for District Lots 173 and 2063, Cowichan District (1761 Cowichan Bay Road) to allow for construction of an addition to the Cowichan Bay Maritime Centre.

MOTION CARRIED

D8 - Kmit

Application No. 1-C-10ALR (Kmit/Luscombe) to construct a second dwelling at 3915 Clearwater Road.

It was Moved and Seconded

That Application No. 1-C-10ALR submitted by H.J. Kmit, on behalf of Olive Luscombe, made pursuant to Section 20(3) of the *Agricultural Land Commission Act* to construct a second dwelling be forwarded to the Agricultural Land Commission with a recommendation to approve, subject to decommission of the existing cottage.

MOTION CARRIED

D9 - Archer

Application No. 4-E-10ALR (John and Anthea Archer) to place a fourth dwelling at 3330 Jackson Road.

It was Moved and Seconded

That Application No. 4-E-10ALR, submitted by John and Athena Archer, made pursuant to Section 20(3) of the *Agricultural Land Commission Act* to place a fourth dwelling on the subject property be forwarded to the Agricultural Land Commission with a recommendation to approve.

MOTION CARRIED

D10 – Kuwert

Application No. 4-A-10DVP (Kuwert) was dealt with at the August 25th Special Board meeting.

D11 - Lamont

Maddy Koch, Planning Assistant, presented Application No. 2-C-10DVP (Kevin Lamont) to relax the rear parcel line setback to allow for construction of an additional steel storage building at 1334 Fisher Road.

It was Moved and Seconded

That Application No. 2-C-10DVP by Kevin Lamont for a variance to Section 11.3(b)(3) Zoning Bylaw No. 1405, to decrease the setback to the rear parcel line from 7.5 metres (24.61 ft.) to 6.66 metres (21.85 ft.) be approved, subject to:

- applicant to provide a survey confirming compliance with approved setbacks; and
- receipt of an irrevocable letter of credit in a form suitable to the CVRD equivalent to 125% of value of the landscaping plan, that includes irrigation, to be submitted by the applicant prior to issuance of the permit.

MOTION CARRIED

D12 - Sheppard

Maddy Koch, Planning Assistant, presented Application No. 2-B-10DVP (Dale Sheppard) to reduce the number of required parking spaces from 35 to 19 and off-street loading spaces from 5 to 1 at 2750 Shawnigan Lake Road.

It was Moved and Seconded

That Application No. 2-B-10DVP by Dale Sheppard for a variance to Section 4.1 (a) of Bylaw No. 1001, to reduce the number of required parking spaces from 35 to 19 and the number of off-street loading spaces from 5 to 1 on Lot 1, Shawnigan Suburban Lots, Shawnigan District, Plan VIP55254 (*PID 017-973-961*) be approved, subject to:

- Secure bicycle parking being created, as shown on the site plan;
- Improvements being made to the existing disability parking space by repainting lines, repainting the wheelchair symbol, installing protective barriers and installing signs, to the satisfaction of the Building Inspector;
- The above conditions being met prior to issuance of a building permit.

MOTION CARRIED

D13 – van der Have

Rob Conway, Manager, presented the request by Jan and Marilyn van der Have to allow additional kitchen fixtures in an accessory building at 2645 Mill Bay Road.

Jan van der Have, applicant, provided further information to the request.

It was Moved and Seconded

That the request by Jan and Marilyn van der Have to allow bathroom fixtures (sink and toilet) and kitchen fixtures (fridge, sink, stove, and island space) in an existing accessory building at 2645 Mill Bay Road (Lot 3, Section 1, Range 9, Shawnigan District, Plan 41541 except part in Plan 45732 (*PID 000-674-478*), be approved, subject to:

- decommissioning the existing upstairs toilet and sink.
- registration of a covenant prohibiting occupancy of the accessory structure as a dwelling and removal of all additional facilities prior to change in ownership of the property.

MOTION CARRIED

D14 - Derhousoff

Request by Greg Bianchini and Heidi Derhousoff to allow bathing facilities and sink in proposed accessory building at 13100 Magdalena Drive.

Heidi Derhousoff, applicant, was present and provided information to the request.

It was Moved and Seconded

That the request by Greg Bianchini and Heidi Derhousoff to allow a shower and kitchen sink, as well as the permitted bathroom sink and toilet, within a converted accessory building at 13100 Magdalena Drive (Lot 24, Block 567, Oyster District, Plan VIP71713) be approved, subject to registration of a covenant prohibiting occupancy of the accessory structure as a dwelling and removal of all additional facilities prior to change in ownership of the property.

MOTION CARRIED

D15 – Lestock Kay

Request by David Lestock Kay to allow one bathing facility in a proposed agricultural accessory building at 3086 Wilkinson Road.

David Lestock Kay, applicant, was present.

It was Moved and Seconded

That the request by David Lestock-Kay to allow one bathing facility (shower) in the planned agricultural accessory building located at 3086 Wilkinson Road (Section 6, Range 7, Shawnigan District (PID 024-091-596), be approved, subject to registration of a covenant prohibiting occupancy of the accessory structure as a dwelling and removal of all additional facilities prior to change in ownership of the property.

MOTION CARRIED

STAFF REPORTS

SR1 – File No. 1-D-08DP(Silver Catch Processing)

It was Moved and Seconded

That Development Permit No. 1-D-08DP (1838 Cowichan Bay Road) issued to Silver Catch Processing Inc. Lapsing on December 10, 2010, be extended until December 10, 2011.

MOTION CARRIED

SR2 – File No. 5-A-07DP (Walerius)

It was Moved and Seconded

That Development Permit No. 5-A-07DP (2650 Partridge Road) issued to Dwain Walerius, which lapsed on November 28, 2009, be renewed until November 28, 2011.

MOTION CARRIED

**SR3 – Release of
Covenant (Loyalist
Lane, Area G)**

It was Moved and Seconded

That a letter be forwarded to the Ministry of Transportation and Infrastructure advising that the CVRD does not object to the release of Covenant EH138168 on strata lot 2 Plan 3436, located at 10894 Loyalist Lane, Electoral Area G - Saltair.

MOTION CARRIED

SR4 – Area D OCP

It was Moved and Seconded

1. That the CVRD advise applicants that rezoning applications for properties located in Electoral Area D – Cowichan Bay will be held in abeyance until an Official Community Plan bylaw has been adopted;
2. That an exception be made for properties located within the Cowichan Bay, Eagle Heights or Lambourn Estates Sewer System Service Areas; and
3. That an exception be made for those properties for which the CVRD Board has allocated sewer units and are intended to be included in the Cowichan Bay, Eagle Heights or Lambourn Estates Sewer System Service Areas.

MOTION DEFEATED

SR5 – RDN Referral

It was Moved and Seconded

That a letter be forwarded to the Nanaimo Regional District advising that the CVRD declines comment respecting the NRD Regional Growth Strategy Amendment Application at 2610 Myles Lake Road.

MOTION CARRIED

SR6 – Bill 27, Area H

It was Moved and Seconded

1. That proposed CVRD Bylaw No. 3421 (Bill 27/Greenhouse Gas Emissions) for Electoral Areas H proceed to the Board for consideration of 1st and 2nd readings;
2. That a public hearing be held for the amending bylaw in Electoral Area H-North Oyster/Diamond with Directors Marcotte, Dorey and Morrison named as delegates of the Board;
3. That the proposed bylaw be referred to the City of Duncan, Town of Lake Cowichan, District of North Cowichan, Town of Ladysmith, Nanaimo Regional District, Cowichan Tribes, Chemainus First Nation, Ministry of Community and Rural Development, and School Districts No. 68 and 79, for comment, in the form of a written referral, with a three week response period.

MOTION CARRIED

**SR7 – Shawnigan
Lake Cemetery**

It was Moved and Seconded
That the request by the Sylvan United Church to waive building permit fees for the construction of a gazebo at the Shawnigan Cemetery, be approved.

MOTION CARRIED

**SR8 – Subdivision
Servicing Bylaw**

It was Moved and Seconded
That staff report dated August 31, 2010, from Tom R. Anderson, General Manager, regarding Draft Subdivision Servicing Bylaw, be referred to the next EASC meeting.

MOTION CARRIED

**SR9 – Marine
Riparian DPA**

It was Moved and Seconded
That staff report dated August 18, 2010, from Mike Tippet, Manager, regarding Marine Riparian Development Permit Areas (Areas A,C,D and H) be referred back to staff for further consideration.

MOTION CARRIED

**SR10 – Community
Planning Reserve
Fund Bylaw**

It was Moved and Seconded
That the Regional Board approve the use of Community Planning Reserve funds in the amount of \$22,000 for the purpose of funding a new photocopier that has been purchased by the Planning and Development Department.

MOTION CARRIED

**SR11 – Malahat Fire
Protection Bylaw**

It was Moved and Seconded
That CVRD Bylaw No. 3418 – Malahat Fire Protection Service Amendment Bylaw, 2010, be forwarded to the Regional Board for consideration of three readings and adoption.

MOTION CARRIED

**SR12, SR13, SR14 –
Mid-year Budget
Reports**

Discussion regarding Staff Report dated August 31, 2010, from Tom R. Anderson, General Manager, regarding Planning and Development Department Budget Preparation Report; Staff Report dated August 27, 2010, from Tom R. Anderson, General Manager, regarding Mid-year Budget Report; and Staff Report dated August 31, 2010, from Brian Farquhar, Manager, regarding Community Parks and Trails 2010 Mid-year Budget Status Report.

Reports received for information purposes.

APC

AP1 - AP7 – Minutes

It was Moved and Seconded

That the following minutes be received and filed:

- Minutes of Area H APC meeting of July 18, 2010
- Minutes of Area H APC site meeting of July 18, 2010
- Minutes of Area E APC meeting of August 9, 2010
- Minutes of Area C APC meeting of August 21, 2010
- Minutes of Area D APC meeting of July 21, 2010
- Minutes of Area C APC site meeting of August 16, 2010

MOTION CARRIED

It was Moved and Seconded

That the Area C APC meeting of June 24, 2010, be received and filed.

MOTION CARRIED

PARKS

PK1 - Minutes

It was Moved and Seconded

That the minutes of the Area H parks meeting of July 25, 2010, be received and filed.

MOTION CARRIED

PK2 - Minutes

It was Moved and Seconded

That the minutes of the Area E Parks meeting of August 23, 2010, be received and filed.

MOTION CARRIED

INFORMATION

IN1 – Barnjum Road

It was Moved and Seconded

That the letter dated July 29, 2010, from the Ministry of Transportation and Infrastructure regarding paving of Barnjum Road, be received and filed.

MOTION CARRIED

IN2 – Building Report

It was Moved and Seconded

That the July 2010, Building Report, be received and filed.

MOTION CARRIED

CORRESPONDENCE

C1 – Grant in Aid

It was Moved and Seconded

That a Grant-in-Aid (Area D – Cowichan Bay) be given to the Cowichan Valley Naturalists' Society in the amount of \$500 for their Estuary Protection Fund for on-going work to protect the waters of Cowichan Bay.

MOTION CARRIED

C2 – Grant in Aid

It was Moved and Seconded

That a Grant-in-Aid (Area D – Cowichan Bay) be given to the Cowichan Bay Maritime Centre in the amount of \$400 to assist with the costs of a development permit application.

MOTION CARRIED

NEW BUSINESS

NB1 – Hollings Creek Trail Agreement

It was Moved and Seconded

That the Board Chair and Corporate Secretary be authorized to sign the necessary documents related to execution of a license agreement with the Kerry Village Residents Association Strata (KVRA) permitting the CVRD to construct and maintain a public footpath on a portion of the KVRA's common property between Bourbon Road and Hollings Creek Park in Electoral Area A, legally described as "Common Property, Part of Lot A, Sections 1 and 2, Range 7, Shawnigan District, VIS 1337".

MOTION CARRIED

NB2, NB3, NB4 – Grants in Aid

It was Moved and Seconded

That the following grants in aid be approved:

- That a Grant-in-Aid (Area A- Mill Bay/Malahat) be given to the Mill Bay Community Tennis Club in the amount of \$2,500 to assist with costs to resurface the two tennis courts.
- That a Grant-in-Aid (Area B – Shawnigan Lake) be given to the Cowichan Green Community in the amount of \$100 to assist with the third annual fall harvest and sustainability festival.
- That a Grant-in-Aid (Area A – Mill Bay/Malahat) be given to the Shawnigan Cemetery in the amount of \$500 to assist with the costs of constructing a gazebo on the property.
- That a Grant-in-Aid (Area B – Shawnigan Lake) be given to the Shawnigan Cemetery in the amount of \$500 to assist with the costs of constructing a gazebo on the property.

- That a Grant-in-Aid (Area C – Cobble Hill) be given to the Shawnigan Cemetery in the amount of \$500 to assist with the costs of constructing a gazebo on the property.

MOTION CARRIED

**PUBLIC/PRESS
QUESTIONS**

Balu Tatacheri

Mr. Tatacheri asked if the Committee is satisfied with how the minutes of the August 3, 2010, EASC meeting have been prepared, and in particular is the information in the Question and Answer section adequate?

Director Harrison stated that he was not at that particular meeting but believes the minutes to be adequate.

Director Duncan noted that Committee minutes contain recommendations only and that verbal comments are not recorded.

Sheila Paul

Ms. Paul asked why an Alternate Director is permitted to Move an item into Closed Session? And asked why the legal matter noted in agenda item SR5 from the August 3rd EASC meeting was not considered under new business?

Director Harrison advised that an Alternate Director has powers equal to a Director. Director Harrison further advised that an item is moved into closed session when the subject is regarding a land, legal or labour issue, and that the legal issue in question was determined by Committee members to be discussed in closed session.

CLOSED SESSION

It was Moved and Seconded

That the meeting be closed to the public in accordance with the *Community Charter* Part 4, Division 3, Section 90(1), subsections as noted in accordance with each agenda item.

MOTION CARRIED

The Committee moved into Closed Session at 5:50 pm.

RISE

The Committee rose without report.

ADJOURNMENT

It was Moved and Seconded
That the meeting be adjourned.

MOTION CARRIED

The meeting adjourned at 6:00 pm.

Chair

Recording Secretary



D1

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 21, 2010

DATE: September 1, 2010 **FILE NO:** 7-A-10BE
FROM: Nino Morano, Bylaw Enforcement Officer **BYLAW NO:** Building Bylaw
No. 143
SUBJECT: 1695 Sandy Beach Road – Notice against Land Title

Recommendation:

On recommendation from the Chief Building Inspector, authorization be given to file a Notice against Land Title for the property owned by Tom & Corrine Jarvis located at 1695 Sandy Beach Road legally described as Lot 3, District Lot 79, Malahat District, Plan 13099, PID 004-716-655.

Purpose:

To obtain CVRD Board authorization for filing of a Notice against Land Title due to outstanding building code and bylaw deficiencies with regards to structures on this property. Registering a Notice against Land Title does not limit the ability of local government to pursue other actions against the land owner and should not be seen as a final measure. The Community Charter provides:

Note against land title that building regulations contravened

57 (1) A building inspector may recommend to the council that it consider a resolution under subsection (3) if, during the course of carrying out duties, the building inspector

(a) observes a condition, with respect to land or a building or other structure, that the inspector considers

(i) results from the contravention of, or is in contravention of,

(A) a municipal bylaw,

(B) a Provincial building regulation, or

(C) any other enactment

that relates to the construction or safety of buildings or other structures, and

(ii) that, as a result of the condition, a building or other structure is unsafe or is unlikely to be usable for its expected purpose during its normal lifetime, or

(b) discovers that

(i) something was done with respect to a building or other structure, or the construction of a building or other structure, that required a permit or an inspection under a bylaw, regulation or enactment referred to in paragraph (a) (i), and

(ii) the permit was not obtained or the inspection not satisfactorily

completed.

(3) After providing the building inspector and the owner an opportunity to be heard, the council may confirm the recommendations of the building inspector and pass a resolution directing the corporate officer to file a notice in the land title office stating that

- (a) a resolution relating to that land has been made under this section, and
- (b) further information about it may be inspected at the municipal hall.

Interdepartmental/Agency Implications:

Corporate Officer authorization to file Notice.

Background:

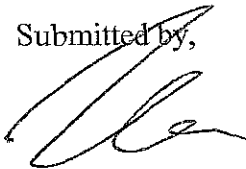
On February 14, 2005 a building permit was issued by the CVRD to allow for the construction of a single family dwelling on a previously undeveloped parcel located at 1695 Sandy Beach Road owned by Tom & Corrine Jarvis. This parcel is located within the R-2A Zone (Suburban Residential – Restricted) in Area A and is approximately .27 acres. It became apparent that development of this parcel would be challenging due to the significant slope from the road to the high water mark of the ocean and resulted in two (2) variances on setbacks for the house and an accessory building and engineering. The engineering required stabilization work on the bank below the foundation of the house including the construction of “finwalls”.

As construction progressed it was brought to the attention of Mr. Jarvis by the CVRD Building Inspector and his engineer (Richard Brimmell, P.Eng.) on several occasions including verbal and in writing via letter from Mr. Brimmell dated February 14, 2005, Field Review Reports dated July 15, 2005, August 26, 2005 and September 26, 2005.

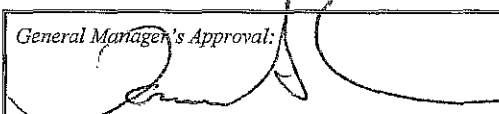
Due to the challenges in performing works at or near the foreshore, Mr. Jarvis was given ample opportunity to secure the necessary permits in order to undertake this project through agencies such as DFO. On January 30, 2007 the CVRD Building Inspector issued a Certificate of Substantial Completion under the understanding that the work on the bank would be completed in a timely manner. Mr. Jarvis has been approached by both the Building Inspector and the Bylaw Enforcement Official recently and has indicated that he no longer intends to undertake the stabilization work on the bank.

This property has been advertised for sale for the past several months with contact made recently with the realtor about the possibility of a notice being registered on the land title for the failure to undertake the noted works. He was advised that this matter be disclosed to any prospective buyer of the property.

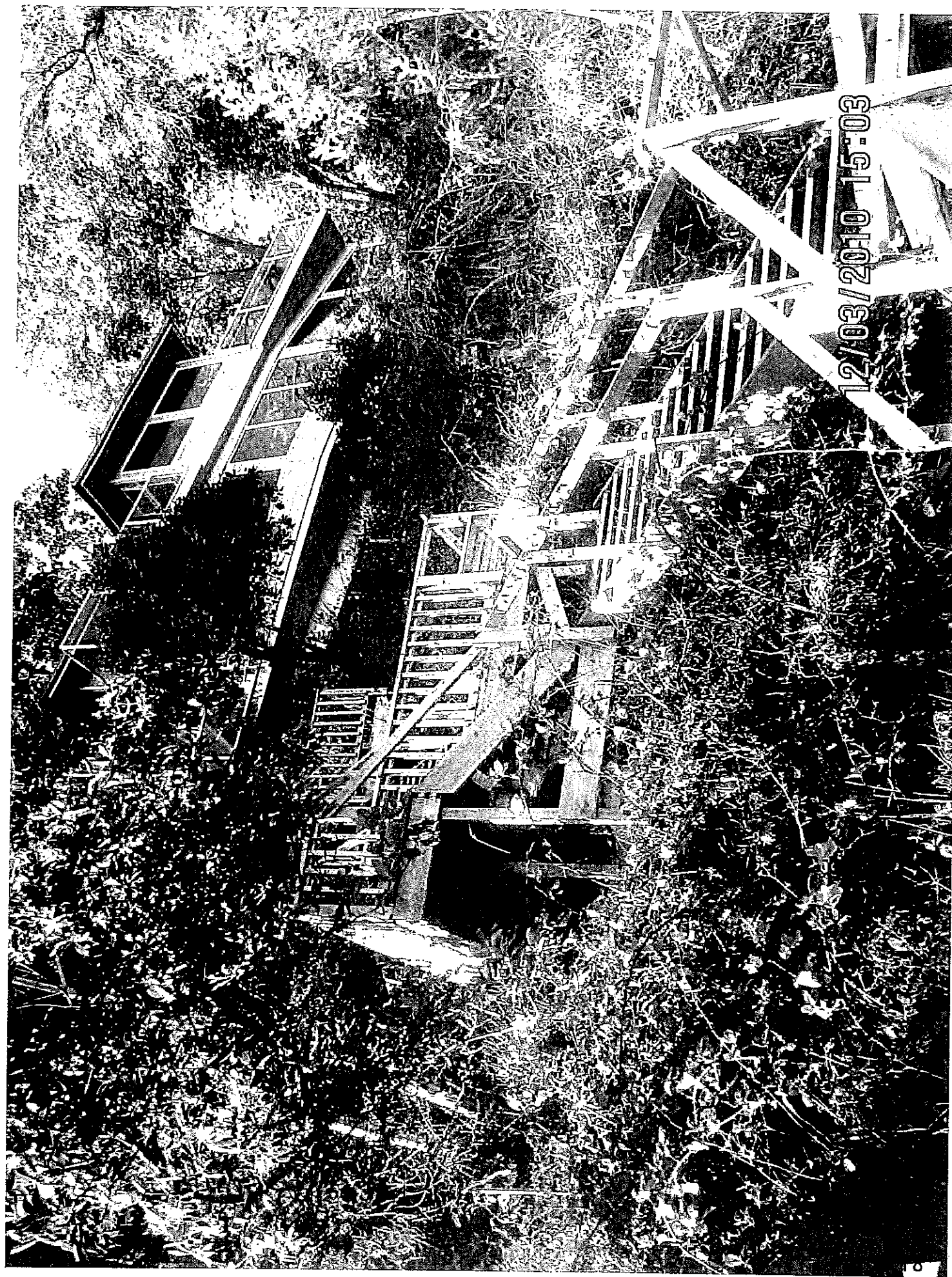
Submitted by,



Nino Morano,
Bylaw Enforcement Officer
Planning and Development Department

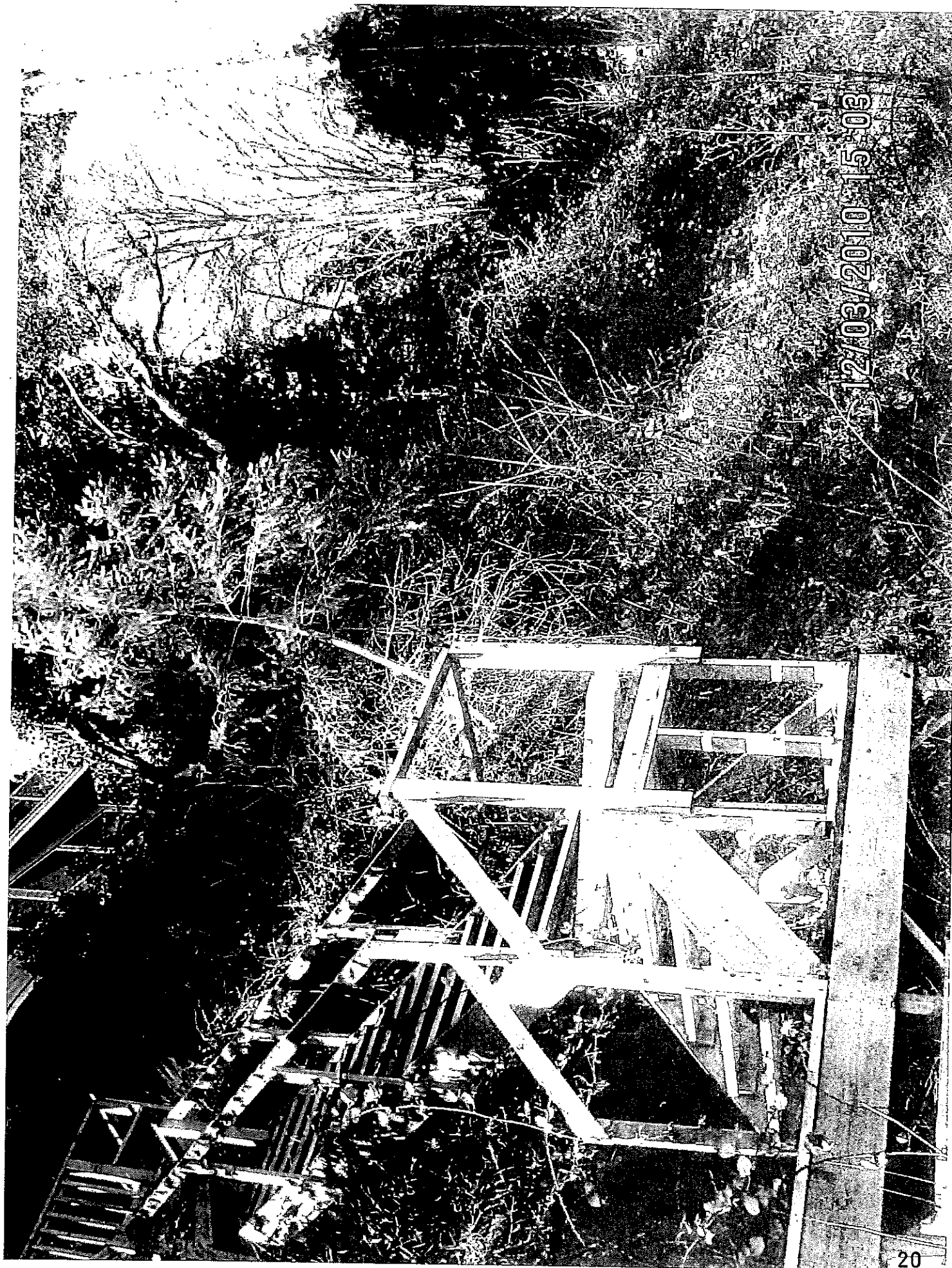
General Manager's Approval: 
Signature

NM/ca



12/03/2010 15:03





12/03/2010 15:03

FAX TRANSMITTAL

RICHARD BRIMMELL, P.Eng.

971 Bank Street

Victoria, BC V8S 4B1

Phone: 592-SOIL(7645) Fax: 592-7640 Cell: 889-3080

To: <u>CVRD-Thor Repstock</u>	FAX NUMBER: <u>250-746-2621</u>
DATE: <u>February 14/05</u>	PROJECT NUMBER: <u>04-138</u>
TOTAL NUMBER OF PAGES (INCLUDING COVERPAGE): <u>1</u>	ORIGINAL MAILED: YES <u> </u> NO <u>X</u>

Re: Proposed Home, Lot 3 Sandy Beach Ln.

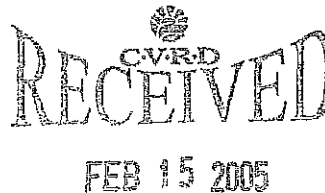
As discussed, the proposed house foundation will be geotechnically safe for the use intended, following the recommended remedial measures, which will include:

-a special foundation, consisting of reinforced concrete "finwalls" locating the footings below the zone of potentially unstable soil, at the same time avoiding the risk of lateral movement of foundation components above footing level

-armoring and supporting the toe-of-slope with large, angular riprap

Landscaped grades beside and behind [toward the water] the home may possibly be prone to future downslope movement.

cc: Tom Jarvis
cc: David Romain


FEB 15 2005

Richard Brimmell, P.Eng.

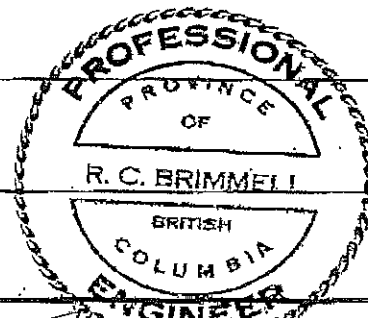
971 Bank St., Victoria, BC V8S 4B1

Ph: 592-SOIL (7645) Mobile: 889-3080

Fax: 592-7640

FIELD REVIEW REPORT

PROJECT:	Proposed Home	No:	1	IN ATTENDANCE:	
LOCATION:	1695 Sandy Beach Dr., Mill Bay	DATE:	July 15/05	Tom Jarvis Richard Brimmell	
		PROJECT No:			
CONTRACTOR(S):	Owner	04-138			
OWNER:	Tom Jarvis				
CONTRACT REF:	Tom Jarvis	TIME:	afternoon	WEATHER:	clear
ASPECT(S) OF PROJECT REVIEWED: Excavation for the south finwall.					
OBSERVATIONS: The excavation steps down to the east [toward Saanich Inlet] at an appropriate depth. Soil consists of compact, brown, gravelly sand.					
REMARKS / RECOMMENDATIONS: The excavation is to an appropriate depth and configuration. Loose material is to be removed from within footing forms, particularly at steps in the subgrade. It is recommended that the steep cut slope to the south of the east [downslope] end of the excavation be securely draped in 6 mil plastic. As discussed, foundations will be atop free-draining gravelly sand, and foundation drains are not considered necessary provided that the front [west] basement wall is thoroughly damp-proofed.					
RECOMMENDED TIMING OF NEXT SITE VISIT: To review the remaining finwall excavations.					
COPIES PROVIDED TO: Client/David Romain/Thor Repstock-CVRD					



Richard Brimmell

A.46.05

Richard Brimmell, P.Eng.

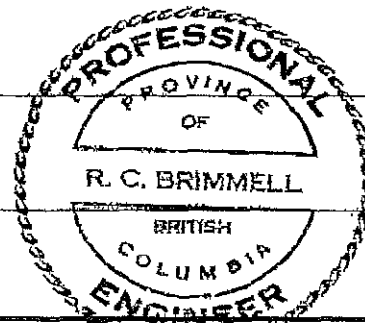
971 Bank St., Victoria, BC V8S 4B1

Ph: 592-SOIL (7645) Mobile: 889-3080

Fax: 592-7640

FIELD REVIEW REPORT

PROJECT:	Proposed Home	No:	2	IN ATTENDANCE:
LOCATION:	1696 Sandy Beach Dr., Mill Bay	DATE:	Aug 26/05	Tom Jarvis Richard Brimmell
		PROJECT No:		
CONTRACTOR(S):	Owner		04-138	
OWNER:	Tom Jarvis			
CONTRACT REF:	Tom Jarvis	TIME:	morning	WEATHER: clear
ASPECT(S) OF PROJECT REVIEWED: Excavation for the centre finwall.				
OBSERVATIONS: The excavation steps down to the east [toward Saanich Inlet] at an appropriate depth. Soil consists of compact, brown, gravelly sand. There is significant loose sand at the footing steps.				
REMARKS / RECOMMENDATIONS: The excavation is to an appropriate depth and configuration. Loose material is to be removed from within footing forms, particularly at steps in the subgrade.				
RECOMMENDED TIMING OF NEXT SITE VISIT: To review the remaining finwall excavation.				
COPIES PROVIDED TO: Client/David Romain/Thor Repstock-CVRD				

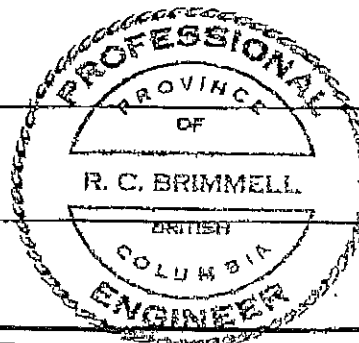


Richard Brimmell

Richard Brimmell, P.Eng.
971 Bank St., Victoria, BC V8S 4B1
Ph: 592-SOIL (7645) Mobile: 889-3080
Fax: 592-7640

FIELD REVIEW REPORT

PROJECT:	Proposed Home	No:	3	IN ATTENDANCE:	
LOCATION:	1695 Sandy Beach Dr., Mill Bay	DATE:	Sept 26/ 05	Tom Jarvis Richard Brimmell	
		PROJECT No:			
CONTRACTOR(S):	Owner		04-138		
OWNER:	Tom Jarvis				
CONTRACT REF:	Tom Jarvis	TIME:	morning	WEATHER:	clear
ASPECT(S) OF PROJECT REVIEWED: Excavation for the north finwall.					
OBSERVATIONS: The excavation steps down to the east [toward Saanich Inlet] at an appropriate depth. Soil consists of compact, brown, gravelly sand. There is significant loose sand at the footing steps, particularly the lower step.					
REMARKS / RECOMMENDATIONS: The excavation is to an appropriate depth and configuration. Loose material is to be removed from within footing forms, particularly at steps in the subgrade. The north side of the excavation should be securely draped with 6 mil poly. The excavation has somewhat undermined the south end of the Terraforce retaining wall. It would be appropriate to support this with timber bracing across to the other side of the excavation.					
RECOMMENDED TIMING OF NEXT SITE VISIT: During excavation for the required seawall.					
COPIES PROVIDED TO: Client/David Romain/Thor Repstock-CVRD					



Richard Brimmell



NOTICE ON TITLE RECOMMENDATION
Section 57 Community Charter

DATE: July 5th, 2010

BUILDING INSPECTOR: Brian Duncan, Chief Building Inspector

SUBJECT PROPERTY: 1695 Sandy Beach Road

LAND OWNER: Tom Jarvis

LOCATION AND DIMENSIONS OF OFFENDING STRUCTURE: Geotechnical Engineer required a retaining wall as part of the septic system retention. This was never done even though the owner agreed to do so. Occupancy was issued based on this being done.

PERMITTED USE: Residential

CURRENT/INTENDED USE: same

BACKGROUND (timeline of events, attempts at compliance, stop work order, safety concerns, etc):
.....Please see file.....

RECOMMENDATION: Notice on title for retaining wall not being completed.

Submitted by,

Brian Duncan, Chief Building Inspector
Planning and Development Department
Building Inspection Division



D2

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 7, 2010

DATE: August 31, 2010 **BUILDING FILE:** 2645 Mill Bay Rd
FROM: Jill Collinson, Planning Technician **BYLAW NO:** 2000
Development Services Division
SUBJECT: 2645 Mill Bay Road – Additional kitchen and bathroom facilities

Recommendation:

Committee direction is requested.

Purpose:

To obtain direction from the EASC with respect to a request for an additional kitchen, including a fridge, sink, stove, and island space, in an existing accessory building at 2645 Mill Bay Road in Electoral Area A.

Interdepartmental/Agency Implications: N/A

Background:

In September 1989, the CVRD issued a building permit relating to the construction of an accessory building in compliance with Zoning Bylaw No. 2000. Previously, the applicants owned and ran the *Ethnic Café* that was located in Frayne Centre. The business evolved and catering was integrated into activities. As the *Ethnic Café* has now closed its doors, there is still the occasional demand for catering activities, primarily for social-cultural events. The applicants are requesting an additional kitchen and bathroom be permitted in an accessory building on their property. The existing two-story garage currently has a bathroom (toilet and sink) on the upper floor. They have been advised by a CVRD building inspector that only one sink and one toilet fixture are permitted in an accessory building unless Board authorization is obtained. The owners wish to incorporate an additional bathroom (toilet and sink) fridge, kitchen sink, stove, and island space into the existing garage and are requesting permission from the Board, as outlined in the attached letter.

The CVRD's policy with respect to plumbing fixtures within accessory buildings originates from the following January, 2004 Electoral Area Services Committee resolution:

"As a measure to reduce the number of illegal dwellings in the CVRD, that staff be authorized to allow for one toilet and one sink, and no other facilities such as showers, bathtubs, and laundry and kitchen facilities, in accessory buildings, without the specific authorization of the Board."

Since 2004, requests for additional fixtures have been directed to the Board, through EASC.

Staff Comments:

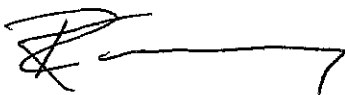
The owners state in their letter that they intend to use the converted accessory building for a small commercial type kitchen. The subject property is located at 2645 Mill Bay Road and is zoned R-3A (Urban Residential-Limited Height). Though the R3-A zone allows for a small suite, the subject property is not large enough to permit this usage, as noted in Zoning Bylaw No.2000.

Staff recommends that if the Committee choose to support their request that a restrictive covenant be registered. This covenant would prohibit the occupancy of the accessory structure as a dwelling as a condition approval. Staff also recommends that the covenant should require the property owner to remove all additional fixtures from the garage (one toilet and one sink permitted) at the time of sale. Although the covenant would not guarantee that structure would not be occupied as a dwelling, it would prevent future owners of the property from using the accessory building as a dwelling. This covenant would also facilitate future enforcement action, should it be required.

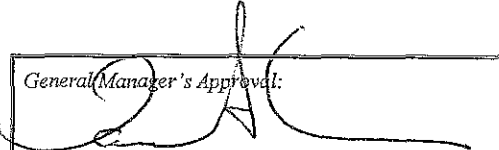
Options:

1. Allow the additional bathroom (sink and toilet) kitchen, including a fridge, sink, stove, and island space, in an existing accessory building for Lot 3, Section 1, Range 9, Shawnigan District, Plan 41541 except part in Plan 45732 (PID 000-674-478) at 2645 Mill Bay Road, subject to the registration of a covenant prohibiting occupancy of the accessory structure as a dwelling and removal of all additional facilities prior to change in ownership of the property.
2. Limit fixtures within an accessory building for Lot 3, Section 1, Range 9, Shawnigan District, Plan 41541 except part in Plan 45732 (PID 000-674-478) at 2645 Mill Bay Road.

Submitted by,



For: Jill Collinson,
Planning Technician
Development Services Division
Planning & Development Department

General Manager's Approval:  Signature
--

July 26, 2010

COWICHAN VALLEY REGIONAL DISTRICT
Development Services Department
175 Ingram Street, Duncan, BC V9L 1N8

Dear Sir/Madame,

Please accept this document in support for the building permit regarding modification of our garage at 2645 Mill Bay Rd, Mill Bay. Owners: Jan and Marilyn van der Have.

This garage was built in or about 1992 and since then was used as such. A building permit was taken out and is appended to the wall inside.

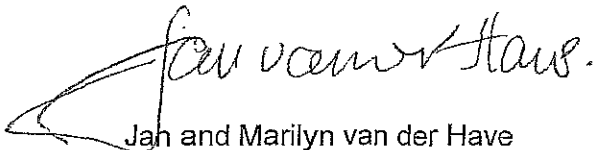
At present we are intending to modify the building to accommodate a small "commercial type" kitchen for Mrs. van der Have who is a specialist in oriental cooking and used to operate a restaurant at the Frayne Centre in Mill Bay, known as the Ethnic Cafe. The sole purpose of the endeavour is to provide her with a larger working area than presently available within the tight confines of the main house.

Mrs. van der Have's Filipino background combined with her cooking expertise has resulted in numerous requests for small catering projects by her extended family as well as other individuals. These activities are primarily social-cultural events as opposed to commercial ones and typically include friends as well as family members participating in the food preparation, hence the requirement for a larger working area.

Mrs. van der Have is on the elected board of the Provincial Intercultural Society, which meets regularly in Vancouver, and she has also contributed to published cookbooks.

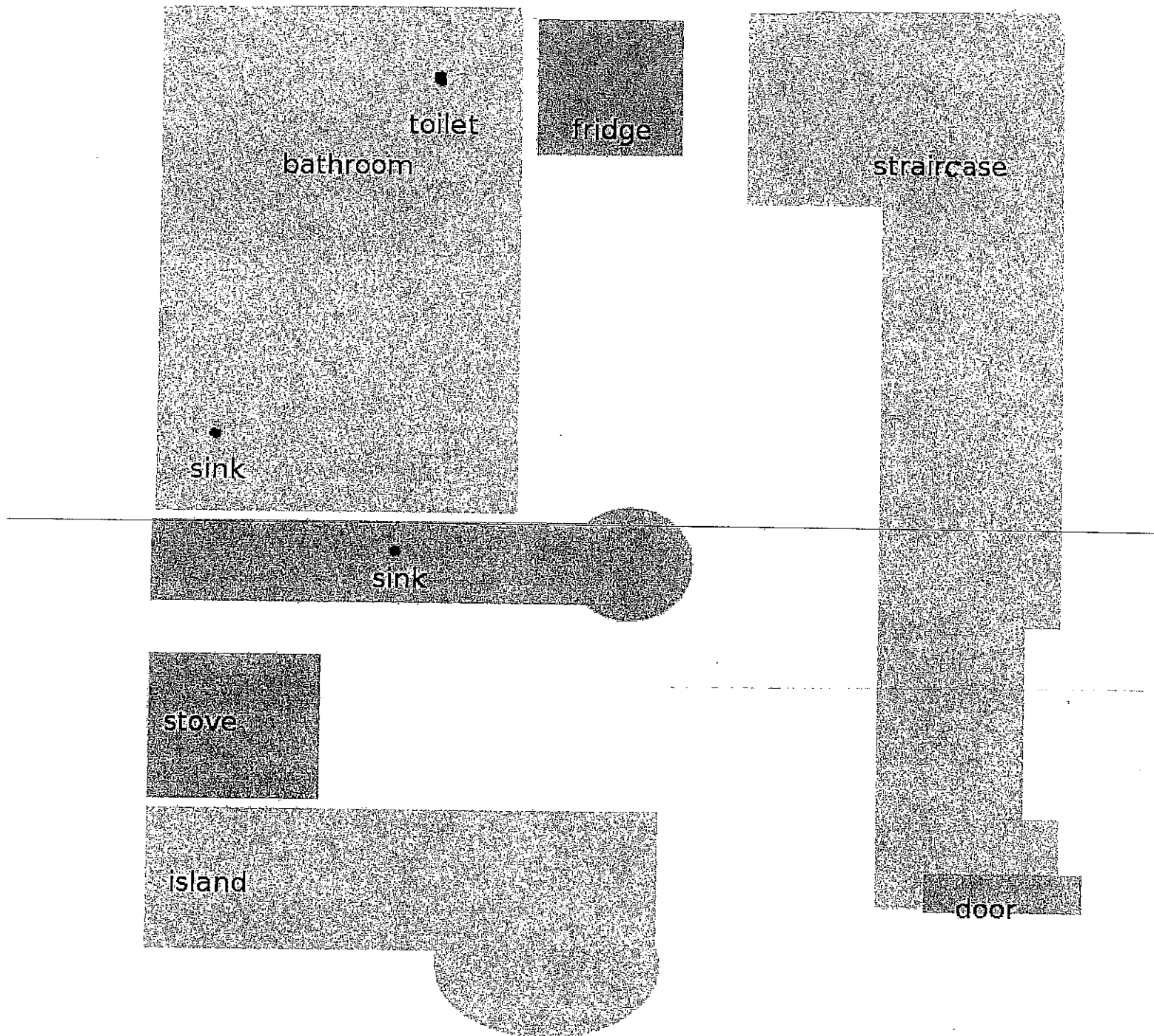
We would appreciate you granting us the necessary permit to modify the garage. All work done will be by fully qualified professional staff and done in accordance with applicable building codes.

Sincerely,

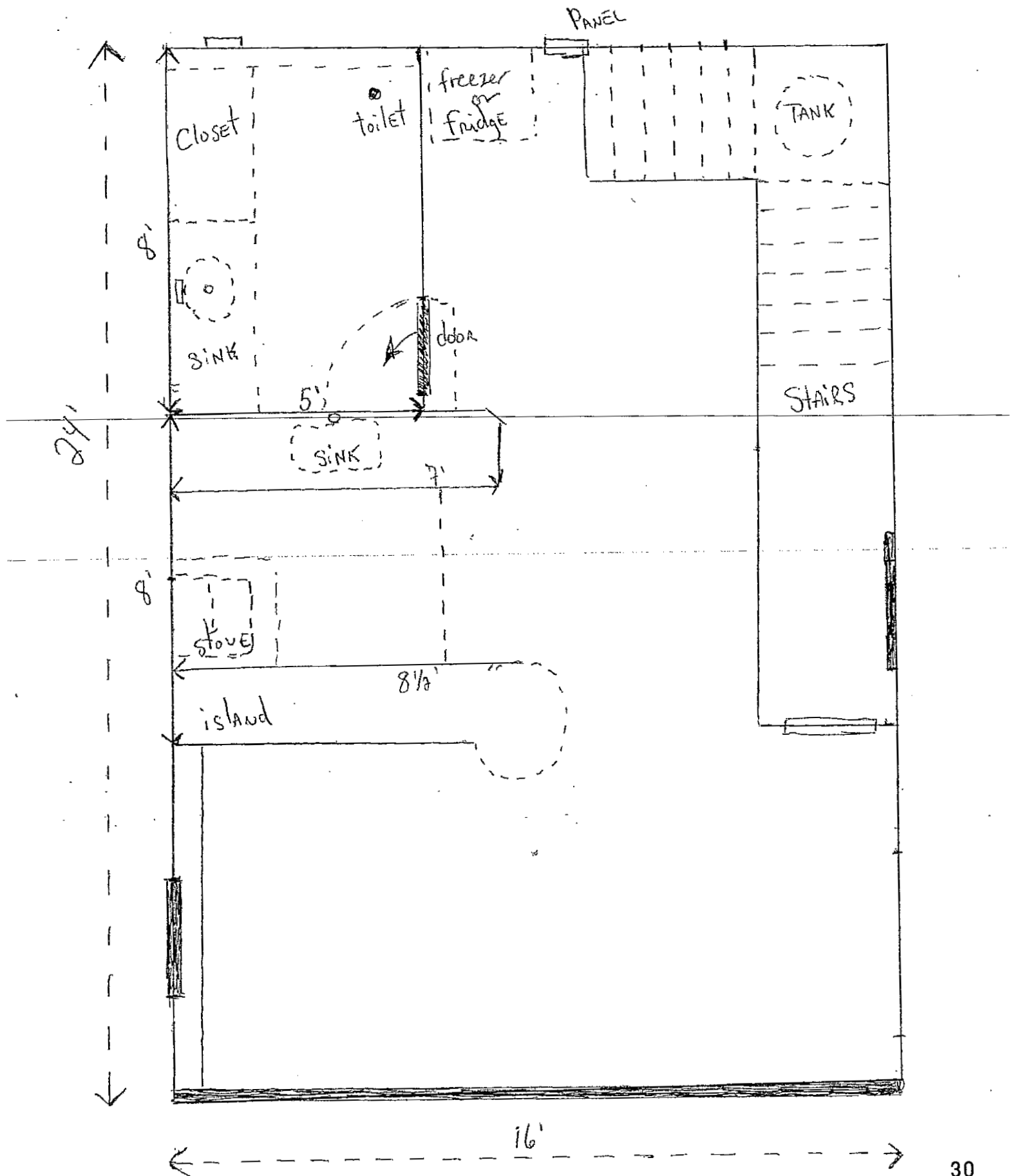


Jan and Marilyn van der Have
2645 Mill Bay Rd
Mill Bay, BC V0R 2P1

general layout plan



Layout





D3

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 21, 2010

DATE: September 15, 2010 **FILE NO:** 2-H09DP
FROM: Alison Garnett, Planner **BYLAW NO:**
SUBJECT: Development Permit Application No. 2-H-09 DP
(Yellow Point Ventures)

Recommendation:

That application No. 2-H-09DP be approved, and that a development permit be issued to Yellow Point Ventures for the 6 lot subdivision of Lot A, District lot 13, Oyster District, Plan VIP 77718, subject to compliance with the following:

- a. Compliance with the Riparian Areas Regulation Assessment dated May 12, 2009 by Madrone Environmental Services;
- b. Compliance with the Preliminary Geotechnical Assessment by Levelton Consultants Ltd, dated August 5, 2010;
- c. Compliance with the Groundwater Exploration Program by Levelton Consultants Ltd, revision dated July 23, 2010, including the following:
 - No underground heating oil storage tanks to be used, and containment systems be installed for any above ground storage tanks;
 - That future property owners be advised not to exceed the well rating estimates during long term pumping;
 - In compliance with Subdivision Bylaw No.1215, a covenant is registered on the proposed new lots, to ensure the wells are treated to the standards of the *Drinking Water Protection Act*, prior to residential use.
- d. Development of the property occurs in compliance with the *Heritage Conservation Act*, and a recommendation for a archaeological overview assessment is forwarded to the Ministry of Transportation and Infrastructure during the subdivision review process.

Purpose:

The applicants are proposing to create 6 lots in a phased 17 lot subdivision of the 55 hectare subject property. As the subject property is located in the Yellow Point and Riparian Areas Regulation Development Permit Areas, a development permit is required in accordance with Electoral Area H North Oyster/Diamond Official Community Plan (OCP) Bylaw No. 1497.

Financial Implications: N/A

Interdepartmental/Agency Implications: N/A

Background:

Location of Subject Property: 3850 Yellow Point Road

Legal Descriptions: Lot A, District lot 13, Oyster District, Plan VIP 77718 (PID 026 066 815)

Date Application and Complete

Original application submitted March 13, 2009

Documentation Received:

Final reports submitted September 1, 2010

Owner: 0752607 BC Ltd. (Yellow Point Ventures)

Applicant: Carol Warkentin for Yellow Point Ventures

Size of Parcel: 55 ha (136 acres)

Existing Zoning: A-2 Secondary Agriculture

Minimum Lot Size Under Existing Zoning: 2 hectares

Existing Plan Designation: Agricultural

Existing Use of Property: Residential

Existing Use of Surrounding Properties:

North: Residential

South: Chemainus First Nation Reserve No. 13

East: Residential

West: Residential

Services:

Road Access: Yellow Point Road

Water: Well

Sewage Disposal: Septic system

Agricultural Land Reserve Status: Located in the ALR. ALC resolution #766/2008 gave approval for 17 lot subdivision in December 2008

Environmentally Sensitive Areas: Several sensitive ecosystem polygons are located on the subject property, two of which are located on the proposed six lots. Please refer to attached Sensitive Ecosystem Inventory map and Riparian Areas Assessment.

Archaeological Site: Confirmed sites are identified along the ocean shoreline, adjacent to the subject property, in CVRD mapping and Remote Access to Archaeological Data (RAAD) mapping. Multiple unconfirmed archaeological sites are identified on the subject property, according to RAAD mapping. The Chemainus First Nation has asserted that archaeological sites are located on the subject property.

Planning Division Comments:

The subject property is a 55 hectare (139 acre) lot located on Yellow Point Road. The zoning is A-2 (Secondary Agriculture) and the subject property is located in the Agricultural Land Reserve (ALR). Currently located on the property are a mobile home and a second single family home. CVRD mapping identifies several sensitive ecosystems located throughout the subject property, including a watercourse as defined by the Riparian Areas Regulation.

The applicants have submitted an application to subdivide the subject property into 17 lots, ranging in size from 2 hectares to 11.6 hectares. Attached are plans of the proposed subdivision, which show the current proposal for six 2 ha lots located along Yellow Point Road, as well as the overall plan of 17 lots. The Agricultural Land Commission gave approval for the subdivision of the subject property in December 2008, based approximately on this 17 lot configuration. The applicants must complete the subdivision within three years of the date of the ALC decision.

The proposed subdivision complies with the 2 hectare minimum lot size of the A-2 zone, in accordance with Zoning Bylaw No. 1020. However, prior to proceeding with the subdivision application, a development permit is required.

The Riparian Areas Regulation DPA was created for the protection of the natural environment, its ecosystems and biological diversity. As required by the development permit guidelines, a report and mapping information by a qualified environmental professional is required in order to determine the location of riparian areas on the proposed new lots.

The Yellow Point DPA was created for the protection of the natural environment by minimizing the degradation of natural freshwater retention areas and for the protection of health, property and wildlife areas. The Yellow Point area has been identified as an area of sporadic and unreliable surface and groundwater. When developments such as this are proposed, the applicants are required by OCP Bylaw No. 1497 to submit professional reports which provide information on water requirements, waste disposal requirements and potential impact of project on the groundwater, as well as a report on the suitability and stability of the soil for the proposed uses. In compliance with these DPA requirements, the applicants have submitted the following reports:

Riparian Areas Regulation Assessment

May 12, 2009 by Madrone Environmental Services

The Madrone Environmental Services report provides mapping of the eight environmentally sensitive and riparian areas on the subject property. Specifically, within the six proposed lots of phase one, a sensitive wetland ecosystem is located on proposed lot 2. On proposed lot 5 is an identified shrub dominated wetland ecosystem. As neither of these wetlands connect to fish habitat, there are no established Streamside Protection and Enhancement Areas, under the Riparian Areas Regulation. No specific recommendations are noted in the Madrone RAR report for phase one of the subdivision, as no streams as defined by the RAR are located in this first phase.

With respect to impacts of this development on these wetlands, the proposed lots appear to be large enough to accommodate residential and agricultural development, without encroaching on the pond and wetland. Furthermore, there is a covenant registered on title of the subject property which prevents buildings from being constructed within 15 metres of the natural boundary of any watercourse.

For convenience sake, a limited version of the Madrone assessment is attached to this report. The complete report is available from the Planning and Development Department.

Preliminary Geotechnical Assessment

August 5th, 2010 by Levelton Consultants

The geotechnical report address the 6 proposed lots in phase one, and provides a description of the surface and subsurface conditions of the proposed lots. The report notes that the lots in phase one are considered suitable for the proposed uses, which include single family residences and associated underground infrastructure, and the proposed roadways.

Further geotechnical assessments are recommended, however this work can be accomplished at the building permit application stage.

Groundwater Exploration Program

Revised July 23, 2010 by Levelton Consultants Ltd.

The Yellow Point aquifer is attributed with moderate demand, low productivity and high vulnerability. The applicants have drilled wells on each of the 5 new proposed lots, the 6th lot has an existing well. The volume produced by these wells meets the quantity requirements of CVRD Subdivision Bylaw No. 1215; however the total coliform, pH and iron levels exceed the recommendations of the Drinking Water Guidelines for water quality. The report notes that these are aesthetic considerations, but treatment will be required.

With respect to the impact on groundwater supplies, the Levelton report states that due to the depth of wells, and the location of the subject property at the downgradient portion of the aquifer, there is a low likelihood that the increased domestic water use in this proposed development will negatively impact the existing supplies. The report provides the opinion that septic systems will pose a low risk on the health of the aquifer, and furthermore that salt water intrusion into the aquifer is unlikely.

The groundwater exploration program makes several recommendations, which staff suggest be included as conditions of the development permit:

- No underground heating oil storage tanks be used for the proposed new residences, and containment systems be installed for any above ground storage tanks, page 12.
- that future property owners be advised, through registration of a development permit on title, not to exceed the well rating estimates during long term pumping;
- That the wells be treated with disinfectant and re-tested for coliform bacteria prior to being put into use. Staff will require that this be completed prior to final subdivision approval from Ministry of Transportation and Infrastructure, in accordance Subdivision Bylaw 1215. If proof of water quality is not achieved during this phase, then a covenant can be registered on title, to ensure that treatment is accomplished prior to residential use.

For convenience sake, individual well log information contained with the appendices of this assessment are not attached to this staff report, however they are available from the Planning and Development Department.

Advisory Planning Commission:

This application was not referred to the Electoral Area H Advisory Planning Commission, as directed by the Area Director.

Summary:

Considering the identification of confirmed archaeological sites within approximately 100 metres of the subject property, and unconfirmed sites throughout the subject property, staff recommend that an Archaeological Overview Assessment be completed during the subdivision review.

The applicant has been advised that a subsequent development permit application, with associated professional reports, will be required for future subdivision of the subject property, as the Levelton reports have only addressed phase one of the overall development.

The attached professional reports meet the requirements of the Riparian Areas Regulation and Yellow Point DPA. They provide reasonable assurance that the first six lots can be developed for residential purposes with a low risk of negative impact on the Yellow Point aquifer and sensitive ecosystems on site, provided the noted recommendations are followed. Finally, the proposed six lots comply with the 2 hectare minimum lot size of the A-2 zone, in accordance with Zoning Bylaw No. 1020.

Options:

1. That application No. 2-H-09 DP be approved, and that a development permit be issued to Yellow Point Ventures for the 6 lot subdivision of Lot A, District lot 13, Oyster District, Plan VIP 77718, subject to compliance with the following:

- a. Compliance with the Riparian Areas Regulation Assessment dated May 12, 2009 by Madrone Environmental Services;
- b. Compliance with the Preliminary Geotechnical Assessment by Levelton Consultants Ltd, dated August 5, 2010;
- c. Compliance with the Groundwater Exploration Program by Levelton Consultants Ltd, revision dated July 23, 2010, including the following:
 - No underground heating oil storage tanks to be used, and containment systems be installed for any above ground storage tanks;
 - That future property owners be advised not to exceed the well rating estimates during long term pumping;
 - In compliance with Subdivision Bylaw No.1215, a covenant is registered on the proposed new lots, to ensure the wells are treated to the standards of the *Drinking Water Protection Act*, prior to residential use.
- d. Development of the property occurs in compliance with the *Heritage Conservation Act*, and an archaeological overview assessment is recommended during the subdivision review process of the Ministry of Transportation and Infrastructure.

2. That application No. 2-H-09 DP not be approved in its current form.

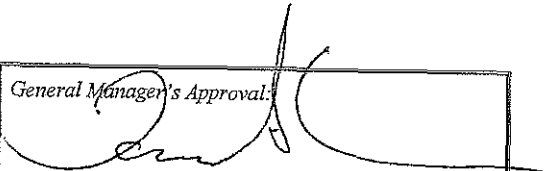
Option 1 is recommended.

Submitted by,



Alison Garnett,
Planner
Development Services Division
Planning and Development Department

AG/ca

General Manager's Approval:	
Signature	



COWICHAN VALLEY REGIONAL DISTRICT

DEVELOPMENT PERMIT

NO: 2-H-10 DP

DATE: September 14, 2010

TO: Yellow Point Ventures- Draft

ADDRESS: _____

1. This Development Permit is issued subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands within the Regional District described below (legal description):

Lot A, District lot 13, Oyster District, Plan VIP 77718 (PID 026 066 815)
3. Authorization is hereby given for the 6 lot subdivision of the subject property in accordance with the conditions listed in Section 4, below.
4. The development shall be carried out subject to the following condition:
 - a. Compliance with the Riparian Areas Regulation Assessment dated May 12, 2009 by Madrone Environmental Services;
 - b. Compliance with the Preliminary Geotechnical Assessment by Levelton Consultants Ltd, dated August 5, 2010;
 - c. Compliance with the Groundwater Exploration Program by Levelton Consultants Ltd, revision dated July 23, 2010, including the following:
 - No underground heating oil storage tanks to be used, and containment systems be installed for any above ground storage tanks;
 - That future property owners be advised not to exceed the well rating estimates during long term pumping;
 - In compliance with Subdivision Bylaw No.1215, a covenant is registered on the proposed new lots, to ensure the wells are treated to the standards of the *Drinking Water Protection Act*, prior to residential use.
 - d. Development of the property occurs in compliance with the *Heritage Conservation Act*, and a recommendation for a archaeological overview assessment is forwarded to the Ministry of Transportation and Infrastructure during the subdivision review process.
5. The land described herein shall be developed in substantial compliance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit shall form a part thereof.
6. The following Schedule is attached:
 - Preliminary Geotechnical Assessment by Levelton Consultants Ltd, dated August 5, 2010
 - Riparian Areas Regulation Assessment dated May 12, 2009 by Madrone Environmental Services
 - Groundwater Exploration Program by Levelton Consultants Ltd, revision dated July 23, 2010
7. This Permit is not a Building Permit. No certificate of final completion shall be issued until all items of this Development Permit have been complied with to the satisfaction of the Development Services Department.

ISSUANCE OF THIS PERMIT HAS BEEN AUTHORIZED BY RESOLUTION NO.
XXXX PASSED BY THE BOARD OF THE COWICHAN VALLEY REGIONAL
DISTRICT THE XXth DAY OF 2010.

Tom Anderson, MCIP
Manager, Development Services

NOTE: Subject to the terms of this Permit, if the holder of this Permit does not substantially start any construction within 2 years of its issuance, this Permit will lapse.

I HEREBY CERTIFY that I have read the terms and conditions of the Development Permit contained herein. I understand and agree that the Cowichan Valley Regional District has made no representations, covenants, warranties, guarantees, promises or agreements (verbal or otherwise) with _____ other than those contained in this Permit.

Signature

Witness

Owner/Agent

Occupation

Date

Date



**Cowichan
Valley
Regional
District**

This map is compiled from various sources for internal use and is designed for reference purposes only.

The Regional District does not warrant the accuracy.

All persons making use of this compilation are advised that amendments have been consolidated for convenience purposes only and that boundaries are representational.

The original Bylaws should be consulted for all purposes of interpretation and application of the Bylaws.

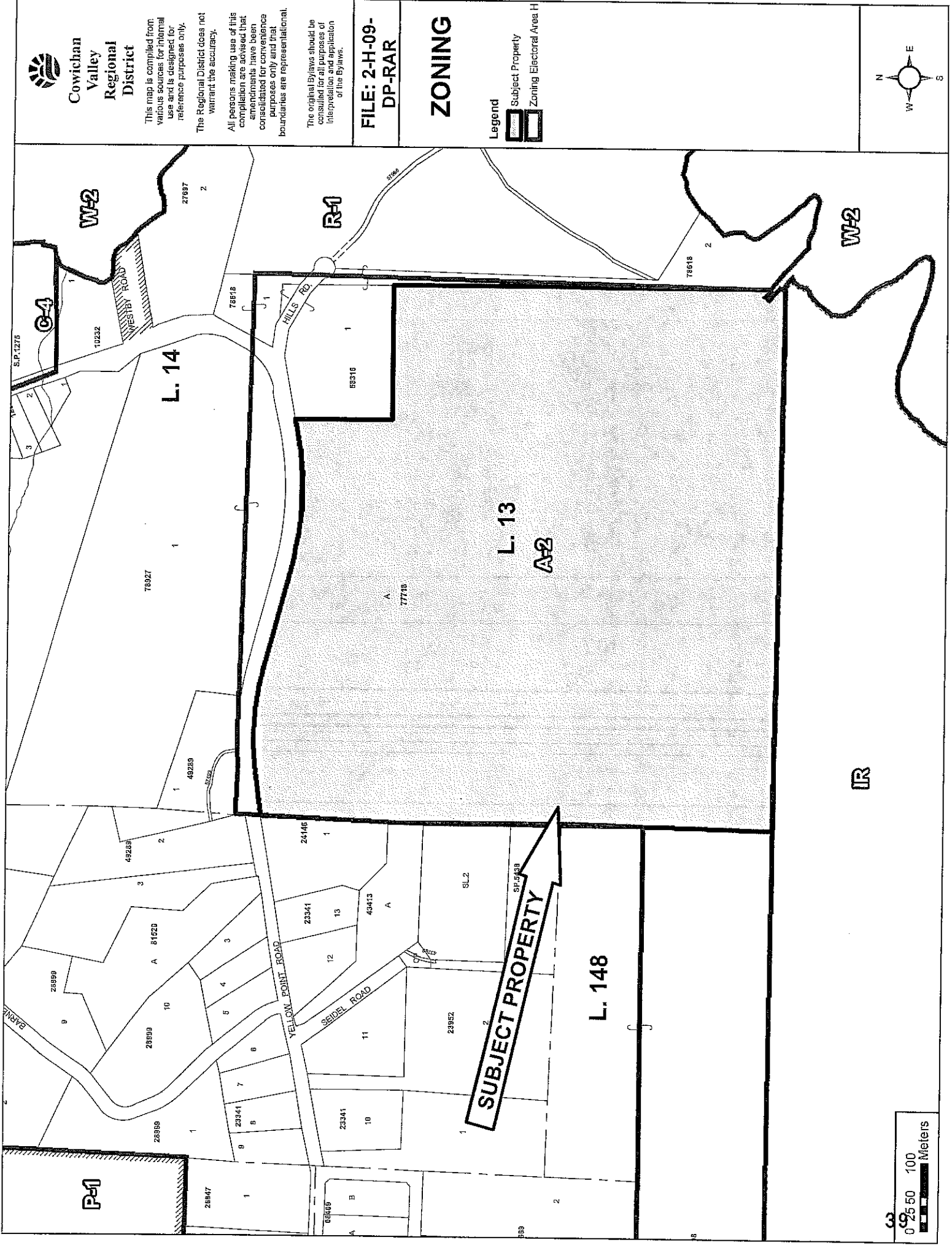
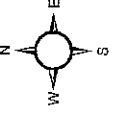
**FILE: 2-H-09-
DP-RAR**

ZONING

Legend



Subject Property
Zoning Electoral Area H





This map is compiled from various sources for internal use and is designed for reference purposes only.

The Regional District does not warrant the accuracy.

All persons making use of this compilation are advised that amendments have been consolidated for convenience purposes only and that boundaries are representational.

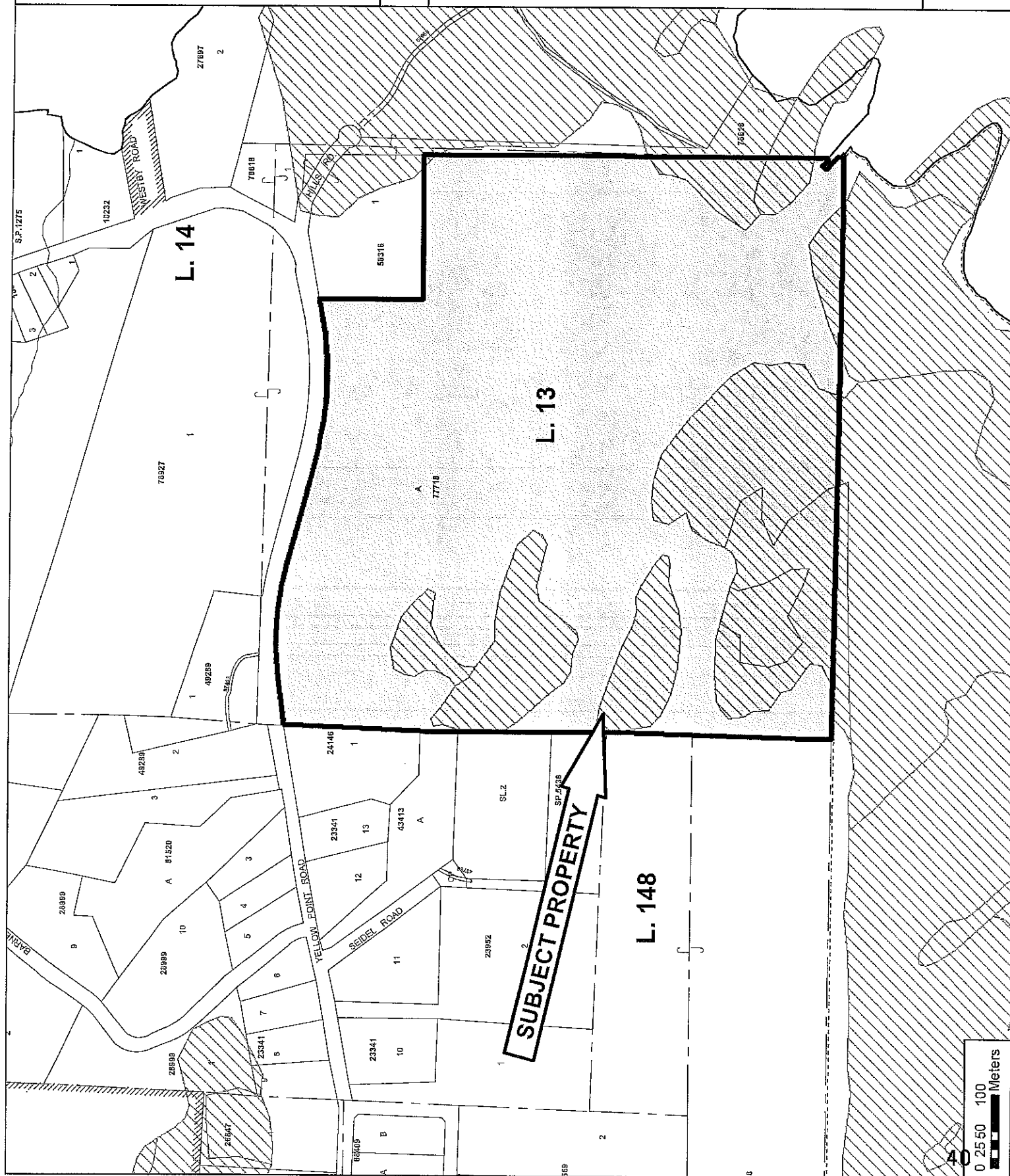
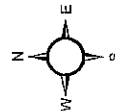
The original Bylaws should be consulted for all purposes of Interpretation and application of the Bylaws.

FILE: 2-H-09-
DP-RAR

Sensitive Ecosystem Inventory

Legend

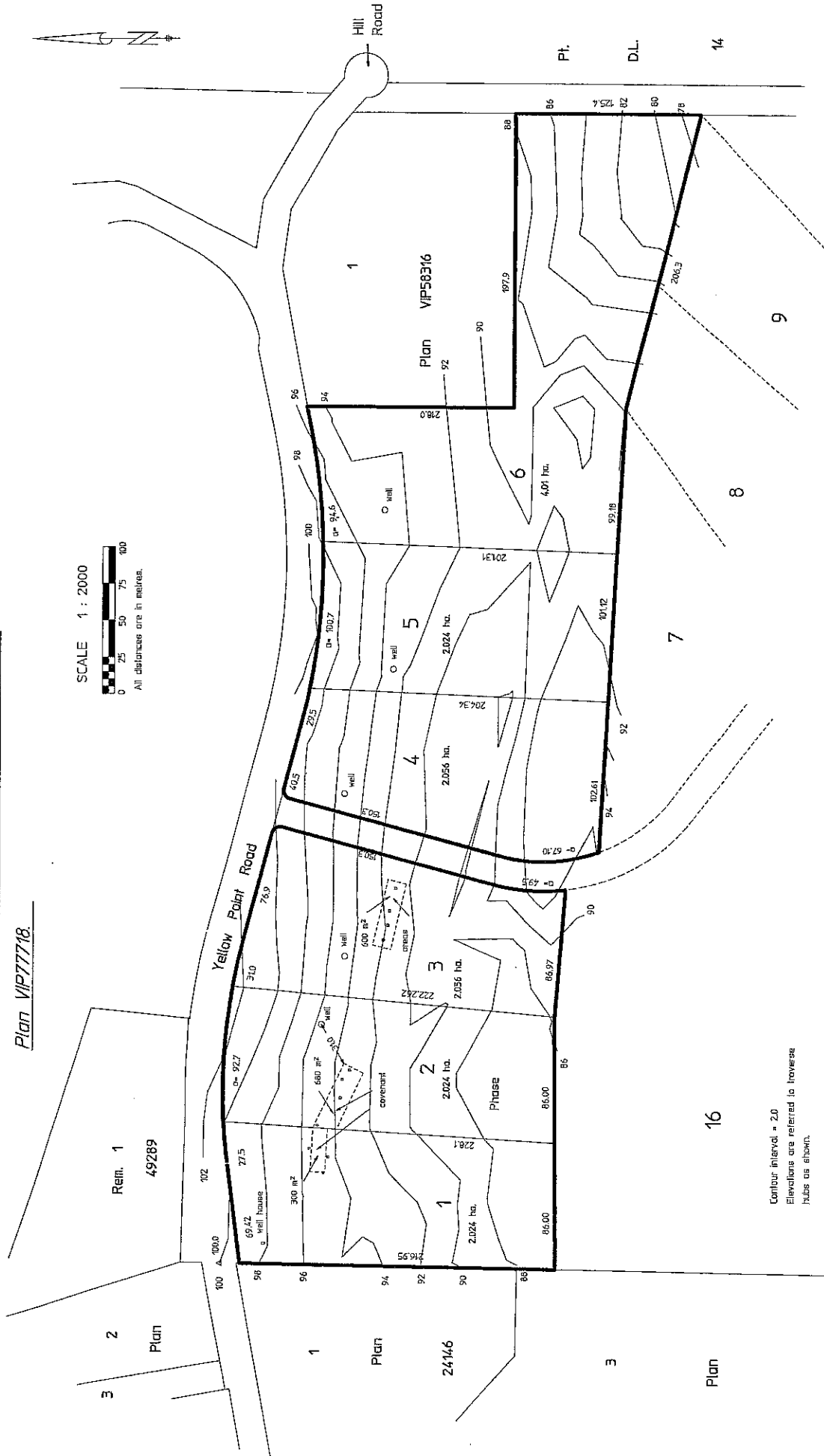
Subject Property
SEI 2004



Plan of proposed Subdivision of part of

Lot A, District Lot 13, Oyster District,

Plan V/P77718.



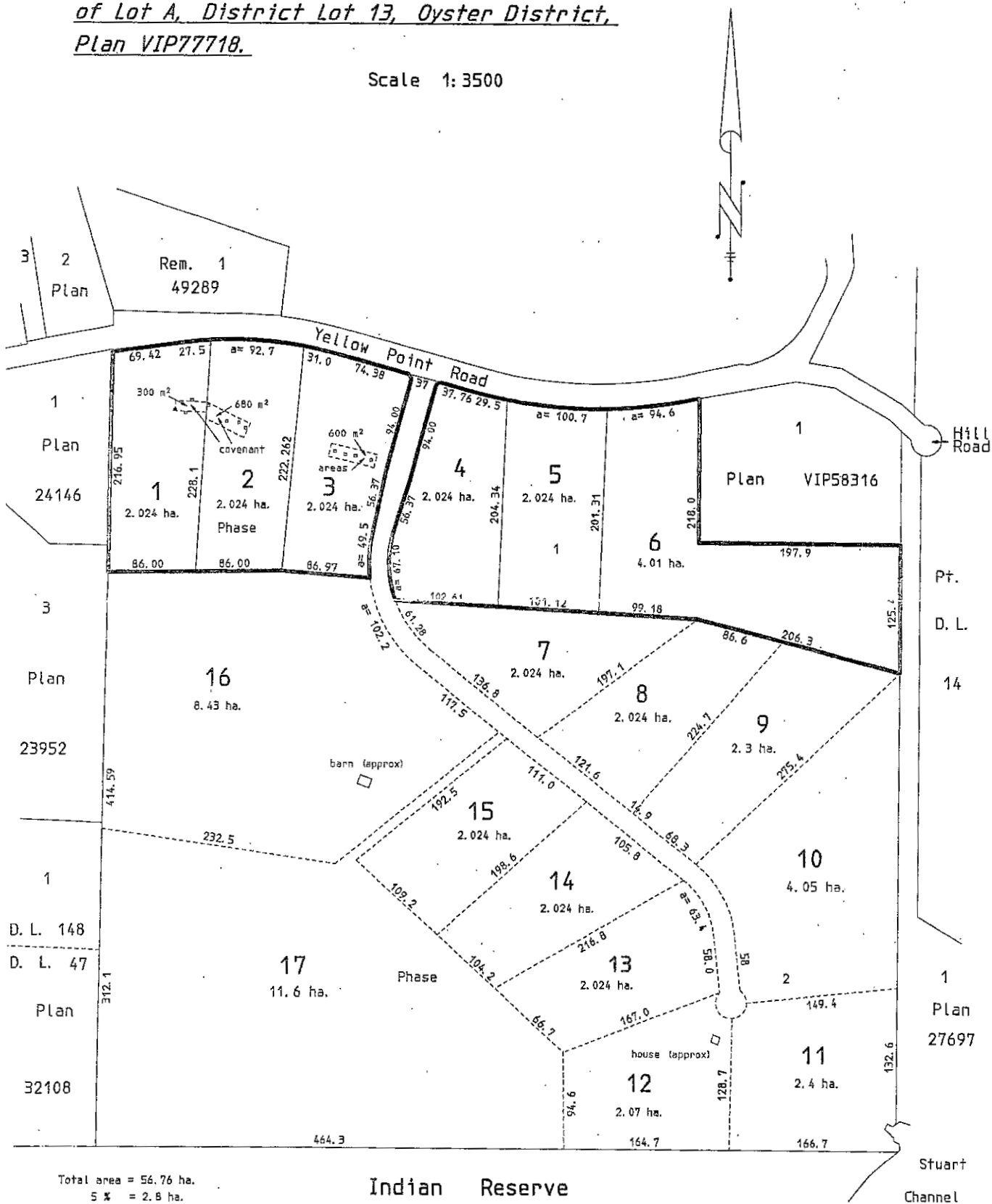
Contour interval = 2.0
Elevations are referred to traverse
hubs as shown.

Corrected correct
this 3rd day of August, 2010.

B.C.L.S.

Plan VIP77718.

Scale 1: 3500



R. Hutchinson
and Surveying Ltd.
Box 459, 20 Warren St.,
Edinburgh, B.C.
TG 1A9
2501 245-9777

File 0-13-2 Mar. 16, 2009.

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 **May 12th 2009**

I. Primary QEP Information

First Name	Trystan		Middle Name		
Last Name	Willmott				
Designation	Technologist		Company	Madrone Environmental Services Ltd.	
Registration #	25491		Email	trystan.willmott@madrone.ca	
Address	1081 Canada Avenue				
City	Duncan	Postal/Zip	V9L 1V2	Phone #	250 746 5545
Prov/state	BC	Country	Canada		

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

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

III. Developer Information

First Name	Murray		Middle Name		
Last Name	McNabb				
Company	Yellowpoint Ventures				
Phone #	250 741 6314		Email	mmcnab@HereldEngineering.com	
Address	3852 Yellowpoint Road				
City	Cedar	Postal/Zip			
Prov/state	BC	Country	Canada		

IV. Development Information

Development Type	Subdivision				
Area of Development (ha)	N/A		Riparian Length (m)	1500	
Lot Area (ha)	57		Nature of Development	New	
Proposed Start Date	2009-04-10		Proposed End Date	2009-06-10	

V. Location of Proposed Development

Street Address (or nearest town)	Lot A, District Lot 13, Oyster District				
Local Government	Cowichan Valley Regional District		City	Duncan	
Stream Name	N/A				
Legal Description (PID)	026 066 815		Region	Vancouver Island	
Stream/River Type	Stream		DFO Area	South Coast	
Watershed Code	N/A				
Latitude	49	2	21	Longitude	123 45 46

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

Table of Contents for Assessment Report

Page Number

1. Description of Fisheries Resources Values	
2. Results of Riparian Assessment (SPEA width)	
3. Site Plan	
4. Measures to Protect and Maintain the SPEA (detailed methodology only).	
1. Danger Trees.....	
2. Windthrow.....	
3. Slope Stability.....	
4. Protection of Trees.....	
5. Encroachment	
6. Sediment and Erosion Control.....	
7. Floodplain.....	
8. Stormwater Management.....	
5. Environmental Monitoring	
6. Photos	
7. Assessment Report Professional Opinion	

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

(Provide as a minimum: Species present, type of fish habitat present, description of current riparian vegetation condition, connectivity to downstream habitats, nature of development, specific activities proposed, timelines)

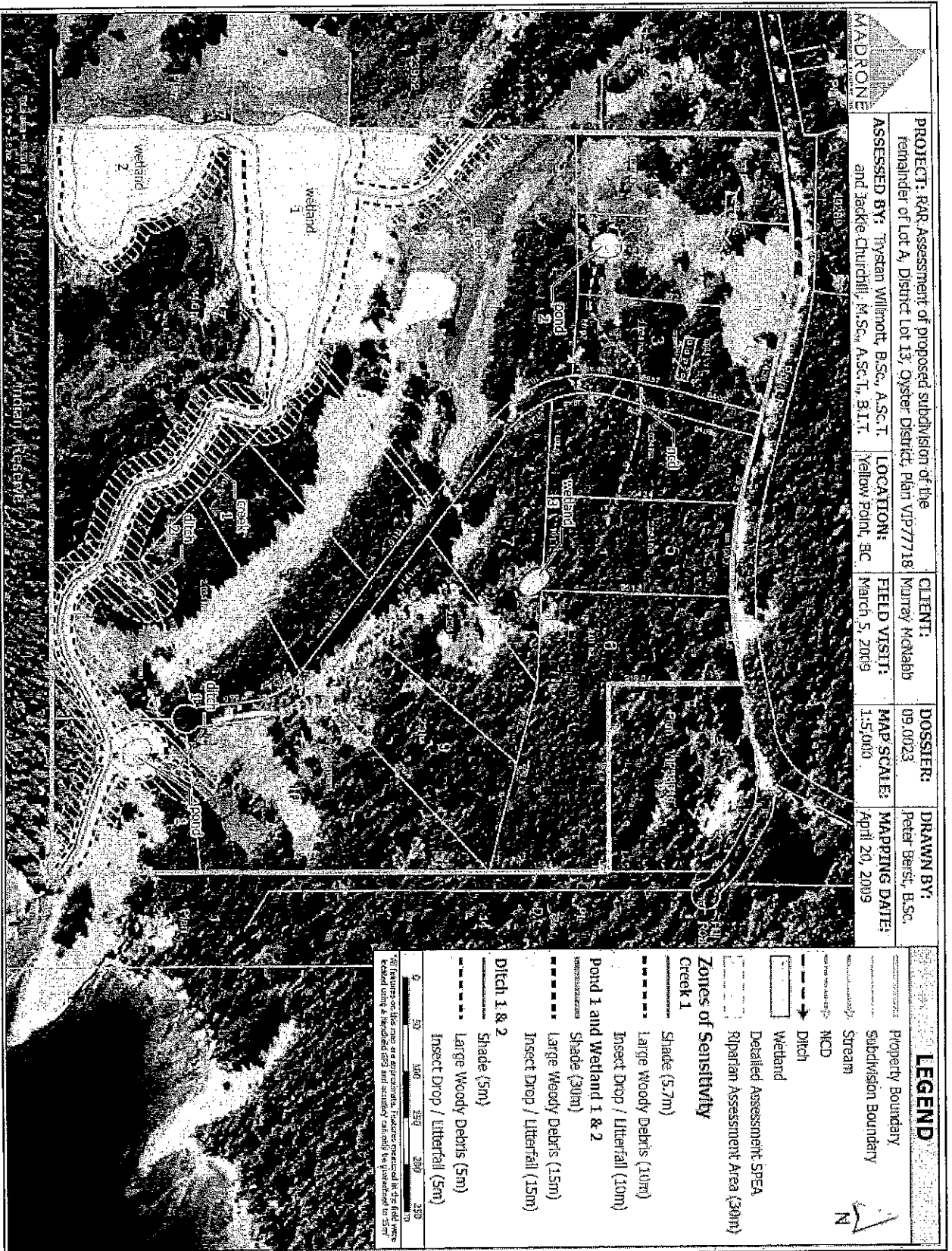
The completion of this Riparian Area Assessment was triggered by an application for subdivision. The proposed subdivision would involve the creation of 17 lots, the smallest being 2.024 ha and the largest 11.6 ha. The assessment area is currently in the Agricultural Land Reserve (ALR) and the subdivision process will not change this zoning. Existing permanent structures include old barns, outbuildings, a residence and access roads. The area to be subdivided was traversed to assess for any water bodies that would be applicable to the Riparian Area Regulations assessment procedure.

The following drainage description is meant to serve as a narrative to the sequence of photographs shown in Section 6 and the Site Plan shown in Section 3. Having these sections available while reading the drainage description will help in gaining an understanding of the on-site characteristics.

One main drainage ("Creek 1") flows through the south-central portion of the study area, with two connected wetlands (Wetlands "1" and "2") and one dug pond ("Pond 1"). The drainage has been historically ditched over the majority of its length and connects directly to the ocean. Two ditches were also located during the assessment, which connect to Creek 1. The lower portion of Creek 1 consists of a low gradient channel, with the potential (albeit marginal) for occupation by fish moving in from the ocean on a seasonal basis. The creek dries during the summer months. Fish habitat values are generally limited in the lower portion of the creek, given the lack of habitat diversity. Substrate type is predominantly smooth bedrock, and there is a lack of security/refuge habitat for fish (no LWD, undercut banks or deeper pools). Spawning gravel is also non-existent in the lower portion of the creek. Functioning riparian vegetation is limited. An existing structure has been built over the creek close to the beach in the far south eastern corner of the property. An additional structure (barn) exists on the south side of the creek in this lower area near the ocean.

"Pond 1" represents a circular dug-out irrigation pond that connects directly to Creek 1 via a culverted outflow channel. This pond offers limited potential to support resident fish populations, as the water likely shallows and warms to intolerable levels for fish, with an associated drop in dissolved oxygen in the warmer water. The pond is un-shaded and shallow (even in the winter months). A short ditch ("Ditch 1") flows into the northern margins of the pond, which drains a seasonally wet fluctuating water table site. This ditch is unlikely to support fish, given the marginal habitat viability of Creek 1 and a lack of fish habitat attributes (i.e. wetted area, cover/security and spawning areas).

Upstream of Pond 1, the creek enters a mature forested stand and begins to show characteristics of a stream as opposed to a channelized ditch. Fish habitat values increase, given the natural sinuosity and associated pool-riffle habitat type. Cover in the form of LWD, undercut banks and deeper pools is evident throughout the mature forest patch. Alluvial deposits are also evident, creating potential spawning areas. Riparian vegetation in the form of mature forest is providing function regarding litter fall, shade, insect drop and provision of LWD. Given the seasonal flow regime and lack of permanent habitat for resident fish, or rearing anadromous fish, however, it is



Section 4. Measures to Protect and Maintain the SPEA

This section is required for detailed assessments. Attach text or document files, as need, for each element discussed in chapter 1.1.3 of Assessment Methodology. It is suggested that documents be converted to PDF before inserting into the assessment report. Use your "return" button on your keyboard after each line. You must address and sign off each measure. If a specific measure is not being recommended a justification must be provided.

1. Danger Trees	I, <u>Trystan Willmott</u>, hereby certify that: y) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>; z) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Murray McNabb</u>; aa) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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
	Danger trees likely exist inside the RAA where Creek 1 flows through the mature forested ecosystem. Any developments inside the RAA of the creek in this particular area (e.g. proposed lots 13, 14, 15 and 17) would likely involve a more detailed assessment for danger trees. Beyond this treed area, any proposed future developments would likely not require further danger tree assessments. This is due to the historical land use and predominance of open fields in remaining RAAs.
2. Windthrow	I, <u>Trystan Willmott</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>Murray McNabb</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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
	Damage to trees from windthrow usually occurs as a result of clearing large areas of trees and creating edges that are exposed to increased wind velocities. Again, the only area that may be prone to windthrow as a direct result of development activities would be the treed area encompassing lots 13, 14, 15 and 17. Specific impacts would be dependent on footprints and individual development proposals.
3. Slope Stability	I, <u>Trystan Willmott</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>Murray McNabb</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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
	The assessment area consists of low topographical relief and there were no indicators of slope instability in any RAAs. It is unlikely that any future developments proposed inside an RAA would trigger further slope stability assessments.
4. Protection of Trees	I, <u>Trystan Willmott</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>Murray</u>

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

<u>McNabb;</u> c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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	
	The most likely area for potential damage to occur to trees during any future development activities would be the treed area generally covered by lots 13, 14, 15 and 17. Damage to trees usually occurs inadvertently during development, e.g. trenching through structural roots, damaging bark or knocking out limbs. More detailed measures would need to be implemented, dependent on specific footprints, to ensure that trees are not damaged. General mitigation measures usually include identifying the rooting zones of trees and implementing visible protective areas on the ground prior to development occurring.
5. Encroachment	
	I, <u>Trystan Willmott</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>Murray McNabb</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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
	The majority of the land in and around the water bodies described has been historically used for agriculture, and there has been encroachment into the RAA due to the historical land use activities (i.e. farming). The study area (including areas now identified as RAAs) can continue to be used for farming and farming related activities when individual lots are purchased. In addition, existing structures (whether related to farming or not) inside the boundaries of RAAs are considered legally non-conforming. Any new developments not associated with farming/farming activities would trigger the RAR process, if these developments were proposed within an RAA.
6. Sediment and Erosion Control	
	I, <u>Trystan Willmott</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>Murray McNabb</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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
	No specific recommendations can be formulated at present, as there are no specific development proposals. Should any development trigger the RAR procedure in the future, sediment and erosion control plans would need to be implemented to ensure that sediment does not become mobilized and transported into water courses.
7. Stormwater Management	
	I, <u>Trystan Willmott</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>Murray McNabb</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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
	The goal of stormwater management is to capture surface run off from impervious surfaces and return it to natural hydrological pathways. No specific recommendations can be made at this stage, although should the RAR process be triggered by any

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

	future developments, site specific stormwater management measures will be developed.
8. Floodplain Concerns (highly mobile channel)	
I, <u>Trystan Willmott</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>Murray McNabb</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and 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	
	Creek 1 is not associated with an active floodplain and no further recommendations would be made regarding this aspect.

Section 5. Environmental Monitoring

Attach text or document files explaining the monitoring regimen. Use your "return" button on your keyboard after each line. It is suggested that all document be converted to PDF *before* inserting into the PDF version of the assessment report. Include actions required, monitoring schedule, communications plan, and requirement for a post development report.

Monitoring is generally required to oversee construction projects on the ground to ensure that the various measures are being implemented.

In this case, no developments are proposed on the assessment area, as the subdivision procedure has triggered the RAR process. Monitoring may take the form of the local government ensuring that any new developments, if not consistent with farming/farming related activities inside an RAA, lead to the completion of a focused RAR assessment report.

Applicable streams have now been identified, allowing the local government to assess any new development applications proposed on the property under the Regulation. Protection of the Riparian Assessment Areas by means of a covenant system is not recommended in this case, as this would involve removing currently active agricultural land from the ALR. All areas inside RAAs can continue to be used as agricultural land.

The Federal Fisheries Act still applies to all activities on the land.



05 August 2010
File Ref: VI10-1322-00

Levelton Consultants Ltd.
Web Site: www.levelton.com

Attn: Ms. Carol Warkentin

Yellow Point Ventures
Box 328
Ladysmith BC
V9G 1A3

Vancouver Island Region

#8-2663 Kilpatrick Avenue
Courtenay, BC
Canada V9N 7C8
Tel: 250 334-9222
Fax: 250 334-3955
E-Mail: courtenay@levelton.com

Re: Preliminary Geotechnical Assessment
Proposed Residential Subdivision – Phase 1 (6 Lots)
3850 Yellow Point Road, Cedar, BC

1935 Böllinger Road
Nanaimo, BC
Canada V9S 5W9
Tel: 250-753-1077
Fax: 250 753-1203
E-Mail: nanaimo@levelton.com

1.0 INTRODUCTION

As requested, Levelton Consultants Ltd. (Levelton) has carried out a preliminary geotechnical assessment relating to the proposed development of a new 6-lot subdivision for the Yellow Point Ventures (Ventures) project on Yellow Point Road. We understand that this report is to be submitted by Ventures in support of a development permit application to the Cowichan Valley Regional District (CVRD).

760 Enterprise Crescent
Victoria, BC
Canada V8Z 6R4
Tel: 250 475-1000
Fax: 250 475-2211
E-Mail: victoria@levelton.com

The scope of work was outlined in Levelton's proposal dated 16 July 2010 (File Ref: PR10-1130). Authorization to proceed was provided on 26 July 2010 and followed with written authorization on 4 August 2010. This preliminary assessment report addresses Items 3a and 3d(ii) described in the CVRD's letter to Ventures dated 12 May 2009. That letter specifies the need for a Geotechnical Engineering Report which reports on *"the suitability and stability of the soil for proposed use including information on soil test sites, soil depths, textures, and composition"*.

Construction Materials
Building Science
Geotechnical
Metallurgy and Corrosion
Environmental
Physical Testing

The following sections present a summary of observations made during a site reconnaissance, results of a test pit and laboratory testing program, and provides geotechnical discussion and recommendations regarding Phase 1 of the proposed residential subdivision.

2.0 PROJECT AND SITE DESCRIPTION

2.1 Project Description

Levelton understands that Ventures is proposing to subdivide a 57 hectare (142 acre) parcel of land located at 3850 Yellow Point Road in Cedar, BC (Figure 1). Phase 1 involves six residential lots on the south side of



Yellow Point Road and an approximate 200 lineal meter section of road (between proposed Lots 3 and 4) that is to provide access to future phases of the project. Five of the proposed lots in Phase 1 are slightly larger than 2 ha with the last lot being approximately 4. ha (Figure 2). All of the Phase 1 lots are to be accessed from Yellow Point Road. We understand that the proposed subdivision is for single family houses. We understand that the proposed subdivision will be serviced with underground water and storm sewers, overhead power and on-site septic systems. Levelton understands that septic system design and layout is to be provided by others.

2.2 Site Description

Levelton visited the site on 28 July 2010, accompanied by Mr. Bill and Ms. Carol Warkentin and Mr. Loïd Hiebert of Ventures. The area of Phase 1 was predominantly forested land. At the time of the site visit, partially cleared in the area of Lots 1 to 3 with exposed bedrock area near to the road in Lots 2 and 3.

A gravel road traversed Lots 1 and 2 in southeasterly direction and then headed south.

In general, ground surface at the site sloped down gently from north to south with an approximate elevation change of 8 m across each property. Figure 3 shows the contour lines provided by W.R.Hutchinson Land Surveying Ltd. for the Phase 1 subdivision.

An existing modular home was present in the north part of lot 1 near to Yellow Point Road. We understand that a septic system and a drinking water well were also present in the vicinity of this structure.

3.0 DESKTOP REVIEW

The Nanaimo surficial geology map suggests that the site is underlain by a veneer of colluvial deposits underlain by bedrock within shallow depths (typically 0.1 to 1 m) with numerous bedrock outcrops. Bedrock mapping indicates that the Yellow Point area is underlain by Cretaceous-aged sedimentary rock of the Nanaimo Group.

A review of historical aerial photographs for the area taken between 1946 and 1993 indicated no distinguishable changes in the tree coverage of the site over that time period.

Levelton carried out a hydrological assessment for the proposed subdivision (Levelton's File No. V109-1519 dated 23 July 2010). The study reflected that ground water is deep (> 60 m) at the project site. Drilling information (Water well logs) showed that sandstone bedrock extended to the end of drilling at depths greater than 80 m.



4.0 SUBSURFACE CONDITIONS

Twelve test pits were excavated on 03 August 2010 (TP10-01 to TP10-12) in the area of Phase 1 using a rubber tyred backhoe equipped with a digging bucket provided by Ventures. The layout of the proposed test pits was provided to provide general overall coverage of the northern portions of the proposed lots (i.e. in the area anticipated for support of residential structures). Figure 3 shows the approximate test pit locations and rock outcrops

Soil conditions were logged by a Levelton representative and are described on the attached test pit logs in Appendix 1. Moisture content and gradation analysis were carried out on select soil samples and the results are provided in Appendix 1.

In summary of the test pit logs, soil conditions encountered at the test pit locations included 0.1 m of topsoil or forest litter overlying a veneer of "fine-grained silty sand" of varying thickness that ranged between 0.2 to 1.4 m overlying grey sandstone bedrock. The silty sand was not encountered at test pits TP10-1, TP10-3 and TP10-5 at the north portion of Phase 1. A dense, till-like deposit was encountered at 0.5 m depth at test pit TP10-12 at the eastern edge of Phase 1. Effective refusal was encountered on bedrock at depths below ground surface ranging from 0 m (i.e. at surface) to 1.5 m depth. The upper 0.3 to 0.9 m of bedrock at test pits TP10-7, 9 and 11 was weathered and excavatable with the backhoe. In general, the depth to bedrock increased in a southerly direction.

Sloughing and seepage were not observed during the test pit assessment.

5.0 DISCUSSION AND RECOMMENDATIONS

The encountered subsurface conditions in Phase 1 are considered geotechnically suitable for the support of contemplated lightly loaded residential structures and proposed roadway and associated underground infrastructure. Shallow bedrock was encountered across the site and blasting is anticipated to be required to install underground services, particularly deeper main lines, and may be required for general grading for driveways, roads, and house site preparation. The potential impact of ground vibrations on existing structures and infrastructure will need to be considered. Sequencing construction of new elements after the blasting work is recommended.

Subject to specific geotechnical input during design, we anticipate that residential structures can be supported on shallow foundation systems bearing on undisturbed natural dense silty sand, intact bedrock and/or engineered fill supported on an approved subgrade. The on-site soils are not considered suitable for reuse as engineered fill for road support, trench backfill, or foundation/slab support due to their high fines content and poor gradation. No slope stability issues at the site were noted during this assessment.



We note that the test holes were widely spaced to reflect the preliminary nature of this assignment. To facilitate planning, detailed design and construction cost estimating, further geotechnical assessment is recommended once the locations of structures, roads and buried pipes are better known. We would be pleased to provide an estimate for these services at that time.

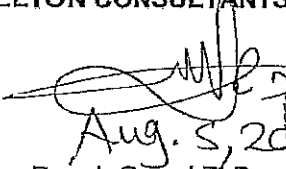
6.0 CLOSURE

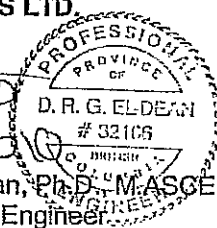
This report has been prepared for Yellow Point Ventures for the project described herein in accordance with the attached Terms of Reference for Geotechnical Reports. The Cowichan Valley Regional District (CVRD) is considered an authorized user of this report, subject to the terms of our agreement with Yellow Point Ventures.

We trust that this report meets your present requirements. Please do not hesitate to contact the undersigned if you have any questions or require further information.

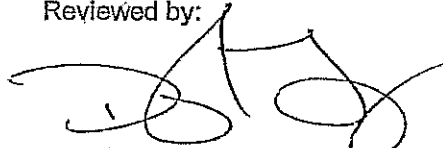
Sincerely,

LEVELTON CONSULTANTS LTD.

Per: 
Deyab Gamal El-Dean, Ph.D., M.ASCE, P.Eng.
Senior Geotechnical Engineer

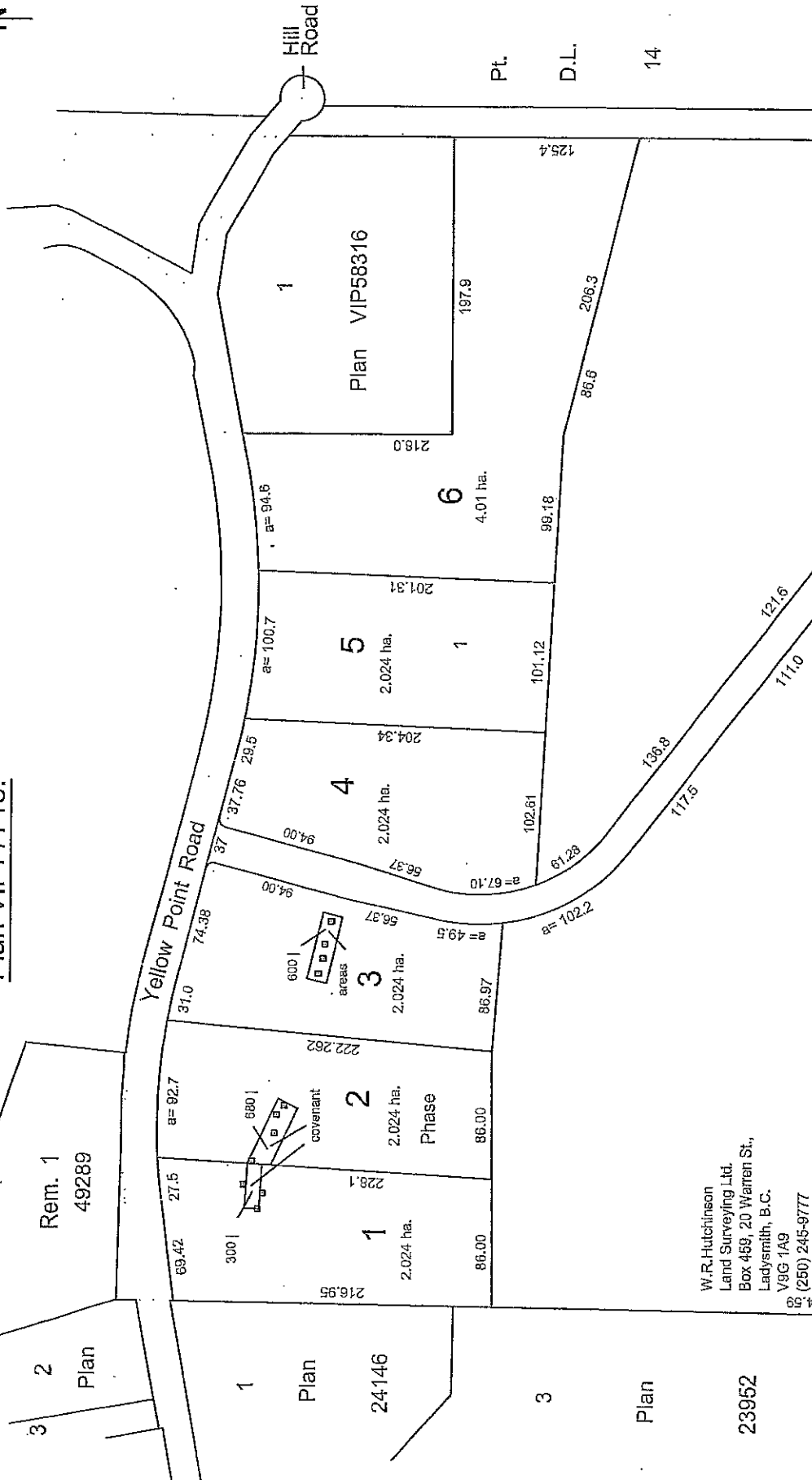


Reviewed by:


Darryl Furey, M.Sc., P. Eng.
Senior Geotechnical Engineer

Attachments: Figure 1 Site Location Plan
Figure 2 Proposed Residential Subdivision Plan
Figure 3 Test Pit Location Plan
Appendix 1 Test Pit Logs and Laboratory Test Results
Appendix 2 Terms of Reference for Geotechnical Reports

Plan VIP77718.



W.R.Hutchinson
Land Surveying Ltd.
Box 459, 20 Warren St.,
Ladysmith, B.C.
V9G 1A9
☎: (250) 245-9777

LEGEND:

PROJECT: PRELIMINARY GEOTECHNICAL ASSESSMENT FOR
PROPOSED SUBDIVISION, 3850 YELLOW POINT ROAD,
CEDAR, BC

CLIENT: **YELLOW POINT VENTURES**

TITLE: **PROPOSED LOT CONFIGURATION PLAN**

THIS DRAWING IS THE SOLE PROPERTY OF LEVELTON CONSULTANTS LTD. AND CAN NOT BE USED OR DUPLICATED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN CONSENT OF LEVELTON. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES OR OMISSIONS TO LEVELTON.

DATE:	AUG 2010
DESIGN BY:	DGE
DRAWN BY:	IS
CHECKED BY:	DGE
SCALE:	NTS
PROJECT NO.:	V110-1322-00



LEVELTON

FIGURE NO.:
2



TP10-1

Depth (m)	Description
0 – 0.05	Topsoil / grass - sod
0.05 -	BEDROCK - Sandstone

End of Test Pit at 0.05m

- no sloughing observed
- no seepage observed.

TP10-2

Depth (m)	Description
0 – 0.05	Topsoil / grass - sod
0.05 – 0.9	Dense, medium brown, SAND , some gravel, trace silt, dry. - Moisture content at 0.3m – 4.3% - Moisture content at 0.4m – 4.2%
0.9 – 1.0	BEDROCK- Sandstone

End of Test Pit at 1.0m

- no sloughing observed
- no seepage observed.

TP10-3

Depth (m)	Description
0.0	BEDROCK – Sandstone at surface

End of Test Pit at 0.0m

- no sloughing observed
- no seepage observed.



TP10-4

Depth (m)	Description
0 – 0.1	Topsoil / grass - sod
0.1 – 1.0	Dense, light brown, SAND , fine grained, silty, trace gravel, moist. - Moisture content at 0.5m – 27.4%
1.0	BEDROCK- Sandstone
End of Test Pit at 1.0m	
- no sloughing observed	
- no seepage observed.	

TP10-5

Depth (m)	Description
0.0	BEDROCK – Sandstone at surface
End of Test Pit at 0.0m	
- no sloughing observed	
- no seepage observed.	

TP10-6

Depth (m)	Description
0 – 0.1	Topsoil / grass - sod
0.1 – 1.0	Dense, light brown, SAND , fine grained, silty, trace gravel, moist. - Moisture content at 0.5m – 14.8%
1.0	BEDROCK- Sandstone
End of Test Pit at 1.0m	
- no sloughing observed	
- no seepage observed.	



TP10-7

Depth (m)	Description
0 – 0.1	Forest Litter
0.1 – 0.4	Dark brown, WEATHERED/FRACTURED BEDROCK , mixed with some sand, gravel, and silt in local undulations, roots and rootlets, dry.
0.4	BEDROCK- Sandstone
End of Test Pit at 0.4 m	
- no sloughing observed	
- no seepage observed.	

TP10-8

Depth (m)	Description
0 – 0.1	Forest Litter
0.1 – 0.3	Compact, light brown, SAND , some gravel, some silt, dry. - Moisture content at 0.2m – 8.2%
0.3	BEDROCK- Sandstone
End of Test Pit at 0.3 m	
- no sloughing observed	
- no seepage observed.	



TP10-9

Depth (m)	Description
0 – 0.1	Forest Litter
0.1 – 0.3	Compact, light brown, SAND , trace gravel, some silt, roots and rootlets, dry. - Moisture content at 0.3m – 8.6%
0.3 – 0.6	Dense, light brown, SAND , silty, dry. - Moisture content at 0.6m – 7.6%
0.6 – 0.7	BEDROCK- Sandstone

End of Test Pit at 0.7 m

- no sloughing observed
- no seepage observed.

TP10-10

Depth (m)	Description
0 – 0.1	Forest Litter
0.1 – 0.4	Dark brown, WEATHERED/FRACTURED BEDROCK , mixed with some sand, gravel, and silt in local undulations, roots and rootlets, dry.
0.4 – 0.5	BEDROCK- Sandstone

End of Test Pit at 0.5 m

- no sloughing observed
- no seepage observed.



TP10-11

Depth (m)	Description
0 – 0.1	Forest Litter
0.1 – 1.0	Dark brown, WEATHERED/FRACTURED BEDROCK , mixed with some sand, gravel, and silt in local undulations, roots and rootlets, dry. - less soil below 0.7 m.
1.0 – 1.1	BEDROCK- Sandstone

End of Test Pit at 1.1 m

- no sloughing observed
- no seepage observed.

TP10-12

Depth (m)	Description
0 – 0.1	Forest Litter
0.1 – 0.5	Compact, light brown, SAND , some gravel, some silt, trace cobbles, roots and rootlets, dry. - Moisture content at 0.3m – 9.1%
0.5 – 1.5	Dense, mottled brown / grey, SAND (TILL-LIKE) , medium grained, trace fine gravel, some silt, moist. - Moisture content at 1.0m – 14.4%
1.5	BEDROCK- Sandstone

End of Test Pit at 1.5 m

- no sloughing observed
- no seepage observed.



Levelton Consultants Ltd.

1935 Bollinger Road
Nanaimo, BC
Canada V9S 5W9
Tel.: 250-753-1077
Fax.: 250-753-1203
E-mail: nanaimo@levelton.com

AGGREGATE GRADATION ANALYSIS

IDENTIFICATION:

Client Yellow Point Ventures
Project 3850 Yellow Point Road, Cedar
Sample Location Test Pit 10-4 @ 0.5m
Test Pit Grab Sample

File No.: VI10-1322
Report No.: 1

Date: 04-Aug-10

SAMPLING INFORMATION:

Material: Sand
Specification: N/A

Material Specification

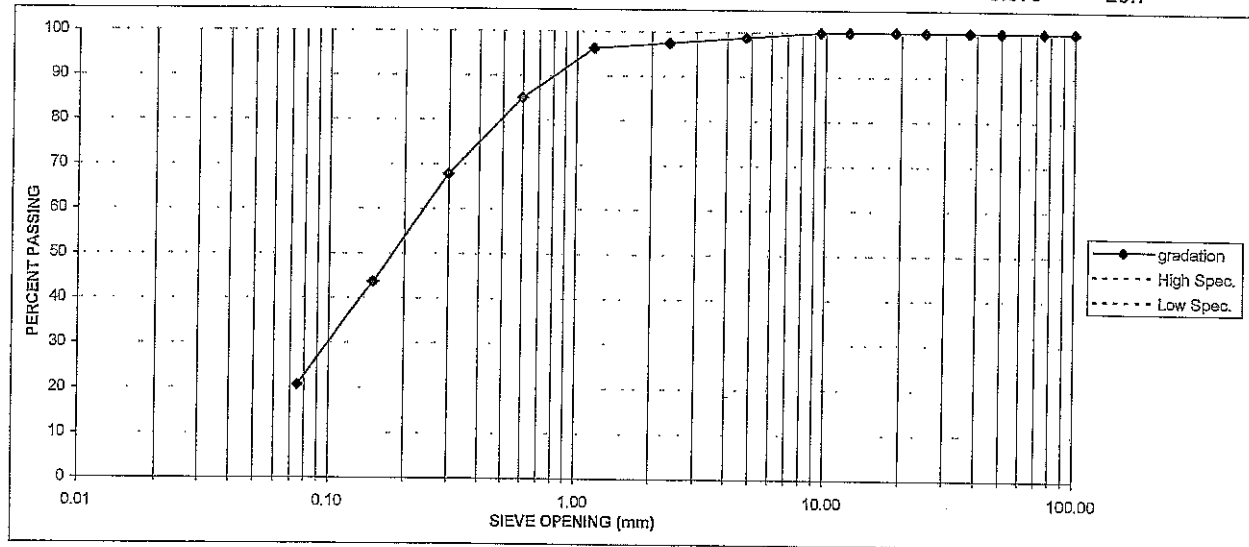
Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
100	100.0
75	100.0
50	100.0
37.5	100.0
25	100.0
19	100.0
12.5	100.0
9.5	100.0
4.75	98.7
2.36	97.4
1.18	96.3
0.600	85.0
0.300	67.9
0.150	43.7
0.075	20.7

Date Sampled 03-Aug-10
Date Tested 04-Aug-10
Sample No: 3133
Fracture by mass 0.0%
Supplier: N/A
Sampled by: IS
Tested by: IS

AGGREGATE GRADATION:



REMARKS: Tested in accordance with ASTM C- 136

LEVELTON CONSULTANTS LTD.

REPORTS TO: _____

per: [Signature]



Levelton Consultants Ltd.

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AGGREGATE GRADATION ANALYSIS

IDENTIFICATION:

Client Yellow Point Ventures
Project 3850 Yellow Point Road, Cedar
Sample Location Test Pit 10-8 @ 0.2m
Test Pit Grab Sample

File No.: VI10-1322
Report No.: 2

Date: 04-Aug-10

SAMPLING INFORMATION:

Material: Sand
Specification: N/A

Material Specification

Sieve	High Spec.	Low Spec.
-------	------------	-----------

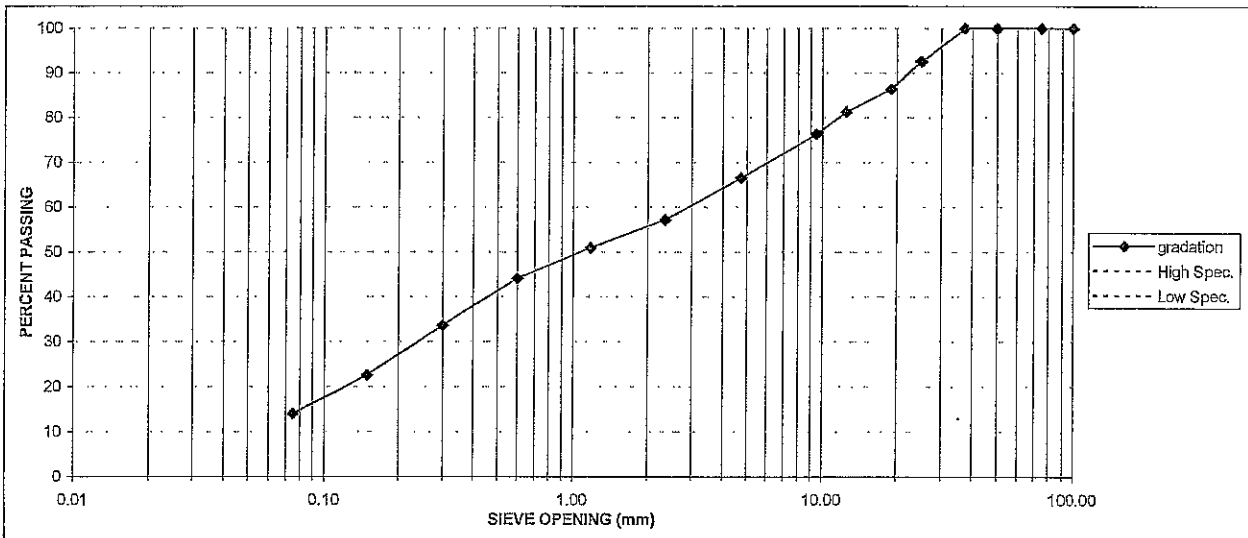
Sieve Analysis

Sieve	% Passing
-------	-----------

Date Sampled 03-Aug-10
Date Tested 04-Aug-10
Sample No: 3133
Fracture by mass 0.0%
Supplier: N/A
Sampled by: IS
Tested by: IS

100	100.0
75	100.0
50	100.0
37.5	100.0
25	92.7
19	86.5
12.5	81.3
9.5	76.4
4.75	66.6
2.36	57.2
1.18	50.9
0.600	44.1
0.300	33.7
0.150	22.7
0.075	14.0

AGGREGATE GRADATION:



REMARKS: Tested in accordance with ASTM C- 136

LEVELTON CONSULTANTS LTD.

REPORTS TO: _____

per:



LEVELTON

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Attn: Ms. Carol Warkentin

Re: Groundwater Exploration Program for Proposed Subdivision
3850 Yellow Point Road, Cedar, BC

1.0 INTRODUCTION

As requested, Levelton Consultants Ltd. (Levelton) has supervised a groundwater exploration program for the above referenced property (the site), shown on Figure 1, in support of a subdivision application to the Cowichan Valley Regional District (CVRD). The application involved the initial stage of the subdivision of a 56.76 hectare (142 acre) parcel. Phase 1 of the subdivision involves six lots, five of which are roughly 2 ha with the last lot being roughly double that size (4.05 ha). Levelton understands that the second phase of this development will include ten lots ranging in size from roughly 2 to 8.5 ha.

The scope of work proposed by Levelton in our proposal dated 24 July, 2009 included:

- Review of existing information and site visit;
- Supervision of a drilling program;
- Supervision of a pumping test program; and
- Preparation of this summary report.



Our scope of work was designed to meet the requirements of the CVRD Bylaws 1497 and 1215¹. Bylaw 1497 presents the Yellow Point Development Permit Area and sets out the policies of the development permit area, including:

Policy 3.7.4 Guidelines b):

The development permit may allow individual, domestic and low density septic disposal systems provided there is adequate investigation and monitoring to assess the effects of the proposal on the groundwater regime and steps taken to minimize degradation.

Policy 3.7.4 Requirements b) ii):

A report on the water requirements, waste disposal requirements and potential impact of the project on the groundwater recharge area. Bylaw 1497 Part 13 designates policies for water, sewer and solid waste systems.

Policy 13.1.5 :

Known groundwater aquifers shall be protected from activities which would reduce their suitability as sources of domestic water supply.

The following sections of CVRD Servicing Bylaw 1215 also apply to the site:

Section 8.3:

Every proposed subdivision which is not served by a community water system shall establish that each parcel in the proposed subdivision has a proven source of potable water and that the water quality consistently meets the conditions of the British Columbia Drinking Water Quality Standards.

¹ Electoral Area "H" North Oyster - Diamond Official Community Plan Bylaw Number 1497 and CVRD Servicing Bylaw 1215.



Subsection (b)

Where groundwater is proposed as a source of domestic water within a proposed subdivision, the subdivider shall provide:

- i) A well on each new parcel, capable of providing a minimum per minute yield of 4.35 litres based on tests done between June 1st and November 1st;
- ii) A well on each new parcel capable of producing a minimum daily yield of 2,273 litres and a letter from a certified well driller or a professional engineer with groundwater assessment experience stating the well is adequate for domestic purposes; and
- iii) A groundwater capability report, prepared by a professional engineer with groundwater assessment experience, which provides a reasonable assurance that all parcels in the subdivision will be capable of supporting wells capable of producing the minimum water yields required in 8.3(b)i above.

Section 8.5

1. Where a parcel created in a subdivision is not served by a community sewer system, a copy of the percolation test results as carried out on said parcel, in accordance with established criteria pursuant with the Health Act, shall be submitted to the Approving Officer; and
2. Where there is to be no community sewer system installed in a subdivision, all sewage effluent shall be disposed of in accordance with the Health Branch or Water Management requirements.

Levelton was authorization to proceed with this scope by Yellow Point Ventures on 23 September 2009.

2.0 BEDROCK SETTING

The Yellow Point area is underlain by Cretaceous-aged sedimentary rock of the Nanaimo Group. These rocks have been mapped as hosting an aquifer designated as Aquifer 162, by the Ministry of Environment. Aquifer 162 has been described as a bedrock aquifer, consisting of fractured sandstone and shale. At the time of mapping, the aquifer was attributed with moderate demand, low productivity and high vulnerability.



Generally speaking, groundwater flow in bedrock aquifers is complex and controlled by the geometry and connectivity of fractures, faults and jointing. A thorough understanding of groundwater flow in bedrock aquifers requires detailed studies and numerical modeling. This type of study has not been completed in the Yellow Point area. For the purposes of this report, groundwater flow is assumed to largely follow surface topography and move southeast from topographically elevated areas towards Stuart Channel.

3.0 WELL DRILLING AND INSTALLATION

Drillwell Enterprises of Duncan was engaged by Yellow Point Ventures to drill new wells on the five new lots (Lots 2 to 6) shown on Figure 2. Lot 1 has an existing well and was not included in this drilling or testing program, as Levelton understands that this well will continue to supply Lot1.

Drilling occurred between 5 October and 16 October 2009. The wells were drilled using an air rotary rig and were completed as 0.152 m (6 inch) domestic wells. As shown in Appendix 1 and summarized in Table 1, the depths of all five wells exceeded 80 m. Water bearing fractures were intercepted at depths from 81 to 99 m bgs, approximately 30 to 40 m below sea level.

Table 1: Well numbers and depths, 3850 Yellow Point Road

Well Number	Lot	Well Depth in m (feet)	Water Bearing Fracture Depth in m (feet)	Water Bearing Fracture Elevation in m (feet)
28198	2	83.8 (275)	80.7 (265)	-30.5 (-100)
28197	3	83.8 (275)	80.7 (265)	-30.1 (- 98)
28192	4	82.3 (270)	79.3 (260)	-27.8 (- 91)
28191	5	105.2 (345)	99.1 (325)	- 48.8 (160)
28182	6	93.0 (305)	79.3 (260)	- 29 (- 95)

All wells were drilled through, fine sandstone and mudstone of the Nanaimo Group sediments that host Aquifer 162. In accordance with the *Groundwater Protection Regulation* under the *Water Act*, a 5.49 m surface seal of steel casing, surrounded by bentonite clay grout, was installed in each well to protect the aquifer from potential impacts of surface waters. The wells were completed without casing, as unlined "open holes".

The well yields estimated by the driller ranged from 0.06 L/s (1 gallon per minute or gpm) to 0.19 L/s (3 gpm), as shown in Table 2. The groundwater recharging the wells was primarily derived from the fractures and faults intercepted by the wells.



Table 2: Driller estimated yields at 3850 Yellow Point Road

Well Number	Estimated yield in L/s (gpm)
28198	0.189 (3)
28197	0.189 (3)
28192	0.126 (2)
28191	0.063 (1)
28182	0.063 (1)

4.0 PUMPING TESTS

The new wells were pumped separately for 24 hours, in accordance with CVRD requirements, by Red Williams Well Drilling and Pump Installations Ltd (RW), between 23 October and 30 October 2009. At this time of year, groundwater levels were expected to be at or near seasonal low levels (due to a prolonged period of little or no recharge) and the impacts of pumping were expected to be more pronounced. The pumping schedule is shown in Table 3.

The pumping rate in each well was 5.45 m³ / day (0.063 L/s or 1 gpm or 5,450 L /day), as described in Bylaw 1215. Water levels were measured by RW staff throughout the 24 hour pumping period and for several hours of recovery, after pumping ceased. Water levels were also measured sporadically in the other new wells during pumping, to monitor whether water levels reacted in response to pumping and, if so, to what degree. Pumping test data and graphs are contained in Appendix 2.

Well yields (or ratings) were estimated for the five new wells following the methodology described in the BC Environment web-based publication "*Evaluating Long-term Well Capacity for a Certificate of Public Convenience and Necessity*". The results of the well capacity assessments are presented in Appendix 3 and discussed below.

Table 3: Pumping Test Summary, 3850 Yellow Point Road

Date of Pumping Test	Pumping Well	Observation Wells
October 23 – 24, 2009 Recovery October 24, 2009	28191	28182
		28197
		28192
October 26 – 27, 2009 Recovery October 27, 2009	28197	28182
		28198
		28192
		28191



Date of Pumping Test	Pumping Well	Observation Wells
October 27 – 28, 2009 Recovery October 28-29, 2009	28182	28198 28192 28191
October 28 -29, 2009 Recovery October 29, 2009	28198	28192 28191 28197 28182
October 29 – 30, 2009 Recovery October 30, 2009	28192	28191 28182 28197

4.1 WELL 28191

Well 28191 was pumped between 23 October and 24 October 2009. Water level recovery measurements were taken for an additional 18 hours after pumping ceased, until the water level had recovered to within 90% of the static water level². The water elevation at the start of pumping was 34.43 metres above sea level (masl) and the drawdown³ in the pumping well was 18.04 m. At the end of pumping the water elevation was 16.39 masl and roughly 65.2 m above the inferred water-bearing fracture.

Recovery was rapid and drawdown had recovered to 0.23 m below static conditions within three hours of pump shut off. The recovery to near static conditions indicated that no groundwater mining⁴ had occurred during the pumping test.

The water levels in the other new wells also reacted in response to the pumping of Well 28191, as shown in Table 4. The greatest decrease in water level was roughly 1.95 m observed in Well 28192. The water level in Well 28192 declined 1.38 m during the same pumping test. There appears to be some degree of hydraulic connection between these wells, but this connection appears to be poorly developed.

² Depth from ground surface to the natural non-pumped water level in a well.

³ Drawdown is the difference between the pumping water level and the static water level in a well.

⁴ Groundwater mining refers to the extraction of groundwater at rates exceeding recharge and is often indicated by dropping static water levels. Groundwater mining is non-sustainable in the long term.



Table 4: Drawdown During Pumping of Well 28191

Pumping Well	Drawdown (m)	Observation Wells	Drawdown (m)
28191	18.31	28182	1.375
		28197	0.904
		28192	1.941

On the basis of the pumping test, the long term, sustainable well yield for Well 28191 was estimated as 0.11 L/s (1.73 gpm). This estimated well rating exceeds the water supply requirements contained in the CVRD Bylaw 1215.

4.2 WELL 28197

Well 28197 was pumped by RW between 26 October and 27 October 2009. Water level recovery measurements were taken for an additional 24 hours after pumping ceased, until the water level was within 90% of the static water level. The water elevation at the start of pumping was 34.66 masl and the drawdown in the pumping well was 5.48 m. By the end of the pumping test the water elevation was 29.18 masl and approximately 59.3 m above the reported water-bearing fracture.

Recovery in Well 28197 was steady and drawdown had recovered to 0.88 m below static conditions after 24 hours of recovery. The recovery graph for well 28197 also indicated no groundwater mining had occurred and that the groundwater level should return to static conditions.

The water levels in nearby new wells reacted in response to the pumping of Well 28197, as shown in Table 5. The greatest decrease in water level was roughly 4.26 m observed in Well 28198. The water level in Well 28192 declined 2.97 m during the same pumping test. There appears to be a relatively good hydraulic connection between these wells.

Table 5: Drawdown During Pumping of Well 28197.

Pumping Well	Drawdown (m)	Observation Wells	Drawdown (m)
28197	5.48	28182	0.11
		28198	4.26
		28192	2.97
		28191	1.07

The long-term, sustainable well yield for Well 28197 was estimated as 0.26 L/s (4.0 gpm). This estimated well rating exceeds the water supply requirements contained in the CVRD Bylaw 1215.



4.3 WELL 28182

Well 28182 was pumped between 27 October and 28 October 2009. Water level recovery measurements were taken for an additional 18 hours after pumping ceased, until the water level was virtually back at the static water level. The water elevation at the start of pumping was 36.54 masl and the drawdown in the pumping well was 11.53 m. By the cessation of pumping the water elevation was 25.01 masl and roughly 54 m above the inferred water-bearing fracture.

Well 28182 recovery was steady and drawdown had recovered to roughly 90% of static level after 18 hours of recovery. As per the previous two wells, no groundwater mining was evident in the recovery data for Well 28182.

The water levels in nearby new wells reacted in response to the pumping of Well 28182, as shown in Table 6. The greatest decrease in water level was roughly 1.2 m observed in Well 28192. The water level in Well 28191 declined 1.4 m during the same pumping test. There appears to be a moderately developed hydraulic connection between these wells.

Table 6: Drawdown During Pumping of Well 28182

Pumping Well	Drawdown (m)	Observation Wells	Drawdown (m)
28182	11.53	28198	0.875
		28192	1.213
		28191	1.401

The long term, sustainable well yield for Well 28197 was estimated as 0.15 L/s (2.4 gpm). This estimated well rating exceeds the water supply requirements contained in the CVRD Bylaw 1215.

4.4 WELL 28198

Well 28198 was pumped between 28 October and 29 October 2009. Water level recovery measurements were taken for an additional 18 hours after pumping ceased, until the water level was virtually back at the static water level. The water elevation at the start of pumping was 34.17 masl and the drawdown in the pumping well was 7.29 m. The pumping elevation at the end of the 24-hour test was 26.88 masl, roughly 56.4 m above the inferred water-bearing fracture.

Recovery was steady and drawdown had recovered to roughly 75% of static level after 5.5 hours of recovery. A review of the data indicated that the pumping of Well 28192 impacted the recovery of Well 28198 and drawdown increased after 5.5 hours of recovery, until the end of pumping. Once the pumping test in Well 28192 ended, the recovery in Well 28198 continued. The recovery of Well 28198 also indicated that no groundwater mining had occurred.



The water levels in the four other new wells reacted in response to the pumping of Well 28198, as shown in Table 7. The greatest decrease in water level was roughly 5.36 m observed in Well 28197. The water level in Well 28192 declined 3.26 m during the same pumping test. There appears to be a well developed hydraulic connection between Wells 28198, 28197 and 28192 and a weaker connection with Wells 28191 and 28182.

Table 7: Drawdown During Pumping of Well 28198.

Pumping Well	Drawdown (m)	Observation Wells	Drawdown (m)
28198	7.29	28192	3.257
		28191	1.211
		28197	5.358
		28182	1.265

The long term, sustainable well yield for Well 28197 was estimated as 0.25 L/s (4.0 gpm). This estimated well rating exceeds the water supply requirements contained in the CVRD Bylaw 1215.

4.5 WELL 28192

Well 28192 was pumped between 29 October and 30 October 2009. Water level recovery measurements were taken for an additional 6 hours after pumping ceased, until the water level was virtually back at the static water level. The water elevation at the start of pumping was 33.49 masl and the drawdown in the pumping well was 5.84 m. At the end of pumping the water level was 27.65 masl and was approximately 55.5 m above the reported water-bearing fracture.

In Well 28192 recovery was rapid and drawdown had recovered to within 0.02 m of static level with 6 hours of pumping cessation, indicating no groundwater mining had occurred.

The water levels in three other new wells reacted in response to the pumping of Well 28192, as shown in Table 8. The greatest decrease in water level was roughly 3.73 m observed in Well 28197. The water levels in Well 28182 and Well 28191 declined 1.21 m and 1.86 m respectively during the same pumping test. There appears to be a relatively strong hydraulic connection between Well 28192 and Well 28197, as previously discussed and a weaker connection with Wells 28191 and 28182.

Table 8: Drawdown During Pumping of Well 28192.

Pumping Well	Drawdown (m)	Observation Wells	Drawdown (m)
28192	5.84	28191	1.857
		28182	1.209
		28197	3.732

The long term, sustainable well yield for Well 28192 was estimated as 0.34 L/s (5.4 gpm). This estimated well rating exceeds the water supply requirements contained in the CVRD Bylaw 1215.



5.0 WATER QUALITY

Levelton collected a water quality sample in November 2009 for bacteriological analysis. A set of samples was also collected in March / April 2010 that was submitted to CARO Analytical Services for physical parameters and dissolved metal analyses. The results of the analyses were compared to the Guidelines for Canadian Drinking Water Quality, published by Health Canada in 2008. The water quality data is summarized in Table 8 and presented in Appendix 4.

The fecal coliform and *E. coli* met drinking water quality guidelines. The absence of *E. coli* in the samples indicates that the water is free of intestinal disease-causing bacteria. The total coliform bacteria results did not meet the drinking water guidelines; however, total coliform are found naturally in water, soil, and vegetation. Since total coliform bacteria can be easily destroyed during well- and water-system disinfection, we would recommend that the wells be treated with a bleach solution or chlorine tablets, re-pumped briefly and then sampled to confirm the effectiveness of the treatment. The results should be submitted as supplementary information to this report.

As shown in Table 9, the measured physical parameters, other than pH, met the water quality guidelines. The pH values all exceeded the drinking water guidelines, however, pH is an aesthetic parameter, related to taste and appearance, rather than a human health parameter. The only other parameter to exceed the water quality guidelines was iron (Well 28192), which is also an aesthetic parameter.

6.0 HYDROGEOLOGICAL SETTING

As discussed previously, the site is underlain by the Cretaceous-aged Nanaimo Group. These sedimentary rocks were mapped by the MOE as hosting Aquifer 162, consisting of fractured sandstone and shale. The bedrock is overlain by a variable surficial layer consisting of thin soil, clay, till or glacio-marine sediments. The MOE attributed the bedrock Aquifer 162 with moderate demand, low productivity and high vulnerability at the time of mapping.

As detailed hydrogeological studies have not been completed for Aquifer 162, Levelton has assumed that regional groundwater flow in the Yellow Point area largely follows surface topography. Although groundwater flow in bedrock aquifers is complex and is controlled by the geometry and connectivity of fractures, faults and jointing, Levelton has assumed groundwater flows from recharge areas in topographically elevated areas northwest of the site and discharges in Stuart Channel.

Based on this regional groundwater flow model, Levelton interprets the northern portion of the site as being in a 'flow through' portion of the groundwater flow system and the southern portion of the site in a groundwater discharge zone. Considering this interpretation, Levelton is of the opinion that the operation of domestic water supply wells will not significantly impact groundwater recharge.



The five new wells appeared to intercept a series of interconnected, water bearing fractures at depths from 81 to 99 m below surface. The fractures were intercepted at roughly 40 – 50 m below sea level. Surface elevation of the site was estimated at roughly 40 masl and the elevation of groundwater at the conclusion of the pumping tests ranged from roughly 16.4 to 29.2 masl. Considering the following factors:

- the response of the wells to pumping;
- the groundwater elevations at the end of pumping;
- the distance between the water bearing fractures and the groundwater pumping elevations;
- the full recovery of each well after pumping; and
- the estimated well yields;

Levelton is of the opinion that the installation and operation of domestic wells to support this rural subdivision will not significantly impact the health or the long term yield of this aquifer.

6.1 POTENTIAL IMPACTS

Residential developments, especially in rural areas (such as the type proposed for the site), are typically considered to pose a low risk of environment impact to groundwater. However, based on Levelton's experience, potential environmental impact may stem from septic systems, stormwater runoff and infiltration, the installation and use of underground heating oil storage tanks and salt water intrusion. These items are discussed in further detail below.

Septic Impacts

The existing home on the site has a septic system and Levelton understands that a Registered Onsite Wastewater Professional has undertaken a septic investigation and will provide design and layout for the lots. Levelton has not reviewed information regarding the installation or maintenance of this system as it is beyond our scope; however, residential septic systems rarely pose threats to groundwater resources in this type of setting. Given the depth to groundwater observed during drilling, the risk posed by septic systems planned for 3850 Yellow Point Road are considered to be very low.

Stormwater Recharge Impacts

In some cases, groundwater quality and quantity may be impacted by residential land development if enough precipitation is intercepted and routed offsite. Given the size of the proposed subdivision, it is considered unlikely that the proposed subdivision will negatively impact local recharge. The development of this area will also likely have a minimal impact on the regional groundwater recharge, as discussed above.



Heating Oil Storage Tanks

Levelton contacted Terasen Gas regarding the supply of household natural gas for the Yellow Point Road area. Based on our discussions, we understand there are no plans to extend the Terasen network toward the site at this time. Accordingly, there is potential for homeowners to use either above-ground or underground storage tanks (ASTs or USTs) to hold home heating oil.

Provided that ASTs are maintained and operated in accordance with the manufacturer's instructions, the potential for ASTs to impact groundwater resources is relatively low, as spills or leaks are more easily prevented, observed and cleaned up. USTs, on the other hand, pose a larger environmental threat as they may corrode and leak over extended periods before being detected. The cleanup of a leaking UST, especially in a bedrock aquifer, may also be more difficult and protracted.

Given the desire to utilize groundwater for domestic purposes, Levelton recommends that no USTs be installed in the proposed subdivision. It is also recommended that containment systems be installed for any ASTs. Restrictions on the installation, maintenance and use of heating oil storage tanks should be regulated using development permits or restrictive covenants by the appropriate municipal or approving authority.

Salt Water Intrusion

As shown in Figure 1, the site extends from Yellow Point southward to Stuart Channel and there is potential for salt water intrusion into Aquifer 162 if wells are pumped at high rates for long periods. Generally, however, domestic wells are not pumped aggressively or for long periods of time and considering the specific capacity of the five new wells on-site and the elevation of the pumping water levels at the end of 24 hours of testing, it is our opinion that salt water intrusion into the Aquifer 162 is unlikely as the result of normal domestic water use.

Summary

The Yellow Point area hosts year round residences which depend on groundwater as a source of domestic water. Aquifer 162 is a bedrock aquifer and has the potential to supply adequate water for typical residential needs, so the addition of this subdivision at the downgradient portion of the aquifer is unlikely to cause significant stress to the aquifer.

7.0 CONCLUSIONS

Based on the information presented above, Levelton has drawn the following conclusions:

1. Five new wells drilled in the Nanaimo Group bedrock intercepted water bearing fractures at depths ranging from approximately 81 to 99 m below ground surface.
2. The five new wells were installed in compliance with the *Groundwater Protection Regulation* under the *Water Act*.



3. Each individual well was subjected to a 24 hour pumping test at a rate of 5.45 m³/day (0.063 L/s or 1 gpm or 5,450 L / day). Based on pumping test data:
 - a. Levelton estimated well yields exceeded the requirements specified in CVRD Bylaw 1215, Section 8.3, Sub-section b;
 - b. The water bearing fractures showed varying degrees of interconnectedness;
 - c. At the end of pumping the groundwater levels remained between 54 and 65 m above the reported depths of the water-bearing fractures;
 - d. At the end of pumping the water table elevations ranged from approximately 16.4 to 29 masl;
 - e. No groundwater mining was observed, even though testing occurred in early fall, a period normally associated with at seasonal low groundwater levels; and
 - f. Based on the MOE well rating methodology, the pumping tests were conducted at sustainable rates.
4. Considering the pumping test results, the installation and operation of domestic wells within this rural residential development will not significantly impact the health of Aquifer 162.
5. The water quality data indicated that physical parameters, other than pH and iron, met the water quality guidelines; however, Levelton notes that pH is an aesthetic parameter. The fecal coliform and *E. coli* also met drinking water quality guidelines. The total coliform bacteria results did not meet the drinking water guidelines; however, total coliform are found naturally in water, soil, and vegetation.

8.0 RECOMMENDATIONS

Based on the conclusions presented above, Levelton offers the following recommendations:

1. That the well rating estimates presented above not be exceeded during long-term pumping;
2. That the wells be treated with disinfectant and re-tested for coliform bacteria prior to being put into use; and
3. That this report and supplemental chemistry be submitted to the CVRD in support of the Yellow Point Ventures sub-division application.

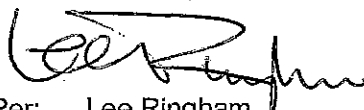


9.0 CLOSURE

This report has been prepared for the exclusive use of Yellow Point Ventures for application to five new wells located at 3850 Yellow Point Road, Cedar BC. Any use which a non-authorized third party makes of this report, or any reliance on or decisions to be made or actions based on it, are the responsibility of such third parties. Levelton accepts no responsibility for damages, if any, suffered by an unauthorized third party as a result of decisions made or actions based on this report. We acknowledge that the Cowichan Valley Regional District may use and rely upon the information in this report. The report has been prepared in accordance with the attached Terms of Reference for Geotechnical Reports.

We trust that the report meets your immediate needs. Please do not hesitate to contact the undersigned for further information.

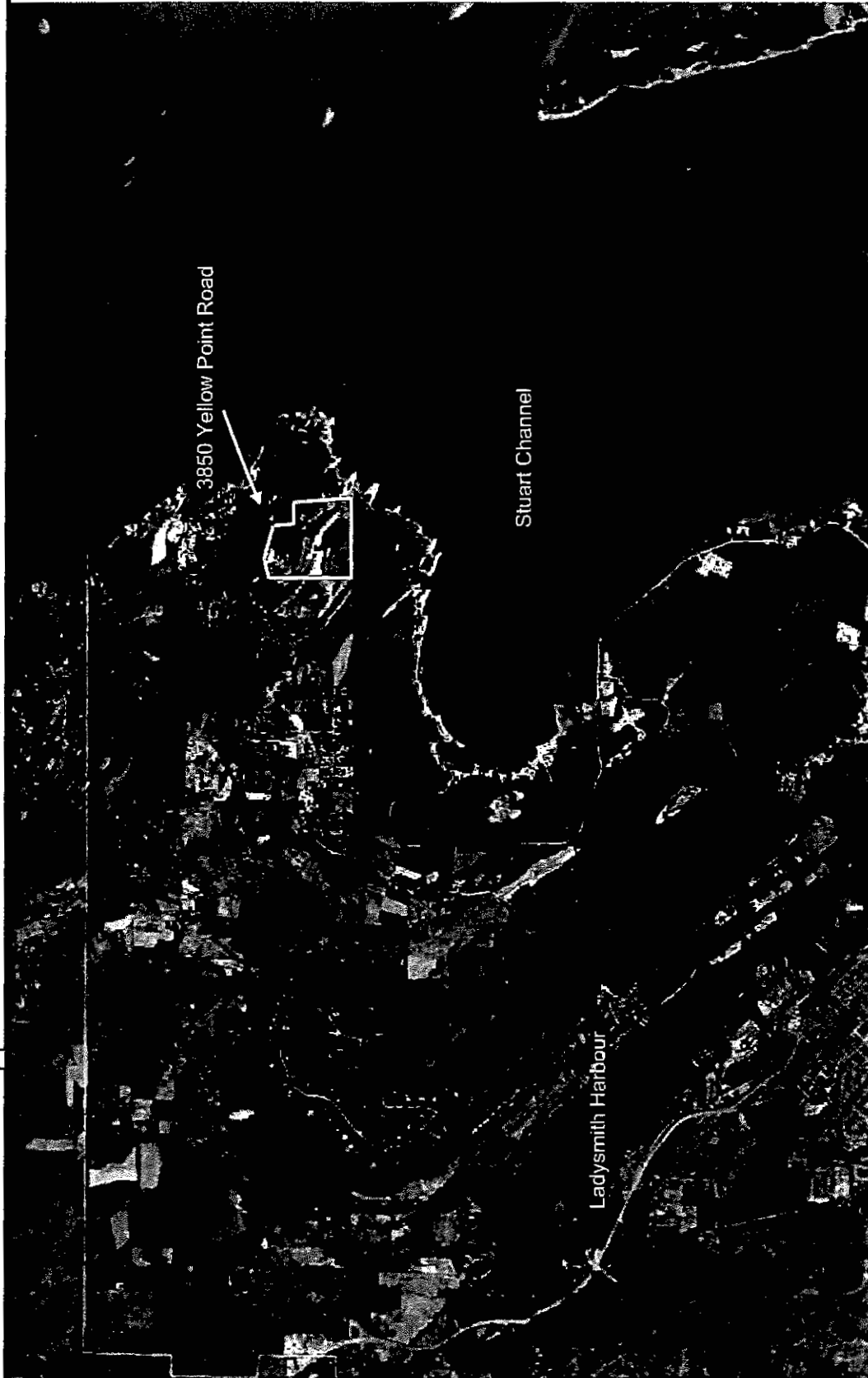
Yours truly,
LEVELTON CONSULTANTS LTD.

Per: 
Lee Ringham
Senior Hydrogeologist



Reviewed by:
Carl Miller M.Sc., P.Eng.
Division Manager

Attachments: Figure 1: Location Map
Figure 2: Lot Plan and Well Locations
Table 9: Water Quality Data
Appendix 1: Driller's Logs
Appendix 2: Pumping Test Data and Graphs
Appendix 3: Well Yield Estimations
Appendix 4: Environmental Laboratory Quality Results
Terms of Reference for Geotechnical Reports



	PROJECT:		Groundwater Exploration Program for Proposed Subdivision			
	TITLE:		Site Location Plan			
	CLIENT:		Yellow Point Ventures			
	DATE:		FILE NO.:	SCALE:	DRAWN BY:	REV NO.:
DRAWING NO.:	June 2010	FV09-1519-00	NTS	LR		1
Figure 1						
Levelton Consultants Ltd., 1935 Bollinger Road, Nanaimo, B.C., V9S 5W9 Phone: 250/753-1077 Fax: 250/753-1203 Email: nanaimo@levelton.com						

Table 9

Water Quality Results from 3850 Yellow Point Road, Yellow Point, BC.

PARAMETERS Sample Date	Units	28182 Apr 22/10	28191 Apr 22/10	28197 Mar 18/10	28192 Mar 18/10	28198 Mar 18/10	Guidelines for Canadian Drinking Water Quality May 2008 Edition
General Parameters							
Alkalinity	mg/L			174	201	175	NS
Chloride	mg/L	15.3	118	23.3	17.8	16.9	250*
Colour, True	Colour Units			6	<5	<5	15*
Conductivity	µS/cm	412	663	409	443	390	700
Fluoride	mg/L	0.19	0.85	1.12	0.61	1.03	1.5
Hardness, Total as CaCO ₃	mg/L	17.2	9.89	6.06	7.74	5.75	80-100 Acceptable
Nitrogen, Nitrate as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	10
Nitrogen, Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	3.2
pH	pH Units	8.57	8.92	9.18	9.08	9.19	6.5 - 8.5*
Solids, Total Dissolved	mg/L	255	366	247	276	240	500*
Sulfate	mg/L	12.7	2.5	3.5	7.5	3.5	500*
Turbidity	NTU	4.4	0.3	2.6	7.5	2.4	Varies, generally < 5
Metals							
Aluminium	mg/L	0.338	<0.050	0.375	0.726	0.407	0.2 ^A (NS)
Antimony	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.006
Arsenic	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Barium	mg/L	0.0089	0.0069	<0.0050	0.006	<0.0050	1.0
Boron	mg/L	0.125	0.506	0.617	0.425	0.602	5.0
Cadmium	mg/L	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010	0.005
Calcium	mg/L	5	3.8	2.2	2.6	2	NS
Chromium	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.05
Copper	mg/L	0.0042	0.0034	<0.0010	<0.0010	<0.0010	1*
Iron	mg/L	<0.10	<0.10	0.18	0.42	0.22	0.3*
Lead	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.01
Magnesium	mg/L	1.15	0.11	0.12	0.29	0.15	NS
Manganese	mg/L	0.0209	<0.0020	0.0073	0.0136	0.0155	0.05*
Mercury	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.001
Potassium	mg/L	0.17	0.1	0.1	0.17	<0.01	NS
Selenium	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.01
Silicon	mg/L	5.4	5.8	<2.0	4.3	<2.0	NS
Sodium	mg/L	87.1	138	86.5	96.1	82.4	200*
Uranium	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.02
Zinc	mg/L	<0.10	<0.10	<0.010	<0.010	<0.010	5*
Microbiological (November 2009)							
Coliforms, Fecal	CFU/100ml	<1	<1	<1	<1	<1	0.0
Coliforms, Total	CFU/100ml	36	170	100	9	220	0.0
E.Coli	CFU/100ml	<1	<1	<1	<1	<1	0.0
Heterotrophic Plate Count	CFU/100ml	200,000	86,000	150,000	38,000	92,000	NS

Notes:

NA - Not Analyzed

NS - No Standard

* - this parameter has an Aesthetic Objective, based on taste or appearance

^A -operational guideline

All concentrations in mg/L or parts per million (ppm).

0.0 Parameter exceeds water quality guideline

D4

COWICHAN VALLEY REGIONAL DISTRICT
ADMINISTRATIVE SERVICES DEPARTMENT

REQUEST FOR DELEGATION

APPLICATION DATE: AUG. 17, 2010

NAME OF APPLICANT: VIKKI MARKS

ADDRESS OF APPLICANT: 10530 CYPRESS ROAD

PHONE NO.: 250-745-3406

REPRESENTING: _____
Name of Organization

MEETING DATE: Sept. 21, 2010

COMMITTEE/BOARD NAME: EAS Committee

NO. ATTENDING: 3-5

NO. WISHING TO MAKE A PRESENTATION: 1

TOPIC TO BE PRESENTED:
request for approval for area T to allow for
backyard chickens.

NATURE OF REQUEST/CONCERN:
food security issues

Note: Once the request for delegation application has been favourably considered, presentations will be restricted to ten (10) minutes, unless notified otherwise.

The purpose of this proposal is to provide some standards for safely keeping domesticated backyard chickens. The intention of the proposal is to enable persons living on residentially zoned properties to keep a small number of female (only) chickens on a non-commercial basis, while at the same time limiting the potential adverse impacts of noise, odor, living conditions, waste storage and removal, and the attraction of predators, rodents and other insects or parasites. It is hoped that this proposal will assist in the creation of licensing standards and requirements which will ensure that domesticated chickens do not adversely impact the neighbourhood surrounding the property on which the chickens are kept. This proposal is based on similar by-laws currently in effect in the Township of Esquimalt, Victoria, Oak Bay and urban centers located in the lower mainland. Suggestions concerning health, space requirements and management are grounded in the current Ag Canada specs for recommended practices and on my own experience as an AgTech in the agriculture industry for the past 20 years as well as my involvement with various “Field to Farm” and food security initiatives in the North Okanagan.

Proposed Poultry By-Law for CVRD

That:

1. An annual permit is required for keeping domesticated chickens on residentially zoned (R1 and R2) properties having a minimum lot area of 5000 square feet.
2. This annual permit is not transferable and in the event that the permit holder is away from the property for longer than 60 (sixty) days, the permit becomes null and void. The time frame for each permit is a calendar year; that being from January 1 to December 31.
3. The annual fee for a permit to keep domesticated chickens is \$25.00 (twenty-five dollars). This permit fee is separate from an initial, one-time building permit fee of \$25.00 (twenty-five dollars) which shall accompany a detailed drawing and/or picture of housing and the enclosure that the chickens will be kept in.
4. The maximum number of chickens allowed is 6 (six) per lot. Only female chickens are allowed. There is no restriction on species. No roosters or males are allowed.
5. Chickens are to be kept for non-commercial or personal use only. No person shall sell eggs or engage in chicken breeding or fertilizer production for commercial purposes. The slaughtering of chickens is prohibited.
6. Chickens must be kept in an enclosure or fenced and roofed area at all times. During daylight hours, chickens may be allowed outside of their chicken pens in a securely

fenced yard area if supervised. During non-daylight hours, chickens must be secured within the henhouse.

7. A minimum enclosed area of 0.4m² (4 square feet) must be provided for each hen or chicken.
8. Enclosures must be clean, dry and odour-free; kept in a neat and sanitary condition at all times in a way that will not disturb the use and enjoyment of neighbouring lots due to noise, odour or other adverse impact.
9. Henhouses must provide adequate ventilation and adequate sun and shade and must be impermeable to rodents, wild birds, and predators including dogs and cats.
10. A henhouse structure shall be enclosed on all sides and shall have a roof and doors. Access doors must be able to be shut and locked at night. Opening windows and vents must be covered with predator and bird-proof wire of less than 1" (one inch) openings.
11. Building materials used for construction of the hen house must be uniform for each part of the structure. For instance, all the walls must be made of the same material, the roof has the same shingles or other covering and windows or other openings are constructed using the same materials. The use of scrap, waste board or scrap metal is prohibited. The structure shall be painted on the outside and a suitable washable paint used on the inside of the structure for easy cleaning and maintenance.
12. Henhouses should be located in rear yard areas, or in the case of a corner lot, a side yard . A minimum setback of 3m (three meters) from any lot line is required. In the event that the only usable area is in the front, then the housing and yard areas must be screened from road and neighbour visibility by vegetation of sufficient height and width.
13. Chicken yards around a henhouse must be provided and consist of sturdy wire fencing buried at a minimum depth of 12" (twelve inches) in the ground. The pen must be covered with wire, aviary netting or solid roofing. The use of chicken wire for this purpose is not allowed.
14. Odour from chickens, chicken manure or other chicken related substances shall not be perceptible at the property boundaries and perceptible noise from chickens shall not be loud enough to disturb neighbours or people of reasonable sensitivity.
15. The exterior of the henhouse can only use motion activated light for lighting.

16. The owner and permit holder will take all necessary steps and actions to reduce the attraction of predators and rodents; including but not restricted to ensuring that all feed is stored safely in metal, rodent and predator-proof containers. The owner and permit holder will make every effort to provide healthy living conditions that will minimize the risk of chickens becoming diseased. Diseased chickens must be killed and the carcass destroyed.
17. Chickens must be provided with access to clean water and clean feed at all times and the water and feed must be located where it is unavailable to rodents or wild birds or other predators.
18. Provision must be made for the storage and removal of chicken manure. All stored manure shall be covered by a fully enclosed structure with a roof or a lid over the entire structure or bin. All manure not being used for composting or fertilizing should be removed. The henhouse, chicken yard and surrounding area must be kept free from trash or accumulated droppings. Uneaten feed should be removed in a timely manner.

NOTE: Many people living in the Cowichan Valley are living with uncertain food security issues and it is expected that healthy food sources including proteins and vegetables and fruits will increase in price both at the retail and farm gate level. The intention of this proposal is to provide a healthy and economical source of protein that would balance out other healthy eating choices for residents, as well as to work in harmony with food security initiatives for the area.



SRI

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 21, 2010

DATE: September 15, 2010 **FILE NO:** 11-D-10BE
FROM: Nino Morano, Bylaw Enforcement Officer **BYLAW NO:**
SUBJECT: 1781 Fenwick Road – Cowichan Bay

Action:

That the Committee provide direction on this matter.

Purpose:

To consider requests made by Eric & Sally Smith and Robyn Quinn to temporarily relax the Area “D” Zoning Bylaw for a number of events proposed to be held at the Clifton Bed and Breakfast in aid of the Cowichan Bay Maritime Centre “Ahoy! Fund Raising Campaign”.

Financial Implications:

N/A

Interdepartmental/Agency Implications:

N/A

Background:

The attached written requests have been submitted by Eric & Sally Smith (owners of The Clifton B&B, 1781 Fenwick Road) and Robyn Quinn (Campaign Director – Cowichan Bay Maritime Centre) for a relaxation of the Area “D” Zoning Bylaw to temporarily allow for a total of five (5) small scale events/meetings with a maximum of forty (40) attendees between the hours of 6:30pm to 8:30pm from September 29, 2010 to March 2011 (excluding October & December) as part of the Cowichan Bay Maritime Centre “Ahoy! Campaign”.

This property is located within the R-3B Zone (Urban Residential – Limited Height) and as such a Bed and Breakfast is a permitted use. However, events like this fund raising gathering is more in line with a use that is permitted under a Tourist Commercial zoning. Hence, the request for a relaxation of the bylaw for these five special events.

The property itself, which is approximately .33 acres, would likely not be able to accommodate parking for the expected number of attendees were it not for the adjacent Lot A also owned by the Smith's which is undeveloped and is approximately .16 acres. This lot has been leveled and graded to accommodate the additional parking. The use of this lot for accessory parking would also violate the aforementioned zoning as parking is only permitted on a property as a secondary use to the principal residential use of the property. With respect to these events, the two properties should be able to accommodate the parking required.

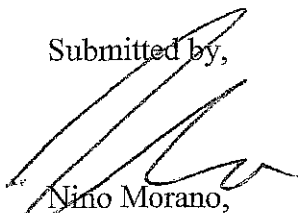
The Clifton was the subject of an investigation in July of this year. Prior to its opening as a Bed and Breakfast, advertisements touted this facility as one which could accommodate small conferences and banquets. The owners were made aware of the fact that this was not a permitted use within the R-3B Zone and immediately altered all advertisements accordingly for B&B use only.

As no specific dates except for the initial event have been identified at this point, it is hoped that the delegation may be able to note other specific dates at the Committee meeting.

Options:

1. Permit requests submitted by Eric & Sally Smith and Robyn Quinn for a relaxation of the Area "D" Zoning Bylaw to temporarily allow for a total of five (5) small scale events/meetings with a maximum of forty (40) attendees between the hours of 6:30pm to 8:30pm from September 29, 2010 to March 2011 (excluding October & December) as part of the Cowichan Bay Maritime Centre "Ahoy! Campaign" and for utilizing the adjacent Lot A for the purpose of parking.
2. Permit only the September 29, 2010 date requested by Eric & Sally Smith and Robyn Quinn for a relaxation of the Area "D" Zoning Bylaw to temporarily allow for a total of five (5) small scale events/meetings with a maximum of forty (40) attendees between the hours of 6:30pm to 8:30pm as part of the Cowichan Bay Maritime Centre "Ahoy! Campaign" and for utilizing the adjacent Lot A for the purpose of parking.
3. Deny requests submitted by Eric & Sally Smith and Robyn Quinn for a relaxation of the Area "D" Zoning Bylaw to temporarily allow for a total of five (5) small scale events/meetings with a maximum of forty (40) attendees between the hours of 6:30pm to 8:30pm from September 29, 2010 to March 2011 (excluding October & December) as part of the Cowichan Bay Maritime Centre "Ahoy! Campaign" and for utilizing the adjacent Lot A for the purpose of parking.

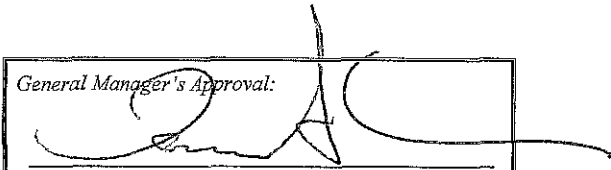
Submitted by,



Nino Morano,
Bylaw Enforcement Officer
Planning and Development Department

NM/ca

General Manager's Approval:



Signature



The Clifton Guest House
1781-B Fenwick Road
Cowichan Bay, BC
V0R 1N1

TEL: 250.748.7378
EMAIL: cliftonrest@telus.net
www.cliftonovercowbay.com

Cowichan Valley Regional District Area Planning Committee

175 Ingram Street,
Duncan, BC V9L 1N8

September 13, 2010

Re: Request for the relaxing of bylaw pertaining to the property at 1781 Fenwick Road, Cowichan Bay.

We, the owners of The Clifton Guest House, would like to offer the use of our venue to the Cowichan Wooden Boat Society for some of their fund raising social events over the next few months.

We understand that the bylaws pertaining to our property restrict us from holding such events and therefore would like to request the relaxing of this bylaw on only the dates and times that the Cowichan Wooden Boat Society require for their fund raising events. The first event is tentatively scheduled for Wednesday, September 29 from 6:30 pm to 8:30 pm. Other dates and times are still being discussed.

The Clifton Guest House has a private parking area and can ensure that all vehicles of guests are parked off street. The venue itself is spacious and can comfortably host social events of up to 40 guests.

We would be happy to reply to any questions you may have.

Eric and Sally Smith



COWICHAN BAY
MARITIME CENTRE

Cowichan Valley Regional District Planning Committee
175 Ingram Street,
Duncan, BC
V9L 1N8

September 13, 2010.

I am writing to formally request the relaxing of a bylaw that currently restricts some of the activities for a local B&B. The owners of Clifton over Cowichan Bay B&B, Eric and Sally Smith, have generously offered the use of their beautiful venue for social activities to raise funds needed to build a new Cowichan Bay Maritime Centre- part of the Ahoy! Campaign. The spacious venue overlooking the existing Maritime Centre is a perfect setting for our community focused fundraising with adequate parking for average number of guests (30-40) expected and room for senior volunteers to properly present our plans for the future. The first Ahoy! Campaign event is tentatively scheduled for the early evening of Wednesday, September 29 when the Cowichan Wooden Boat Society will host a small gathering of invited prospective donors. There will be no more than 30 people attending this event and we expect the session to wrap up by 8:30 pm.

We are also considering this venue to announce the formal agreement with the Federal/Provincial WCAP – tentatively the first or second week of November.

Our plans include several chef-featured theme dinners at the Clifton – tentatively starting in November and monthly until March. The dates are being discussed with the chefs: November 13/18, none in December, mid-January, mid-February, late March. No more than 36 donor guests and approximately 10 volunteers would attend the dinners. We would ensure Cowichan Wooden Boat Society volunteers park on the Maritime Centre lot and use a shuttle to transport them.

The final event would be a donor recognition event in the spring. No details available.

I would be happy to discuss the value of this generous arrangement for our community fundraising efforts.

Robyn Quinn, APR

Ahoy! Campaign Director
Cowichan Bay Maritime Centre
250-220-4750 Cell: 778-977-2264
www.classicboats.org/Ahoy/
Preserving Maritime Adventures for the Future



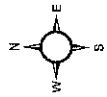
This map is compiled from various sources for internal use and is designed for reference purposes only.

The Regional District does not warrant the accuracy.

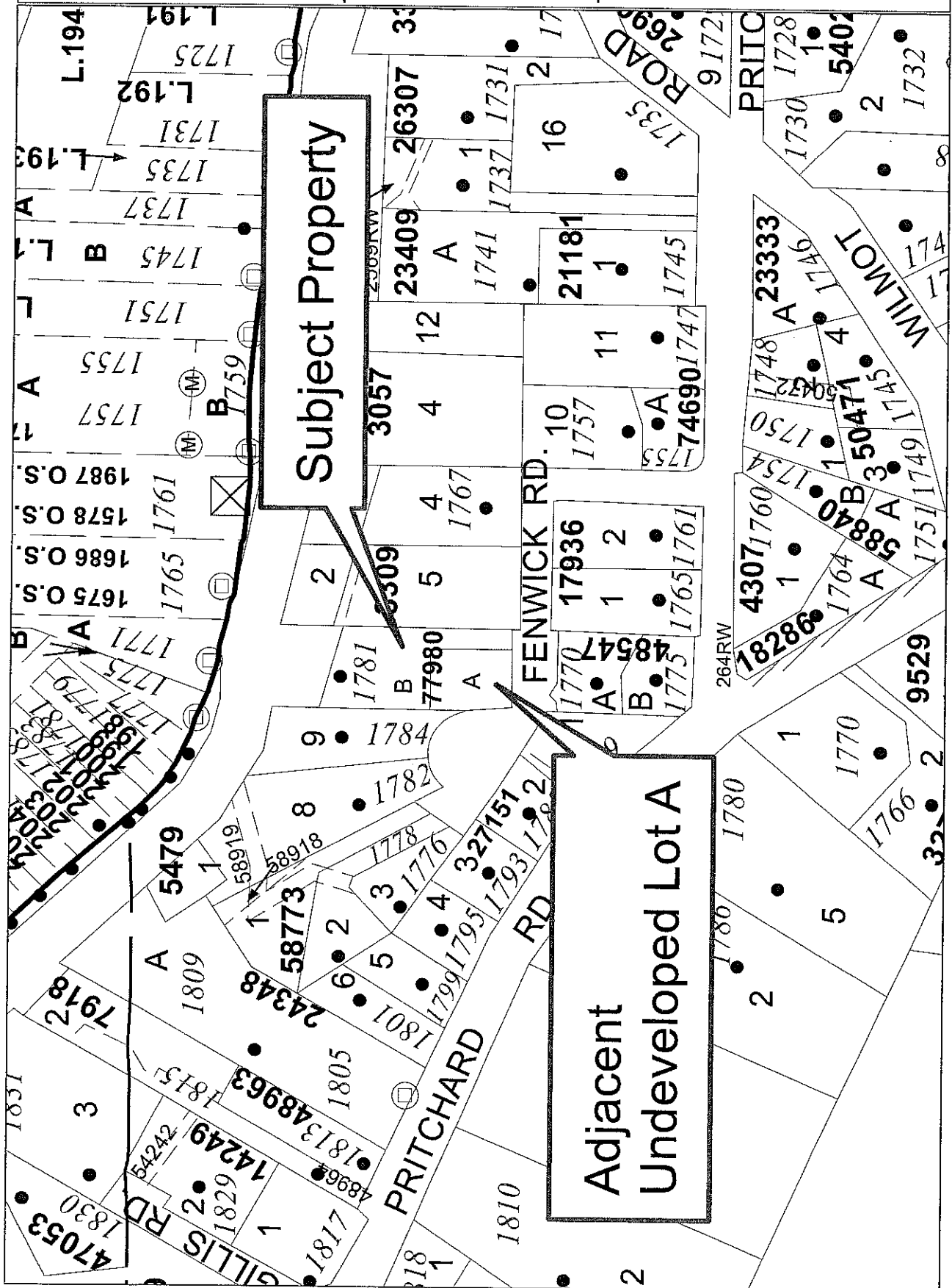
All persons making use of this compilation are advised that amendments have been consolidated for convenience purposes only and that boundaries are representational.

The original Bylaws should be consulted for all purposes of interpretation and application of the Bylaws.

Printed: September 15, 2010



Scale: 1:1,266





SR2

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 21, 2010

DATE: September 14, 2010 **BYLAW No:** 3427
FROM: Kathleen Harrison, Legislative Services Coordinator
SUBJECT: Cobble Hill Community Hall Contribution Service Amendment Bylaw (Maximum Requisition Limit Increase).

Recommendations:

1. That the annual maximum requisition limit for the Cobble Hill Community Hall Annual Contribution Service be increased from \$15,000. to \$18,000.
2. That "CVRD Bylaw No. 3427 – Cobble Hill Community Hall Annual Contribution Service Amendment Bylaw, 2010", be forwarded to the Board for consideration of three readings and adoption.

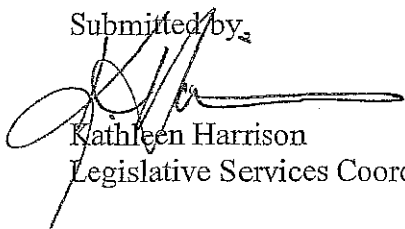
Purpose: To introduce Bylaw No. 3427 that amends Bylaw No. 2935, *Cobble Hill Community Hall Annual Contribution Service*, by increasing the maximum annual requisition limit from \$15,000. to \$18,000. to reflect the current and expected increase in costs to operate and maintain the Cobble Hill Community Hall.

Financial Implications: If adopted, the maximum amount of money that may be requisitioned annually in support of this service is the greater of \$18,000. or an amount equal to the amount that could be raised by a property value tax of \$.02105 per \$1,000. of net taxable land and improvements. The average costs to taxpayers within the service area with property assessed at \$100,000. would be approximately \$1.91 annually.

Interdepartmental/Agency Implications: This bylaw requires the approval of the service area voters before it can be adopted. Voter approval may be obtained by the Area Director consenting, in writing, to the adoption of the Bylaw. This bylaw meets the criteria for exemption from obtaining the Inspector of Municipalities approval pursuant to the *Regional Districts Establishing Bylaw Approval Exemption Regulation, B.C. Reg. 113/2007*.

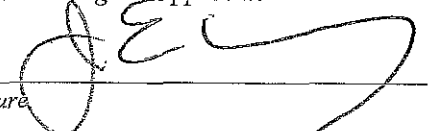
Background: At the request of the Electoral Area C – Cobble Hill Director, an amendment bylaw has been drafted and is attached for consideration.

Submitted by:


Kathleen Harrison
Legislative Services Coordinator

Attachment: Bylaw No. 3427

Division Manager's Approval:


Signature



COWICHAN VALLEY REGIONAL DISTRICT

BYLAW No. 3427

A Bylaw to Amend Cobble Hill Community Hall Annual Contribution Service Establishment Bylaw No. 2935

WHEREAS the Board of the Cowichan Valley Regional District established the *Cobble Hill Community Hall Annual Contribution Service* under the provisions of Bylaw No. 2935, cited as "CVRD Bylaw No. 2935 - Cobble Hill Community Hall Annual Contribution Service Establishment Bylaw, 2007", for the purpose of assisting the Shawnigan Farmers Institute with costs associated with the operation and maintenance of the Cobble Hill Community Hall;

AND WHEREAS the Regional District wishes to amend Bylaw No. 2935 by increasing the maximum annual requisition limit from \$15,000. to \$18,000.;

AND WHEREAS the Director for Electoral Area C – Cobble Hill has consented, in writing, to the adoption of this bylaw;

NOW THEREFORE the Board of Directors of the Cowichan Valley Regional District, in open meeting assembled, enacts as follows:

1. CITATION

This bylaw may be cited as "CVRD Bylaw No. 3427 – Cobble Hill Community Hall Annual Contribution Service Amendment Bylaw, 2010".

AMENDMENT:

2. Bylaw No. 2935, cited as "CVRD Bylaw No. 2935 – Cobble Hill Community Hall Annual Contribution Service Establishment Bylaw, 2007", is hereby amended as follows:

a) That the Section 6 - Maximum Requisition text be deleted and replaced with the following:

The maximum amount of money that may be requisitioned annually in support of this service shall be the greater of \$18,000. or an amount equal to the amount that could be raised by a property value tax of \$.02105 per \$1,000 of net taxable value of land and improvements within the service area.

READ A FIRST TIME this _____ day of _____, 2010.

READ A SECOND TIME this _____ day of _____, 2010.

READ A THIRD TIME this _____ day of _____, 2010.

ADOPTED this _____ day of _____, 2010.

Chair

Corporate Secretary



SR3

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 21, 2010

DATE: September 14, 2010
FROM: Catherine Tompkins, Senior Planner
SUBJECT: Heron Habitat Protection Development Permit Area – Electoral Area H

Recommendation:

That the Habitat Protection Development Permit Area for the protection of the Ladysmith Heron Colony be forwarded to the Board for consideration of first and second readings, and that a public hearing be scheduled with Director M. Marcotte, Director M. Dorey and Director L. Iannidinardo appointed as the hearing delegates.

Purpose:

To request direction from the Electoral Area Services Committee with respect to the attached proposed development permit area, aimed at protecting a Great Blue Heron colony along Christie Road, within Electoral Area H.

Financial Implications: NA

Interdepartmental/Agency Implications: NA

Background:

At its regular meeting of July 14, 2010, the Regional Board passed the following (Resolution No. 10-407):

- *That staff prepare a Development Permit Area for protection of the Great Blue Heron habitat in the Diamond area along Christie Road.*
- *That the proposed Development Permit Area be referred to the Ministry of Environment, Rare and Endangered Species Biologist; Ministry of Community and Rural Development; the Ministry of Transportation and Infrastructure; CVRD Engineering and Environmental Services Department; and the Diamond Improvement District, for comment.*

The Great Blue Heron habitat area is located on a parcel of land in the vicinity of Christie Road (Lot 2, District Lot 66, Oyster District Plan 4510) in the Diamond area of Electoral Area H (North Oyster Diamond). The Heron colony is referred to by the Ministry of Environment as the “Ladysmith Pacific Great Blue Heron Colony”. It has been active continually in this location since its conception with 11 nests in 2003. Since that time it has fluctuated between 12 and 58 nests per year. In 2010 there were 58 active nests, with an estimated 116 fledglings. Regionally (including Gulf Islands and Vancouver Island) there are from 500 to 600 active nests in about 30 colonies in a given year. The Ladysmith colony represents 10 percent of this regional population.

Pacific Great Blue Herons are listed as a species of special concern in Canada and are blue-listed (vulnerable) in British Columbia. They are currently protected by the provincial *Wildlife Act*, however only the nests, eggs and young are protected. There is no protection for the areas surrounding the nests, despite that the Ministry of Environment recommends a 100 metre buffer area for the habitat to be viable. Herons are sensitive to disturbance around their nest sites and are particularly sensitive to loud sounds. They are known to desert their nests and young due to human activities taking place during nesting season. There is a potential for future population declines due to urbanization combined with predation (eagles), and there are few viable Heron habitat areas on Vancouver Island. Habitat areas must be within easy reach of the ocean shoreline. – more than 5 kilometres from the shoreline would be too far for an adult to be able to feed its young.

The subject property owners have been supportive of the Ladysmith Heron Colony, and CVRD efforts to protect the colony, and have provided access and assistance to the Ministry of Environment for documenting and monitoring the activities of the colony. The proposed Development Permit Area will also affect three additional parcels, the owners of which will be individually notified prior to the public hearing, if this initiative proceeds.

Agency Comments

A referral process has been conducted with the Ministry of Environment (Rare and Endangered Species Branch); Ministry of Transportation and Infrastructure; Ministry of Community and Rural Development; Diamond Improvement District; and CVRD Engineering and Environmental Services Department. The following responses have been received:

- Ministry of Environment-Ecosystem Biologist: **Recommend approval subject to minor adjustment** (minor adjustment to the draft bylaw was made)
- Ministry of Environment Endangered Species Biologist: **Recommend approval subject to minor adjustment** (minor adjustment to the draft bylaw was made)
- Diamond Improvement District: **Interests unaffected**
- Ministry of Transportation Approving Officer: **Interests unaffected**
- CVRD Engineering and Environmental Services Department – Senior Engineering Technologist: **Interests unaffected**

Planning and Development Comments

In 2010, the subject habitat area accommodated some 10% of all Pacific Great Blue Herons on Vancouver Island and the Gulf Islands. The proposed development permit area is essential if the habitat is to be protected from undue impacts caused by human development. There are few other viable Heron habitat areas on Vancouver Island, and studies indicate that there may be a future decline in Heron populations due to increased urbanization on southeastern Vancouver Island and the Gulf Islands. At the same time, the provincial *Wildlife Act* protects only the heron nests and nest trees when the eggs, chicks or fledglings are present in the trees.

Section 919.1(1) of the *Local Government Act* allows the Regional District to prepare a development permit area for “the protection of the natural environment, its ecosystems and biodiversity”, which could include a DPA designed to protect habitat areas for a species such as the Pacific Great Blue Heron. The attached draft DPA is similar to the “Habitat Protection Development Permit Area”, which was prepared in 2008 for the protection of a Heron colony in Cowichan Bay. The Cowichan Bay DPA has been generally supported by the community and has resulted in more awareness in Cowichan Bay about the habitat requirements of the species. There is far less disturbance occurring during breeding season than would otherwise have been the case, yet development continues to occur in accordance with zoning.

Ministry of Environment supports the proposed adoption of the Habitat Protection Development Permit Area, and the Ministry of Transportation and Infrastructure, Diamond Improvement District, and CVRD Engineering and Environmental Services Department have stated that their interests are unaffected.

Should the Board proceed to amend the Official Community Plan and establish the Habitat Protection Development Permit Area, land within the subject area could not be altered without an owner first obtaining a development permit from the CVRD and, in so doing, provide assurances that efforts are being made to limit impacts on the habitat area. In some cases the owner would be required to consult with a biologist to determine the best way to develop the land without undue disturbance of the colony.

Finally, the Heron habitat is located on a 2 ha parcel zoned as R-2 “Suburban Residential.” The parcel is within the Diamond Improvement District water service area, and the minimum parcel size for a parcel served by community water is 0.4 ha. Therefore there is a potential for a subdivision on the property of about four lots. The owners do not plan to subdivide in the short term, and at the time of subdivision any new subdivision would be subject to the provisions in the Development Permit Area. This would provide a significant degree of protection for the Heron habitat, however the degree of protection could be increased further by offering the owners an opportunity to dedicate more than the regular 5% parkland dedication at the time of subdivision. Over the long term, the Board may wish to consider allowing for an amendment to the Zoning Bylaw, to add a “Dedication for Public Use” regulation, similar to the regulation in Saltair and in other electoral areas. This would enable a subdivision applicant to dedicate not only the statutory 5% parkland dedication, but also an additional amount, specified in the Zoning Bylaw, without reducing the lot yield of the subdivision.

This proposed Habitat Protection Development Permit Area would require an amendment to the Official Community Plan; therefore a Public Hearing would be required for this initiative to proceed.

Options

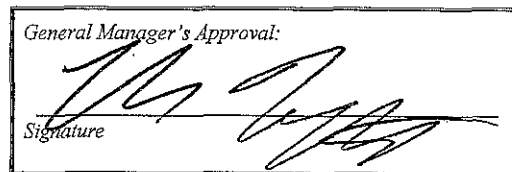
1. That the Habitat Protection Development Permit Area, for the protection of the Ladysmith Heron Colony, be forwarded to the Board for 1st and 2nd readings, and that a public hearing be scheduled, with Director M. Marcotte, Director M Dorey and Director L Iannidinardo appointed as the hearing delegates;
2. That no action be taken.

Pacific Great Blue Herons are a Species at Risk in Canada, and are Blue Listed (Vulnerable) in British Columbia. They have few remaining options for habitat on southeastern Vancouver Island, and the Ladysmith Pacific Blue Heron Colony represents some 10 percent of the population in Vancouver Island and the Gulf Islands. The proposed development permit area is essential if the Ladysmith colony is to survive. Option 1 is therefore recommended.

Submitted by,



Catherine Tompkins, MCIP
Senior Planner
Planning and Development Department



CT/ca



COWICHAN VALLEY REGIONAL DISTRICT

BYLAW NO. DRAFT

A Bylaw For The Purpose Of Amending Official Community Plan Bylaw No. 1497, Applicable To Electoral Area H – North Oyster/Diamond

WHEREAS the *Local Government Act*, hereafter referred to as the "*Act*", as amended, empowers the Regional Board to adopt and amend official community plan bylaws;

AND WHEREAS the Regional District has adopted an official settlement plan bylaw for Electoral Area H – North Oyster/Diamond, that being Official Community Plan Bylaw No. 1497;

AND WHEREAS the Regional Board voted on and received the required majority vote of those present and eligible to vote at the meeting at which the vote is taken, as required by the *Act*;

AND WHEREAS after the close of the public hearing and with due regard to the reports received, the Regional Board considers it advisable to amend Official Community Plan Bylaw No. 1497;

NOW THEREFORE the Board of Directors of the Cowichan Valley Regional District, in open meeting assembled, enacts as follows:

1. CITATION

This bylaw shall be cited for all purposes as "CVRD Bylaw No. DRAFT - Area H – North Oyster/Diamond Official Community Plan Amendment Bylaw (Habitat Protection Development Permit Area), 2010".

2. AMENDMENTS

Cowichan Valley Regional District Official Community Plan Bylaw No. 1497, as amended from time to time, is hereby amended as outlined on the attached Schedule A.

3. CAPITAL EXPENDITURE PROGRAM

This bylaw has been examined in light of the most recent Capital Expenditure Program and Solid Waste Management Plan of the Cowichan Valley Regional District and is consistent therewith.

READ A FIRST TIME this _____ day of _____, 2010

READ A SECOND TIME this _____ day of _____, 2010.

READ A THIRD TIME this _____ day of _____, 2010.

I hereby certify this to be a true and correct copy of Bylaw No. _____ as given Third
Reading on the _____ day of _____, 2010.

Secretary

Date

APPROVED BY THE MINISTER OF COMMUNITY AND RURAL DEVELOPMENT
UNDER SECTION 913(1) OF THE *LOCAL GOVERNMENT ACT*
this _____ day of _____, 2010.

ADOPTED this _____ day of _____, 2010.

Chairperson

Secretary



SCHEDULE "A"

To CVRD Bylaw No.

Schedule B to Official Community Plan Bylaw No. 1497 is hereby amended as follows:

1. That Part 3 Natural Environment be amended by adding Section 3.9 as follows:

3.9 – HABITAT PROTECTION DEVELOPMENT PERMIT AREA

13.6.1 CATEGORY

The Habitat Protection Development Permit Area is designated pursuant to Section 919.1(1)(a) of the *Local Government Act*, to protect the natural environment, its ecosystems and biological diversity.

13.6.2 JUSTIFICATION

Pursuant to Section 919.1 of the *Local Government Act*, the Habitat Protection Development Permit Area is established to address the following:

- (a) The OCP aims to provide for greater protection of Great Blue Heron nest habitat areas from direct and indirect development. The nests, eggs and young of Great Blue Herons are protected pursuant to the *Wildlife Act*; it is an offence to destroy, remove, or injure any of these features. However, only the actual nests, eggs and young are protected under the *Wildlife Act*. To ensure the viability of the nests and the rooting integrity of the nest trees, the Ministry of Environment recommends buffer areas surrounding these trees.
- (b) The OCP recognizes that Pacific Great Blue Herons are listed as a species of special concern in Canada and are blue-listed (Vulnerable) in British Columbia, and that there are very few viable nest sites to accommodate them on Vancouver Island, due to concerns around population levels, productivity, and habitat. Pacific Great Blue Herons are also protected by the Canadian *Species at Risk Act*.
- (c) The OCP recognizes that Great Blue Herons are sensitive to disturbance around their nest sites, and are particularly sensitive to loud sounds. Herons have been known to desert their nests and young due to disturbances taking place during nesting season.
- (d) The area of concern is surrounded by private properties, and the owners may require building permits for the construction of buildings, or may wish to harvest trees in the future. The Board intends to ensure that such activities can take place without negatively impacting the habitat area that the herons rely upon.

...2

13.6.3 AREA OF APPLICATION

The Habitat Protection Development Permit Area applies to areas of land shown on Figure 9 - Habitat Protection Development Permit Area Map.

13.6.4 GUIDELINES

Within lands located in the Habitat Protection Development Permit Area, no person shall:

- subdivide land;
- alter land, including the removal of trees or vegetation and removal/deposit of soil;
- construct a road, bridge, driveway; well, sewage works, pipelines, or similar work, or
- construct a building or structure,

prior to the owner of land applying for and receiving a development permit from the CVRD, which shall sufficiently conform to the following guidelines:

- (a) Development will, wherever possible, be directed outside of the Habitat Protection Development Permit Area. In cases where there are no appropriate alternatives but to locate development within the Development Permit Area, the onus will be on the applicant to demonstrate that encroaching into the Habitat Protection Development Permit Area is necessary due to circumstances such as the entire parcel being located within the Development Permit Area;
- (b) Where a parcel of land is entirely or significantly within the Habitat Protection Development Permit Area, the development should be sited so as to maximize the separation between the proposed development and the wildlife tree or trees. The applicant may be required to provide, at his/her own expense, a report by a registered professional biologist, with experience and knowledge in dealing with Herons and their nesting requirements, which will identify the area of lowest environmental impact which is suitable for the use intended. In such cases, mitigation and restoration measures may be required to minimize the impact of the encroachment;
- (c) Breeding and nesting season is generally from mid February until mid August. Construction and development, including unusual or loud activities such as blasting, tree falling, chain saws, and concrete cutters, should not take place during breeding and nesting season;
- (d) Subdivisions should be undertaken in a manner that does not create parcels entirely within the Development Permit Area, or parcels that would require or encourage additional development to occur within the Development Permit Area.
- (e) Where development is proposed within the Habitat Protection Development Permit Area, all works will adhere to the *Environmental Best Management Practices for Urban and Rural Land Development in British Columbia* (Ministry of Environment: 2004).

...3

13.6.5 EXEMPTIONS

Within the Habitat Protection Development Permit Area, the following activities are exempted from the requirement of obtaining a development permit:

- (a) Development proposed between September 1 and January 31, where a registered professional biologist, with experience and knowledge in dealing with Great Blue Herons and their nesting requirements, provides a report to the CVRD indicating that the birds are not present or would not be affected by the proposed development, and that the proposed work is taking place in compliance with the *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia* (Ministry of Environment: 2006).
- (b) Interior and minor exterior building renovations;
- (c) Construction, repair and public maintenance works by agents or contractors of the Government of Canada, British Columbia or the CVRD;
- (d) Fence building, growing, rearing, producing and harvesting of agricultural products in areas affected by the *Farm Practices Protection Act*, in accordance with recognized standards of the *Farm Practices Protection Act*;
- (e) The planting of trees, shrubs or groundcovers and manual removal of invasive plants or noxious weeds for the purpose of enhancing the habitat values and /or soil stability within the Habitat Protection Development Permit Area provided that the planting is carried out in accordance with the *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia* (Ministry of Environment: 2006).
- (f) The removal of a hazardous tree that could result in loss of life or damage the built environment.

13.6.6 APPLICATION REQUIREMENTS

- (a) Before the CVRD authorizes the issuance of a development permit for a parcel of land in the Habitat Protection Development Permit Area, the applicant must submit a development permit application, which at a minimum includes:
 - (1) a written description of the proposed project;
 - (2) information in the form of one or more maps, as follows:
 - location/extent of proposed work, including land clearing;
 - location of all Great Blue Heron nests;
 - location of watercourses, including top of bank;
 - topographical contours;
 - existing tree cover and proposed areas to be cleared;
 - existing and proposed buildings;
 - existing and proposed property parcel lines;
 - existing and proposed roads, vehicular access points, driveways, and parking areas;
 - existing and proposed trails;
 - existing and proposed septic tanks, treatment systems and fields;
 - existing and proposed community water lines and well sites.

- (b) In addition to the requirements listed above, the applicant may be required to furnish, at the applicant's expense, an impact assessment report prepared by a Registered Professional Biologist, with experience and knowledge in dealing with Great Blue Herons and their nesting requirements, indicating that the birds are not present and would not be affected by the proposed development, and that the proposed work is taking place in compliance with the *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia* (Ministry of Environment: 2006).

13.6.7 VIOLATION

Every person who:

- i. violates any provision of this Development Permit Area;
- ii. causes or permits any act or thing to be done in contravention or violation of any provision of this Development Permit Area;
- iii. neglects to do or refrains from doing any act or thing required under this Development Permit Area;
- iv. carries out, causes or permits to be carried out any development in a manner prohibited by or contrary to this Development Permit Area;
- v. fails to comply with an order, direction or notice given under this Development Permit Area; or
- vi. prevents or obstructs or attempts to prevent or obstruct the authorised entry of the Administrator, or person designated to act in the place of the Administrator;

commits an offence under this Bylaw. Each day's continuance of an offence under the Violations Section constitutes a new and distinct offence.

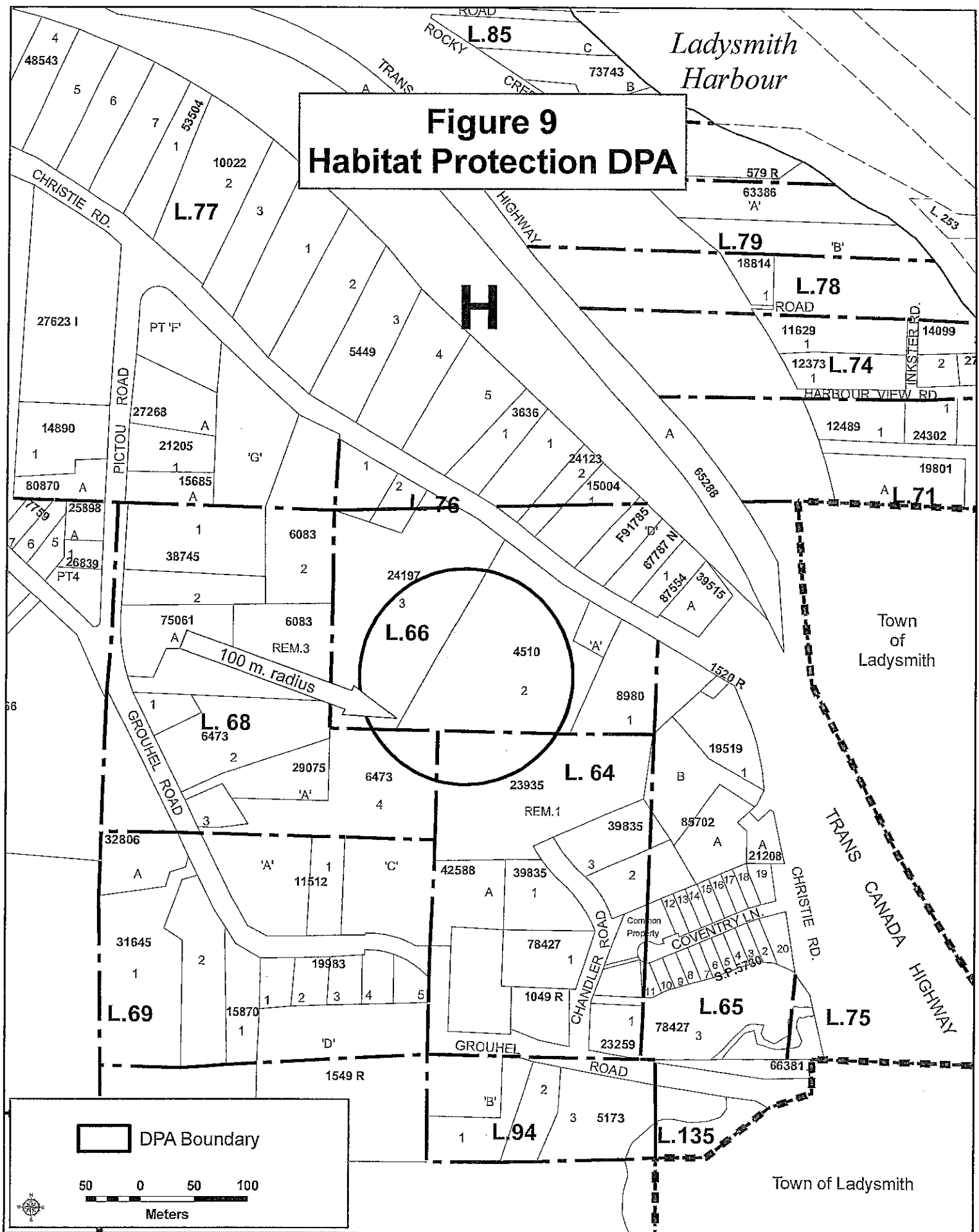
13.6.8 PENALTY

A person who commits an offence against this Bylaw is liable, upon conviction in a prosecution under the *Offence Act*, to the maximum penalties prescribed under the *Community Charter* for each offence committed by that person.

13.6.9 SEVERABILITY

If any section, sentence, clause, phrase, word or schedule of this Development Permit Area is for any reason held to be invalid by the decision of any Court of competent jurisdiction, the invalid portion shall be severed and the decision that it is invalid shall not affect the validity of the remainder of this Development Permit Area.

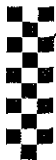
2. That existing Figure 9 "Agricultural Land Reserve" be renumbered to "Figure 10" and that all subsequent Figures be renumbered accordingly.









**CVRD**

COWICHAN VALLEY REGIONAL DISTRICT

175 Ingram Street, Duncan, B.C. V9L 1N8

Tel: (250) 746-2620 Fax: (250) 746-2621

BYLAW AMENDMENT REFERRAL FORM

Date: July 22, 2010

CVRD Bylaw No. 3405 – Area H Heron Rookery

The CVRD proposes to create a Development Permit Area (DPA) to protect a Great Blue Heron colony in the vicinity of Christie Road

General Property Location: Christie Road area

Legal Description: See attached maps

You are requested to comment on this proposal for potential effect on your agency's interests. We would appreciate your response by **Friday, August 13, 2010**. If no response is received within that time, it will be assumed that your agency's interests are unaffected. If you require more time to respond, please contact Catherine Tompkins, Senior Planner, Planning and Development Department, 250-746-2620.

Comments:

☐

Approval recommended for reasons outlined below



Interests unaffected

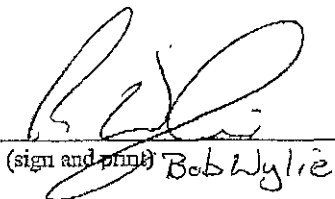
☐

Approval recommended subject to conditions below

☐

Approval not recommended due to reasons outlined below

Signature


(sign and print) Bob Wylie

Title

Provincial Approving Officer

Contact No.

(250) 751-3278

This referral has been sent to the following agencies:

- ☒ Ministry of Environment (Rare and Endangered Species)
- ☒ Ministry of Transportation and Infrastructure
- ☒ Ministry of Community and Rural Development
- ☒ Diamond Improvement District
- ☒ CVRD Engineering and Environmental Services Department

CVRD

COWICHAN VALLEY REGIONAL DISTRICT
 175 Ingram Street, Duncan, B.C. V9L 1N8
 Tel: (250) 746-2620 Fax: (250) 746-2621

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Comments:

☐

Approval recommended for reasons outlined below

☒

Interests unaffected

☐

Approval recommended subject to conditions below

☐

Approval not recommended due to reasons outlined below

JUST AN OBSERVATION:

By Law 3405 - mentions official settlement plan Bylaw 1497 in title. Is this correct or should it be "Official Community Plan"?

Page 2 - Certification area refers to Minister of Community, Aboriginal & Women's Services. Should this not be the Minister of Community and Rural Development?

*Pat Irvine
Administrator*

Signature

Dave Kane
 (sign and print) DAVE KANE

Title

CHAIR

Contact No.

(250-245-4549)

DIAMOND IMPROVEMENT DISTRICT.

This referral has been sent to the following agencies:

- ☒ Ministry of Environment (Rare and Endangered Species)
- ☒ Ministry of Transportation and Infrastructure
- ☒ Ministry of Community and Rural Development
- ☒ Diamond Improvement District
- ☒ CVRD Engineering and Environmental Services Department

CVRD

COWICHAN VALLEY REGIONAL DISTRICT
175 Ingram Street, Duncan, B.C. V9L 1N8
Tel: (250) 746-2620 Fax: (250) 746-2621

RECEIVED

JUL 23 2010

Engineering &
Environmental Services

BYLAW AMENDMENT REFERRAL FORM

Date: July 22, 2010

CVRD Bylaw No. 3405 – Area H Heron Rookery

The CVRD proposes to create a Development Permit Area (DPA) to protect a Great Blue Heron colony in the vicinity of Christie Road

General Property Location: Christie Road area

Legal Description: See attached maps

You are requested to comment on this proposal for potential effect on your agency's interests. We would appreciate your response by **Friday, August 13, 2010**. If no response is received within that time, it will be assumed that your agency's interests are unaffected. **If you require more time to respond, please contact Catherine Tompkins, Senior Planner, Planning and Development Department, 250-746-2620.**

Comments:

☐

Approval recommended for reasons outlined below

☒

Interests unaffected

☐

Approval recommended subject to conditions below

☐

Approval not recommended due to reasons outlined below

Interests unaffected for Engineering & Environment, Water Management Division as we have no water or sewer systems in this area, however, we recommend comments by Environmental Policy Division.
cc. Kate Miller

Signature

L. Kusche-Joy
(sign and print)

Title

Senior Engineering Technologist

Contact No.

250-746-2536

This referral has been sent to the following agencies:

- ☒ Ministry of Environment (Rare and Endangered Species)
- ☒ Ministry of Transportation and Infrastructure
- ☒ Ministry of Community and Rural Development
- ☒ Diamond Improvement District
- ☒ CVRD Engineering and Environmental Services Department

Catherine Tompkins

From: Chatwin, Trudy ENV:EX [Trudy.Chatwin@gov.bc.ca]
Sent: Friday, July 30, 2010 1:49 PM
To: Catherine Tompkins
Subject: RE: heron ocp bylaw.docx

Dear Katy:

My goodness, I forgot to tell you the good news. In the end there were 58 active nests! Largest number ever for that colony.

Trudy Chatwin
Rare & Endangered Species Biologist
Ministry of Environment
Vancouver Island Region
2080A Labieux Rd, Nanaimo BC V9T 6J9
email trudy.chatwin@gov.bc.ca
Telephone 250 751-3150

From: Catherine Tompkins [mailto:ctompkins@cvrd.bc.ca]
Sent: Friday, July 30, 2010 8:09 AM
To: Chatwin, Trudy ENV:EX
Subject: RE: heron ocp bylaw.docx

Hi Trudy – Did you get a nest count?

Katy

Catherine Tompkins MCIP
Senior Planner
Community and Regional Planning
Cowichan Valley Regional District
Telephone 250-746-2620

If you are not the intended recipient of this email and any attachments, please notify the sender by a return email and delete the email and any attachments immediately thereafter. This email and any attachments may be confidential and privileged. Confidentiality and privilege are not lost by this email and any attachments having been sent to the wrong person. Any use of the email and any attachments by an unintended recipient is prohibited

From: Chatwin, Trudy ENV:EX [mailto:Trudy.Chatwin@gov.bc.ca]
Sent: Tuesday, July 27, 2010 4:26 PM
To: Catherine Tompkins
Subject: heron ocp bylaw.docx

<<heron ocp bylaw.docx>> Dear Katy:

Sorry I was slow in reviewing the proposed bylaw. Here are a few comments on the bylaw as you have written it. We can discuss tomorrow.

Catherine Tompkins

From: Caskey, Marlene ENV:EX [Marlene.Caskey@gov.bc.ca]
Sent: Thursday, August 12, 2010 6:07 PM
To: Catherine Tompkins
Cc: Barr, Brenda M ENV:EX; Chatwin, Trudy ENV:EX
Subject: Christie Road Heron DPA; our file 58000-35/RD10, 92929

Thanks for the opportunity to comment on this proposed Development Permit Area. We strongly support the creation of these buffers as they appear to be critical to keeping Great Blue Heron colonies.

We recommend that you change the references to the '*Environmental Best Management Practices for Urban and Rural Land Development in British Columbia 2004*' to its replacement document, '*Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia 2006*'.
http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html

P. Marlene Caskey, B.Sc., R.P.Bio

Senior Urban Ecosystem Biologist

Environmental Stewardship Division,

Vancouver Island Region, Ministry of Environment

Nanaimo

(250) 751-3220

**Update
COSEWIC Status Report**

on

Pacific Great Blue Heron
Ardea herodias fannini

prepared for

**COMMITTEE ON THE STATUS OF ENDANGERED
WILDLIFE IN CANADA**

by

Ross G. Vennesland

Parks Canada Agency
Western and Northern Service Centre
300-300 West Georgia St., Vancouver, B.C., V6B 6B4

&

Robert W. Butler

Canadian Wildlife Service
Environment Canada
5421 Robertson Road, Delta, B.C., V4K 3N2

DRAFT

**Funding provided by B.C. Ministry of Environment, Parks Canada
Agency and Environment Canada**

**1st draft submitted April 25, 2007
2nd draft submitted October 31, 2007**

EXECUTIVE SUMMARY

Species information

The Great Blue Heron, *Ardea herodias*, is the largest wading bird in North America, standing over 1 m in height. On the coast of British Columbia the subspecies, *Ardea herodias fannini*, referred to as the Pacific Great Blue Heron in this report, resides year round. This sub-species is non-migratory and isolated in part by high mountain ranges to the east and a slightly earlier breeding season, compared to more continental herons. The Pacific Great Blue Heron is darker plumaged, smaller in size and has a smaller clutch size than continental herons. Genetic evidence is not available that would assist in clarifying the degree of separation of subspecies.

Distribution

The Great Blue Heron breeds across most of North America south of Alaska, and on the Galapagos Islands. The non-breeding distribution is south of freezing areas in the north, to as far south as Panama. The distribution of the Pacific Great Blue Heron is confined to the Pacific Coast from Prince William Sound, Alaska south to Puget Sound, Washington, where it resides year-round.

Habitat

The Pacific Great Blue Heron forages along the seacoast, in fresh and saltwater marshes, along rivers and in grasslands. Smaller numbers of herons forage in kelp forests, from wharves and at anthropogenic waterbodies (e.g., ornamental ponds and fish farms). Most herons nest in woodlands near large eelgrass (*Zostera marina*) meadows, along rivers, and in estuarine and freshwater marshes. Nesting colony locations are dynamic, especially in areas of high disturbance. Some colonies are used for many years, but most colonies and especially those with fewer than 25 nests, are relocated every few years. All known nesting occurrences are within the Coastal Western Hemlock and Coastal Douglas Fir Biogeoclimatic Zones. In autumn, juvenile herons occupy grasslands on the Fraser River delta and southern Vancouver Island, and adults occupy estuarine marshes, riverine marshes and grasslands.

Overall, suitable foraging habitat likely is declining in British Columbia, though quantitative information on foraging habitat status is not available. The size of Great Blue Heron populations is correlated with the area of foraging habitat available locally, and consequently the largest concentrations of Pacific Great Blue Herons occur around the Fraser River delta where extensive mudflats and eelgrass beds provide abundant foraging locations. Local declines in foraging habitat likely have been greatest in south-coastal British Columbia because most of the province's human population is located in this area. Further, the magnitude of use of some foraging locations currently may be limited by the amount of suitable nesting habitat that remains undeveloped.

Suitable tall trees as nesting habitat near foraging areas have declined in some parts of British Columbia over the past century due to increases in the size of human

populations and industry. Especially hard hit is south-coastal British Columbia and especially the lower Fraser Valley, where the human population is large and still growing. In this region, nesting habitat might be limiting the size of the heron population. Habitat destruction in south-coastal British Columbia has resulted in the abandonment of at least 21 colonies (measured from 1972 to 1985 and from 1998 to 1999).

Some habitat (nesting colonies and foraging areas) is protected in parks and other reserves (e.g., provincial Wildlife Management Areas) across the coast. The British Columbia *Wildlife Act* protects heron nests, but does not provide for buffer areas. Other protection can be afforded on provincial Crown land through the *Forest and Range Practices Act*, including buffer areas, though no reserves have thus far been established under this legislation. Little protection is afforded for heron habitat on private land.

Biology

In springtime, most herons gather in colonies where they court, nest, and raise young. The principal diet is small fish during the breeding season augmented with small mammals in winter. Nesting for the Pacific Great Blue Heron begins in February to March and ends in about August. Typically four eggs are laid and less than two chicks on average reach the fledgling stage and leave the nest to become juveniles. Fewer than 25% of juveniles survive their first winter, after which survival increases to about 75% per year for adults. Nests are generally in trees and are made using large sticks. Pacific Great Blue Herons may nest solitarily or in colonies of up to about 400 nests. Nesting usually occurs at sites that are relatively free from disturbance by human activities, but sometimes occurs in heavily developed areas.

In British Columbia, the Bald Eagle (*Haliaeetus leucocephalus*) is the primary predator of Great Blue Herons. Bald Eagles prey on heron eggs, nestlings, juveniles and adults, and have been responsible for reduced breeding productivity at many colonies as well as many total colony abandonments. Other predators include crows, ravens and hawks.

The concentrations of most chemical contaminants in heron tissues have declined in recent years, though concern recently has been raised about two newly identified classes of chemicals. In particular, polybrominated diphenyl ether concentrations have been increasing exponentially in heron tissues over recent years, though the toxicological implications of this are currently unknown.

Population sizes and trends

Data on population sizes and trends come from several sources, including the British Columbia Conservation Data Centre's historical database of nesting colonies, as well as volunteer based population surveys such as the Christmas Bird Count (CBC), Coastal Waterbird Survey (CWS) and Breeding Bird Survey (BBS).

Population size has been difficult to estimate for the Pacific Great Blue Heron

because colonies are not stable entities and are difficult to track in a standardized fashion. Most coastal areas outside the Strait of Georgia have not been systematically surveyed. Based on 2005 data for the Georgia Basin (1833 active nests estimated in 46 colonies), recent work on the Queen Charlotte Islands (c. 200 herons), and our liberal estimate of 900 herons outside the Strait of Georgia on the mainland coast, we believe the Pacific Great Blue Heron population size in Canada to be about 4000-5000 nesting adults. The global population of the Pacific Great Blue Heron is likely between 9,500 and 11,000 nesting adults.

An analysis of changes in colony size from nesting surveys shows that on the whole there have been no drastic increases or decreases in colony occupancy for nesting Pacific Great Blue Herons in the Strait of Georgia over recent years. However, this analysis is limited to colonies with consecutive observations and thus may not provide a full picture of population trends. Nesting success and productivity have declined significantly since the 1970's. One region of the Strait of Georgia (the Sunshine Coast) has seen a drastic decline in nesting population size and another region (north-eastern Vancouver Island) has seen a complete lack of productivity in at least one recent year. Based on these data, we believe a range retraction may be occurring along the northern margin of southern populations. Furthermore, productivity declines may be disproportionately threatening large colonies that produce most of the fledglings for the sub-species and are concentrated in a region suffering from habitat declines as well as heavy disturbance from predators and humans.

CBC data show a significant decline of between 19-26% over the past three generations (assuming an average age of 5.6 years). CWS data show a significant increase in herons on the coast, but this trend is from only a five year period and, as compared to CBC data, may correspond to a short period of stability/increase in an otherwise significant decline through time. BBS data show a significant decline across the coast (though this decline apparently was driven largely by one survey route, so its significance has been questioned).

A demographic analysis shows that only the lower Fraser Valley is producing enough young to sustain local populations and the surplus young from this region may be propping up Vancouver Island populations that are not producing enough young. It is unclear if this situation is sustainable over the long term. A matrix population model for both regions suggests the Strait of Georgia population as a whole should be declining at 9% annually. The lower Fraser Valley population is crucial to the sub-species as a whole, and this small geographic area (about 5000 km² in extent) essentially may represent the only area of effective breeding of the Pacific Great Blue Heron in Canada (i.e., the only area producing sufficient numbers of fledglings to sustain a population). Further, this important area is also under the greatest threat from human and Bald Eagle disturbance and has the highest level of habitat destruction on the coast.

In summary, four lines of evidence suggest that Pacific Great Blue Heron populations are threatened on the coast of British Columbia. Christmas Bird Count data show a significant decline of 19-26% over the past three generations, the subspecies

may be undergoing a range retraction along the northern edge of the centre of its range, demographic analyses suggest populations should be declining, and reproductive success has fallen over the past decades to nearly half of the historical rate (suggesting further population declines should follow).

Limiting factors and threats

Declines and other issues with productivity and population size are thought to primarily be due to Bald Eagle predation, human disturbance and destruction of nesting and foraging habitat. Long-term survival of the Pacific Great Blue Heron on the British Columbia coast is threatened by habitat loss from urban development, as well as disturbance and predation at colonies by Bald Eagles and disturbance from humans. The projected doubling in the human population in the next 30 years in the core of the range threatens to exacerbate the problem of human disturbance and habitat loss. In addition, the influence of predators may be reducing habitat quality by causing herons to move to new, and ever more limited, sites as they try to evade predation.

Special significance of the species

The Pacific Great Blue Heron has high public appeal as a symbol of wetland conservation and environmental quality.

Existing protection

All Great Blue Herons are protected from hunting and wanton molestation by the *Migratory Birds Convention Act*, Migratory Bird Regulations and the British Columbia *Wildlife Act*. Both subspecies of Great Blue Heron inhabiting British Columbia are at present on the provincial 'Blue List' compiled by the British Columbia Ministry of Environment. The Pacific Great Blue Heron is currently listed as a Species of Special Concern by COSEWIC and is on Schedule 3 of the federal *Species at Risk Act*.

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SPECIES INFORMATION

Name and classification

The Great Blue Heron, *Ardea herodias*, belongs to the Class Aves, Order Ciconiiformes and Family Ardeidae. It is a distinctive heron species found in wetlands across southern Canada and is the largest wading bird in North America (standing over 1 m in height).

Five subspecies currently are recognized (Payne 1979; Butler 1992), two of which occur in British Columbia. The subspecies *Ardea herodias herodias* occupies all of southern Canada east of the coastal mountain ranges of British Columbia, while the subspecies *Ardea herodias fannini* occupies the whole British Columbia coast west of the mountain ranges. The distribution of the subspecies *A. h. fannini*, which we refer to as the Pacific Great Blue Heron in this report, globally is confined to the Pacific Coast including the islands from Prince William Sound, Alaska south to Puget Sound, Washington. The Canadian distribution is confined to the coast of British Columbia including offshore islands (Figure 1).

Morphological description

The Great Blue Heron measures about 60 cm in height (with neck relaxed), 97 to 137 cm in length, and 2.1 to 2.5 kg in mass (Butler 1992; 1997). The wings are long and rounded, the bill is long, and the tail is short (Butler 1992; 1997). Great Blue Herons fly with deep, slow wing beats and with their necks folded in an S-shape. Plumage is mostly a blue-grey colour and adults have a white crown (Butler 1992; 1997).

The Pacific Great Blue Heron differs from the continental form (*A.h. herodias*) in morphology and breeding behaviour/physiology (Butler 1997). In terms of morphology, the Pacific Great Blue Heron is smaller in size and darker in plumage than *A.h. herodias*. In terms of breeding, the Pacific Great Blue Heron has a slightly earlier breeding season, a smaller clutch size and sedentary populations (*A.h. herodias* largely migrates out of Canada in autumn). Morphological differences therefore may be a result of geographic and behavioural isolation (coastal herons are isolated in part by both high mountain ranges to the east and a slightly earlier nesting season).

Genetic description

Genetic characterization of Great Blue Herons in North America has not been conducted.

Designatable units

The American Ornithologists' Union (A.O.U.) recognizes one coastal subspecies in British Columbia that we refer to here as the Pacific Great Blue Heron (*A. h. fannini*). However, a recent comparison of heron taxonomy showed that specimens on the

Queen Charlotte Islands, the north coast and southeast Alaska had shorter tarsii and darker plumage than specimens on the south coast (Dickerman 2004). South coast herons were intermediate in size between the north coast and specimens from California (Dickerman 2004). From these data, Dickerman (2004) recommended that the *fannini* subspecies designation be restricted to the Queen Charlotte Islands and adjacent north coast of British Columbia in Canada and Alaska, and that south coast herons be considered an intermediate form with California herons.

His recommendation has not been considered by the A.O.U. and stands in contrast to the currently accepted designations based on work by Payne (1979), which also was based solely on morphology. Genetic evidence would assist in clarifying the degree of separation of subspecies and geographical boundaries. This has some importance to conservation, because if the currently recognized *fannini* sub-species is actually more than one sub-species, then perceived extinction risk may be amplified for all these coastal taxa in Canada. For example, if Dickerman's (2004) classification were adopted by the A.O.U., the *fannini* taxon would have a population size of considerably less than 500 adults. In this report we consider there to be a single coastal subspecies, as per currently accepted A.O.U. taxonomy.

DISTRIBUTION

Global range

The Great Blue Heron breeds from south coastal Alaska, coastal and southern British Columbia, northern Alberta, central Manitoba, southern Ontario and Quebec, New Brunswick, Prince Edward Island and Nova Scotia, south throughout the USA and coastal Mexico, and on the Galapagos Islands (Butler 1992). The winter distribution is south of the frozen regions in the north to as far south as Panama.

The distribution of the Pacific Great Blue Heron, which is the subject of this report, is confined to the coast from Prince William Sound, Alaska south to Puget Sound, Washington (Figure 1).

Canadian range

In Canada, the Pacific Great Blue Heron resides year round on the north and south coasts and associated islands (e.g., Vancouver Island and the Queen Charlotte Islands; Figure 2). Figure 2 illustrates the potential areas of occupancy within this area, assumed to include the Coastal Western Hemlock and Coastal Douglas Fir Biogeoclimatic Zones within 10 km of the coast or large river systems (see *Habitat* section for discussion). Due to small population sizes on the entire coast outside of the Strait of Georgia, herons are not commonly present in most of this potential area of occupancy. Figure 3 illustrates nesting colony locations in the Strait of Georgia, the core of the sub-species' range and the only area where long term data on nesting habitat are available. The area of occupancy in Canada is approximately 188,000 km², while the extent of occurrence in Canada is approximately 244,000 km². The Canadian extent of

occurrence for the Pacific Great Blue Heron is approximately 59% of the global extent of occurrence (approximately 128,000 km² in Alaska and 43,000 km² in Washington State).

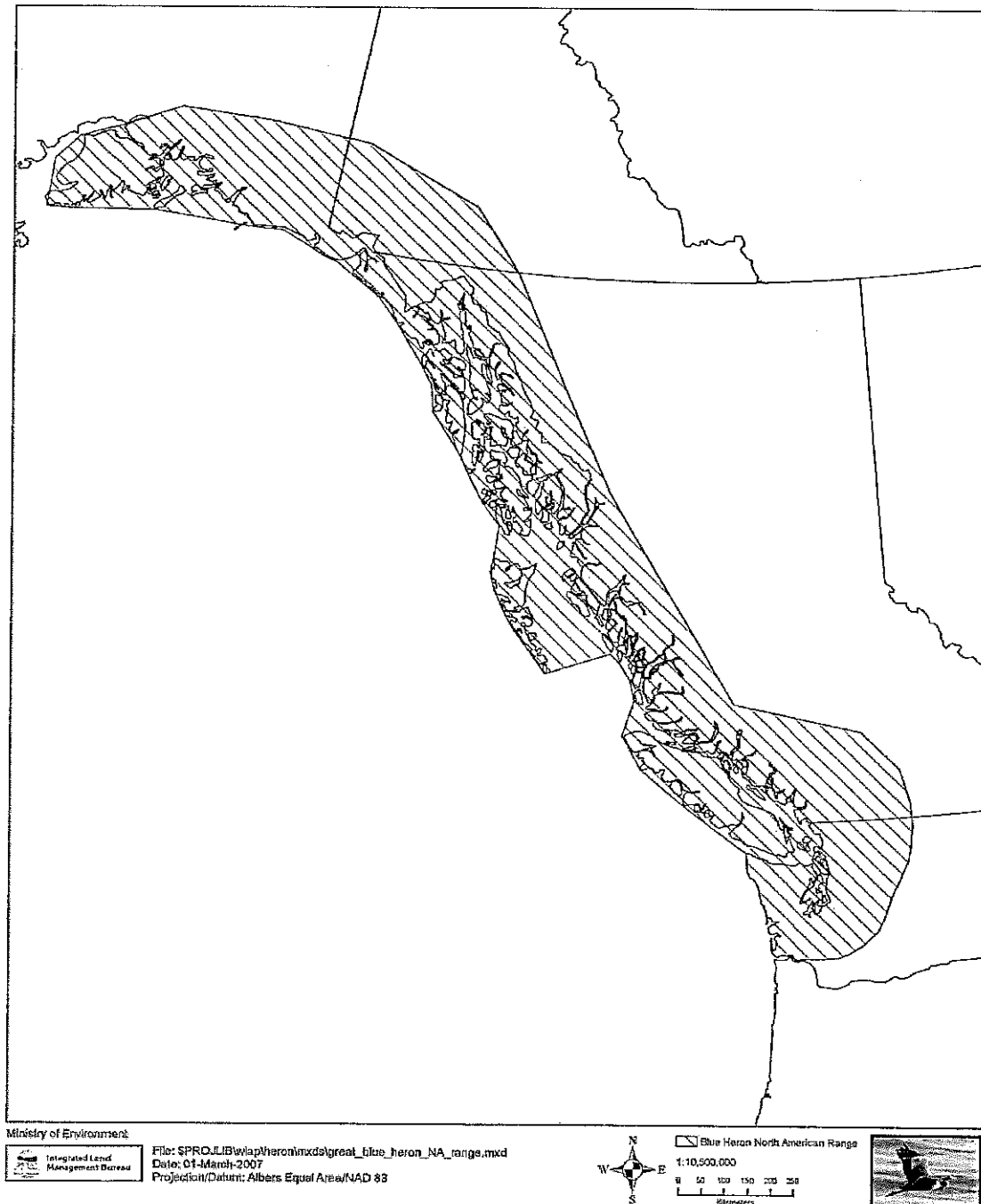


Figure 1. Global range of the Pacific Great Blue Heron, *Ardea herodias fannini*.

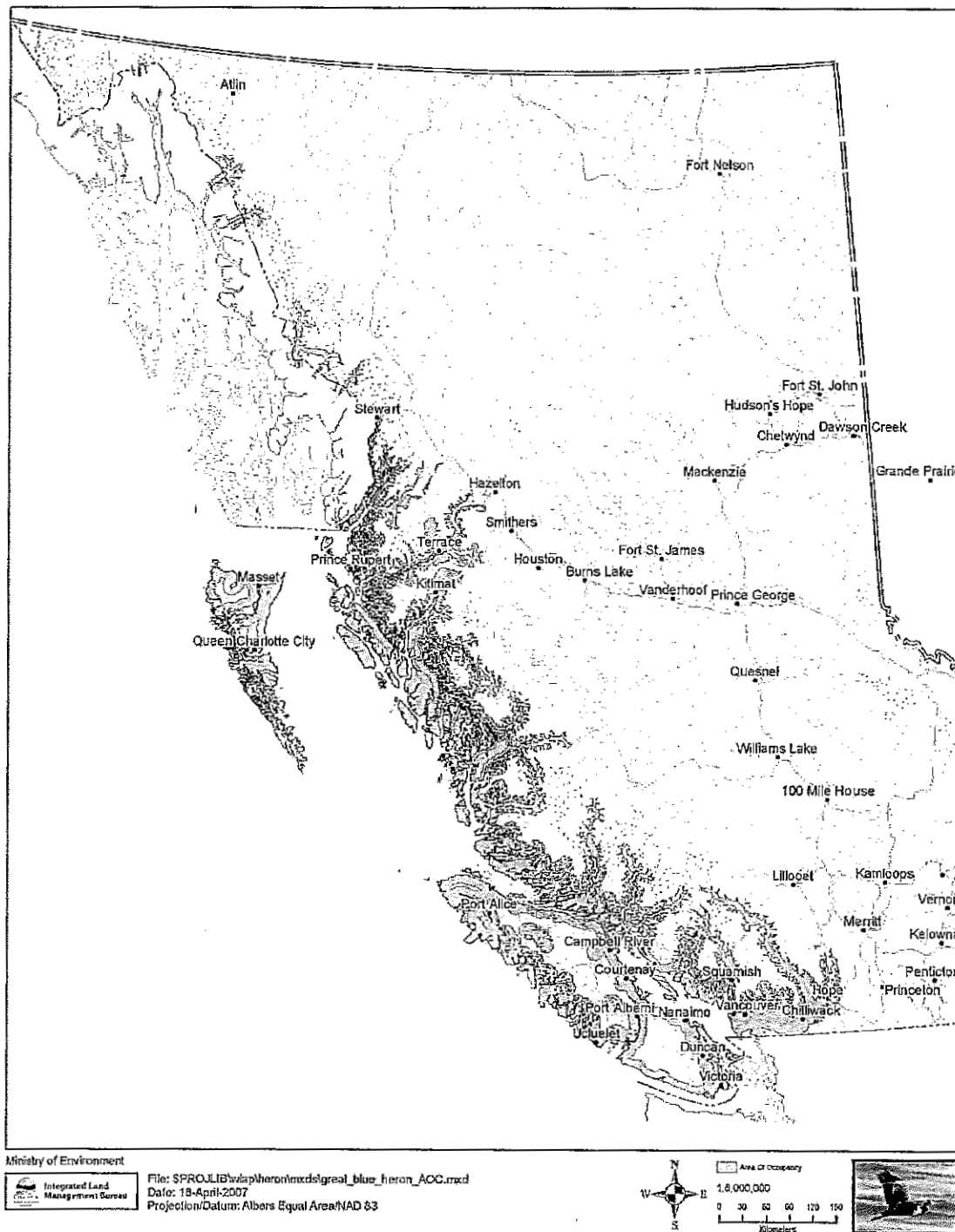
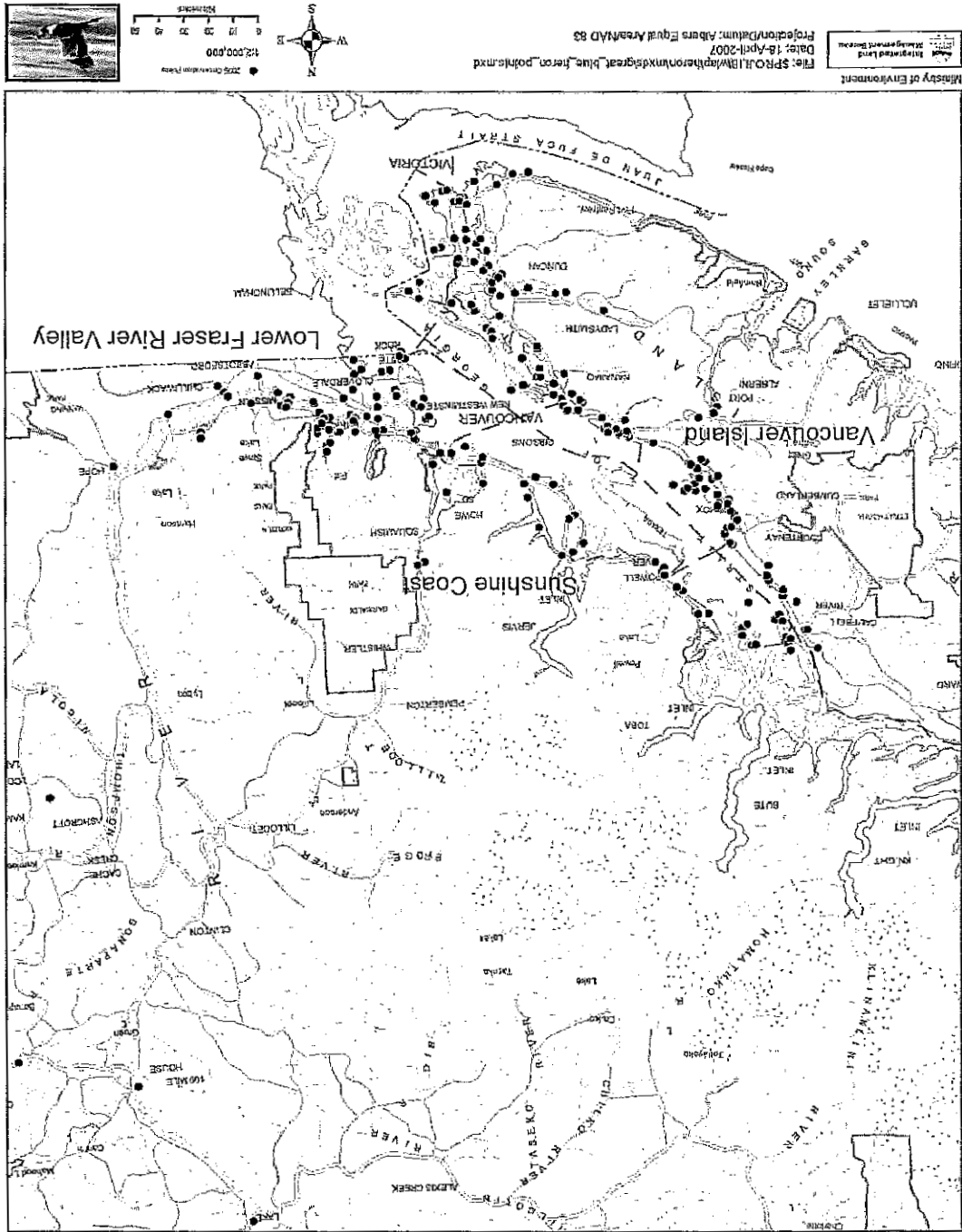


Figure 2. Canadian range of the Pacific Great Blue Heron showing potential area of occupancy (shaded area). Potential area of occupancy is defined as terrestrial areas within the Coastal Douglas Fir and Coastal Western Hemlock biogeoclimatic zones that are less than 10 km from a potential foraging area. Potential foraging areas are defined as the entire coastline and major river systems.

Figure 3. Documented nesting colony locations for the Pacific Great Blue Heron on the south coast and Vancouver Island of British Columbia from 1920 to 2005. Some nesting locations have been identified on other areas of the coast (e.g., Queen Charlotte Islands), but they are few and not based on significant inventory. The three primary regions of south-coastal British Columbia mentioned in the report (Vancouver Island, Sunshine Coast and lower Fraser Valley) are shown on this map.



HABITAT

The habitat of the Pacific Great Blue Heron has been described by Butler (1995; 1997) and Gebauer and Moul (2001). This subspecies forages along the seacoast, in fresh and saltwater marshes, along rivers and in grasslands. Smaller numbers of herons forage in kelp forests, from wharves and at anthropogenic waterbodies (e.g., ornamental ponds and fish farms). Most herons nest in woodlands near large eelgrass (*Zostera marina*) meadows, along rivers, and in estuarine and freshwater marshes. In autumn, juvenile herons occupy grasslands on the Fraser River delta, and adults occupy estuarine marshes, riverine marshes and grasslands. All known foraging and nesting occurrences are within the Coastal Western Hemlock and Coastal Douglas Fir Biogeoclimatic Zones.

Habitat requirements

Foraging Habitat

Breeding Pacific Great Blue Herons require accessible prey within about 10 km of a nesting location (Butler 1995). Important foraging habitats for Pacific Great Blue Herons include aquatic areas such as tidal mudflats, riverbanks, lakeshores and wetlands (Butler 1992; 1997; Gebauer and Moul 2001). Shallow water fish species are the most important prey group during breeding and non-breeding seasons (Butler 1992; 1995). During winter on the coast, when aquatic prey are less abundant due to a reduced duration of daytime low tides, fallow agricultural fields become important foraging areas for adult and juvenile herons (Butler 1995; 1997). Inland fields are considered an important foraging habitat for both adults and juveniles in the lower Fraser Valley and on southern Vancouver Island (Gebauer and Moul 2001). The number of herons that use non-aquatic foraging habitats is not known, but large numbers of herons reside in south-coastal areas (Gebauer and Moul 2001), so it is likely that these areas are an important foraging habitat for a significant number of herons. Some foraging habitat is not used by herons each year, suggesting that population growth might not be limited by available foraging habitat.

Nesting Habitat

Pacific Great Blue Herons are mostly arboreal nesters and colonies are typically situated in forests near to (usually <10 km from) suitable foraging areas (Butler 1991; 1992; 1995; 1997). Nesting usually occurs at sites that are relatively free from disturbance by human activities, but sometimes occurs in developed areas. Large colonies require more suitable forest than small colonies. Colonies are located in both urban and rural areas, using relatively contiguous forest, fragmented forest and solitary trees (Butler 1997; Vennesland 2000).

Pacific Great Blue Heron colony locations are dynamic, especially in areas of high disturbance (Butler 1992; Vennesland 2000). Some colonies are used for many years (e.g., Shoal Island, Pacific Spirit Park and Point Roberts; all >25 years), but most

colonies, especially those with fewer than 25 nests, are relocated every few years (Gebauer and Moul 2001). A site will be re-used by individual herons that failed in their first nesting attempt if other herons are present and if there is sufficient time to complete a nesting cycle (Vennesland 2000). If an entire colony abandons and there is sufficient time to complete a nesting cycle, herons will occasionally return as a group to the same or different colony site in the same year (Vennesland 2000). Herons will sometimes return to a site after one or more years of no use (Moul et al. 2001; Chatwin et al. 2006).

Habitat trends

Foraging Habitat

Suitable foraging habitat likely is declining in British Columbia (Gebauer and Moul 2001), though quantitative information on habitat trends is not available. The size of Great Blue Heron populations has been correlated with the area of foraging habitat available locally (Gibbs and Kinkel 1997), and consequently the largest concentrations of Pacific Great Blue Herons occur around the large estuaries of south-coastal British Columbia, primarily the Fraser River delta where extensive mudflats and eelgrass beds provide abundant foraging locations (Butler 1995; Eissinger 1996). These habitat sites also are highly threatened because most of the province's human population is located near these areas (Butler 1997; Gebauer and Moul 2001). For example, the magnitude of use of some foraging locations (e.g., Boundary Bay) may currently be limited by the amount of suitable nesting habitat that remains undeveloped (B. Smith, unpubl. data; see discussion of nesting habitat below).

Although native eelgrass beds are declining globally, some small and very localized habitat gains have been seen on Roberts Bank on the southern Fraser River delta due to jetty construction for a ferry terminal and shipping port (Butler 1997). Outside the Georgia Basin, Pacific Great Blue Herons are scarce but widespread along the coast and feed from kelp beds, wharves and floating objects, and wade in shallow water. There is no loss of suitable habitat for these herons and some might benefit from installations of wharves and fish farms where they can access fish in deep water. At a coast wide level, however, these potential habitat gains likely are insignificant and probably are overshadowed by habitat loss due to development on different sites, especially in the lower Fraser Valley.

Nesting habitat

Suitable tall trees as nesting habitat for Pacific Great Blue Herons near foraging areas have declined in some parts of British Columbia over the past century due to increases in the size of human populations and industry (Butler 1997, Gebauer and Moul 2001). Especially hard hit is the lower Fraser Valley (Moore 1990, Butler 1997), where the human population is projected to grow from about 2.5 million in 1990 to about 4 million in 2020 (Georgia Basin Ecosystem Initiative 2002). Habitat destruction in south coastal British Columbia has resulted in the abandonment of at least 21 colonies (measured from 1972 to 1985 and from 1998 to 1999; Forbes et al. 1985b; Gebauer 1995; Vennesland 2000; Vennesland 2006). Smith et al. (unpubl. data) used spatial

analysis of the landscape around Boundary Bay to examine the availability of nesting habitat within 15 km of known important foraging locations (the distance at which the energetic cost of flight was 90% of foraging intake that could be provisioned to young). Results showed that nesting habitat is severely limited in this area. Although the foraging habitat in this location can theoretically sustain a large heron population, available nest sites likely limit the population. Perhaps demonstrating this, herons in at least three locations in this area are nesting in untraditional habitats (e.g., farm field hedgerows). As the lower Fraser Valley continues to develop, this fate may befall many other important locations. In the *Population Status and Trends* section we illustrate the importance of the lower Fraser Valley for the Pacific Great Blue Heron population as a whole.

Furthermore, the quality of Pacific Great Blue Heron nesting habitat might be declining as a result of increased disturbance by humans and eagles. Although some herons are persisting in urban settings, others seem reluctant to venture close to humans. Furthermore, Vennesland and Butler (2004) reported that heron nesting productivity was negatively correlated with the level of human activity near colonies. The primary mechanism for this relationship was eagle predation of heron nests, with direct human disturbance as a secondary mechanism. Thus, the impact of eagle predation may be higher as urbanization increases. This may be compounded by the fact that eagle populations in the Strait of Georgia are thought to benefit from humans through, for example, gull populations being enhanced by human refuse (Vermeer et al. 1989).

Outside the Georgia Basin, Pacific Great Blue Herons are scattered in small groups and as individuals that appear to nest secretly in the forest. Few nests have been found and all were within a few kilometers of foraging sites. There is no shortage of trees for herons in these areas, so we assume nesting habitat is readily available and has not significantly declined. However, more work is required to locate heron nests in these remote regions as data are limited.

Habitat protection/ownership

Section 34 of the British Columbia *Wildlife Act* (1982; updated 1999) protects heron nests (and consequently also nest trees), but does not provide for buffer areas. The British Columbia *Forest and Range Practices Act* (2004) has guidelines to protect heron colonies (i.e., through the *Identified Wildlife Management Strategy*) on Crown Land, including provision of buffer areas (Vennesland 2004). However, no reserves have been established under this legislation, so currently it affords no protection. No other habitat outside of parks, Wildlife Management Areas (through the British Columbia *Wildlife Act*) or National Wildlife Areas (through the *Canada Wildlife Act*) receives legal protection.

On private land, the British Columbia government advises land users how to best protect wildlife with largely non-legal documents such as the Environmental Best Management Practices for Urban and Rural Land Development in British Columbia (or 'Develop with Care') series produced by the Ministry of Environment (MOE 2007).

However, there is little legislation to force action on recommendations in these mostly advisory documents. Municipalities have considerable control over the land base within their jurisdiction with the capability of zoning land for different uses and identifying Development Permit Areas, among other regulatory powers. However, due to the high economic cost of wildlife conservation to landowners, implementation of conservation actions is limited and variable across jurisdictions.

Foraging habitat for Pacific Great Blue Herons includes land and waters under federal jurisdiction (e.g., tidal areas, rivers, national parks, National Wildlife Areas, etc.) and provincial jurisdiction (e.g., private lands, municipal lands, provincial parks, Wildlife Management Areas, etc.). It is not known what proportion of foraging areas are under formal protection, but some notable sites that are protected and support large numbers of foraging herons include Boundary Bay, Sturgeon Bank, Pitt Addington Marsh, Coquitlam River and Parksville-Qualicum Beach Wildlife Management Areas (provincial), and Alaksen, Qualicum and Wigeon Valley National Wildlife Areas (federal). However, regardless of their protective status, many of these sites are under threat from oil spills or other catastrophic events (e.g., Sturgeon Bank and Boundary Bay from nearby ferry and freighter traffic).

Currently active Pacific Great Blue Heron nesting colonies are located in protected and non-protected lands under the control of federal, provincial, regional and municipal governments and on private land. Table 1 lists current nesting locations on protected lands. These seven sites account for 14% of known active locations ($n = 49$ sites active in 2005), and afford some level of protection to the nesting sites of 37% of the documented nesting pairs in 2005 ($n = 1943$ nesting pairs). Nevertheless, it should be noted that heron colonies are dynamic in nature and frequently re-locate (Butler 1997; Vennesland 2000). Using examples from Table 1, both Stanley Park and Deer Lake Park are at recently colonized locations, and McFadden has declined from a maximum of 138 active nests in 2000 to two in 2005. In addition, four of the protected sites in Table 1 (Beacon Hill, Salal Park, Stanley Park and Deer Lake Park) are located in municipal parks with high levels of human disturbance. High levels of human disturbance have been correlated with reduced nesting productivity (Vennesland and Butler 2004), so habitat quality at these locations may be low. The other three sites are either fenced or have controlled access, measures thought important to long term site viability (Carlson and McLean 1996). Of the further 39 sites used by herons for nesting in 2005 that are not protected, four were on Indian Reserves (8%) and 35 (71%) were located on unprotected land under provincial jurisdiction (mostly private ownership). In 2006, three nests were located in Gwaii Haanas National Park (Queen Charlotte Islands). No nests are known within Pacific Rim National Park or Gulf Islands National Park, though they likely do nest there (e.g., a few pairs have been found nesting near Bamfield next to Pacific Rim National Park and large numbers of herons nested on Sidney Island in what is now the Gulf Islands National Park from 1974 to 1990).

Table 1. Pacific Great Blue Heron colonies active in 2005 that have protection in place. Included is general geographic location and number of nesting pairs of herons in 2005.

Col_ID	Col_Name	Location	Colony size (no. active nests)	Protective Status
H101-001	Beacon Hill	Victoria	103	Municipal Park
H101-005	McFadden Creek	Saltspring Island	2	Local conservation lands
H101-038	Salal Park	N. Saanich	11	Municipal Park
H204-009	CFB Chilliwack	Chilliwack	203	Municipal Conservation Area
H208-002	Stanley Park	Vancouver	176	Municipal Park leased from the Department of National Defense
H208-005	Mary Hill	Port Coquitlam	222	Provincial Wildlife Management Area
H208-044	Deer Lake Park	Burnaby	4	Municipal Park

BIOLOGY

Life cycle and reproduction

In springtime, most Pacific Great Blue Herons gather in colonies where they court, nest, and raise young. During the nesting season the principal diet is small fish, while during the winter this primarily piscivorous diet is augmented with small mammals.

In south-coastal British Columbia, Pacific Great Blue Heron nesting is initiated between February and April (Butler 1992; Butler 1997; Vennesland 2000; Vennesland and Butler 2004). The initiation period is defined as the period of courtship before eggs are laid, and can last for over two months at some colonies (Butler 1997; Vennesland 2000). At one closely watched colony, males arrived at the colony site and established nest sites followed about a week later by the arrival of females (Butler 1991). Nest repair and/or building can take from as little as several days to about two months (Butler 1991, Vennesland 2000). Monogamous pairs are established for the season (Simpson 1984), and eggs are laid at about two-day intervals (Vermeer 1969; Pratt 1970; R. Butler, pers. obs.). Clutch size reported from Great Blue Heron colonies across North America ranges from one to eight eggs, with three to five being typical (Ehrlich et al. 1988; Campbell et al. 1990). Clutch size increases with latitude and the Pacific Great Blue Heron lays smaller clutches than expected for this latitude (mean clutch size is about 4 eggs compared to about 4.7 at other sites at this latitude; Butler 1997). Incubation begins soon after the first egg is laid and results in asynchronous hatching (Butler 1992). Hatching occurs after about 27 days of incubation (Butler 1992), though the incubation period in a colony can last for much more than a month as pairs often re-nest after predation or other disturbance events (Vennesland 2000). The period after hatching but before young fledge is defined as the chick rearing period and lasts about

60 days (Krebs 1974; Simpson 1984).

Hérons require about 95 days to complete a nesting cycle, but regularly take much longer than this if re-nesting or other delays occur. For example, Vennesland (2000) reported that the nesting season for individual Pacific Great Blue Heron colonies in south-coastal British Columbia in 1999 ranged from 88 to 167 days, with a mean of 127 days (SD = 23, n = 12 colonies). Thus, herons can potentially breed more than once if their first attempt fails early. Herons can relocate nests rapidly because nests can be built in three days and eggs can be laid within about one week (Butler 1997).

In south-coastal British Columbia, the number of fledglings raised in a nest varies from 0 to 4 (Butler 1992; 1997; Vennesland 2000). Historically, the nesting productivity of herons in studies across North America has ranged from 1.3 to 2.7 fledglings per active nesting attempt, and from 2.0 to 3.0 fledglings per successful nesting attempt (reviewed by Butler 1997; see also Pratt 1970 and Vos et al. 1985). Fewer than 25% of juveniles survive to their second year after which survival increases to about 75% per year for adults (Butler 1997).

Nesting Colony Characteristics

Pacific Great Blue Herons in British Columbia are normally arboreal nesters and nest solitarily and in colonies (Butler 1992; 1997; Vennesland 2000). Nests are large stick platforms, usually 20 m to 30 m above ground (Butler 1997), but some have nested as low as 2 m in shrubs (Vennesland 2000). For south-coastal British Columbia in 1999, Vennesland and Butler (2004) reported a 'colony' size range of 1 to 400 active nests, with a mean of 62 active nests (SD = 94, n = 31) and a median of 26 nests. Herons normally are not choosy in the species of tree where they build nests. The most common tree species used for nesting are Red Alder (*Alnus rubra*), Black Cottonwood (*Populus balsamifera*), Bigleaf Maple (*Acer macrophyllum*), Sitka Spruce (*Picea sitchensis*) and Douglas Fir (*Pseudotsuga menziesii*) (Gebauer and Moul 2001). See Gebauer and Moul (2001) for a full list of tree species used.

Predation

In British Columbia, the Bald Eagle (*Haliaeetus leucocephalus*) is the primary predator of Pacific Great Blue Herons (Butler 1997; Gebauer and Moul 2001; Vennesland and Butler 2004). Bald Eagles prey on heron eggs, nestlings, juveniles and adults (Simpson and Kelsall 1978; Forbes et al. 1985b; Forbes 1987; Forbes 1989; Simpson et al. 1987; Norman et al. 1989; Butler et al. 1995; Butler 1997; Gebauer and Moul 2001; Vennesland and Butler 2004), and have been responsible for reduced nesting productivity at many colonies (Norman et al. 1989; Gebauer and Moul 2001; Vennesland and Butler 2004). Repeated eagle predation is the suspected cause of many colony abandonments (Forbes et al. 1985b; Simpson et al. 1987; Butler 1991; Butler 1997; Gebauer and Moul 2001; Vennesland and Butler 2004). The effects of Bald Eagles are covered in more detail in the *Limiting Factors and Threats* section.

Other birds of prey also have been observed preying on Pacific Great Blue Heron nest contents, including Red-tailed Hawks (*Buteo jamaicensis*) on both eggs and nestlings (Simpson 1984, Simpson and Kelsall 1978, Forbes et al. 1985b, Norman et al. 1989, Butler 1997, Vennesland and Butler 2004) and Northwestern Crows (*Corvus caurinus*) and Common Ravens (*Corvus corax*) on eggs (Butler 1989; Moul 1992). Raccoons prey on nesting herons, but in British Columbia disturbance from non-human mammals is rare (Butler 1997).

Physiology

Specific research on physiological requirements or tolerances of Great Blue Herons from a conservation perspective has been rare. Monitoring of contaminants in eggshells and fetal tissues of Pacific Great Blue Herons has been ongoing since about 1977 (Elliott et al. 1989; Elliott et al. 1996; Elliott et al. 2001; Harris et al. 2003). Currently, most contaminants (e.g., organochlorine pesticides, polychlorinated biphenyls, dioxins, furans) are not seen as a significant conservation issue for this subspecies as concentrations have generally been in decline over recent years (Elliott et al. 1989; Elliott et al. 2001; Harris et al. 2003). However, recently new attention has been paid to chemicals that have not previously been tracked. Concentrations of one class of chemicals in particular (polybrominated diphenyl ethers; PBDEs) has been found to be increasing exponentially in heron tissues and may be close to toxicologically significant levels (Elliott et al. 2005). The implications of this finding currently are not fully understood, but the situation is seen as a potential emerging threat in urban areas (Elliott et al. 2005). There are similar concerns over another emerging class of industrial pollutants, the perfluoro chemicals (PFCs). Environment Canada is currently in the process of investigating spatial and temporal trends of those chemicals, including in herons from the Georgia Basin (J. Elliott, pers. comm.).

Dispersal/migration/movements

The Pacific Great Blue Heron is non-migratory. Banded individuals are known to disperse between habitats in the Strait of Georgia and a few individuals have been found dead in the interior of British Columbia and in coastal Washington and northern Oregon (Butler 1997). Most individuals on the Fraser River delta and other south-coastal areas forage along beaches from March to October and along beaches and grasslands in winter (Butler 1995; 1997). Juvenile herons forage along beaches until about October and reside largely in grasslands in winter (Butler 1995; 1997). When not nesting, herons on the coast of British Columbia roost alone or in loose flocks of over 100 individuals on the ground, in trees, and on man-made objects near feeding grounds during the day (Butler 1992). Some roosts are used repeatedly (Butler 1992). At night, herons sleep in trees with dense foliage during high tide and forage on beaches at low tide (Butler 1992). Limited research has been conducted on annual movements between colonies. Simpson et al. (1987) concluded that considerable movement might occur (40% of nesting herons did not return to breed in the second year of the study). Movements between regions are largely unknown but assumed to occur, as birds have been seen by both authors flying across the Strait of Georgia. Colonies will suddenly

grow when new arrivals settle, presumably from an abandoned nearby colony (R. Vennesland, unpubl. data).

Interspecific interactions

Interactions of Pacific Great Blue Herons with their predators are described previously in the *Predation* section. Prey includes a wide array of animals including fish, insects, mammals, amphibians, and crustaceans (Butler 1992; 1995; 1997). Fish are a mainstay food item during the nesting season, demonstrated by summer congregations of more than 600 herons feeding together in eelgrass meadows near Tsawwassen on the Fraser River delta (R. Vennesland, unpubl. data). In winter, small mammals in agricultural areas are also important, especially for juvenile survival (Butler 1991; 1995; 1997; Gutsell 1995). Little information is available on diseases, although some have been documented in Great Blue Herons (but not Pacific Great Blue Herons), including *Giardia* and *Eustrongylides* nematodes (Butler 1992).

Adaptability

Some Pacific Great Blue Herons can tolerate human activities near their nests, but many are sensitive to the presence of humans (reviewed by Vennesland 2000; Gebauer and Moul 2001). Human activity near colonies of herons compounds the threat posed by eagle predation to this subspecies (Vennesland 2000, Vennesland and Butler 2004). Butler et al (1995), Carlson and McLean (1996) and Vennesland and Butler (2004) showed that the number of fledglings raised in Great Blue Heron colonies with frequent disturbances was significantly lower than at colonies with no disturbance. When disturbed, herons leave nests unguarded, especially early in the nesting season when humans enter colonies on foot or when loud noises occur nearby (Vennesland 2000). Corvids take eggs when the opportunity arises (Butler 1989; Moul 1992).

POPULATION SIZES AND TRENDS

Search effort

Surveys of the Pacific Great Blue Heron have concentrated on nesting colonies. Many published and unpublished papers have been produced based on these surveys through the years (e.g., Norman et al. 1989; Butler et al. 1995; Butler 1997; Vennesland 2000; Vennesland and Butler 2004). Some recent work has been conducted to evaluate the utility of foraging ground surveys (mostly through the use of counts from aircraft), but this work is in its infancy and is not included in this report.

Search effort at Pacific Great Blue Heron nesting colonies on the coast of British Columbia has a long and variable history. The database held by the British Columbia Conservation Data Centre (<http://www.env.gov.bc.ca/cdc/>) has records of nesting colonies going back to 1920. Nesting sites have been documented from across the range of the Pacific Great Blue Heron, though surveys have concentrated on the core of the range (the Strait of Georgia). Survey effort prior to 1970 was minimal (the CDC

database holds 77 colony-level observations over 50 years). From 1970 to the mid-1980's survey effort was increased with the implementation of specific research projects targeted at this species (182 colony level observations from 1970 to 1986). However, data collection over this period (e.g., Forbes et al. 1985a) concentrated on successful nests and commonly ignored failed nesting attempts (an important source of variation in nesting productivity; Butler et al. 1995; Vennesland 2000; Gebauer and Moul 2001). Some database entries include measures of productivity from successful and failed attempts, but sample sizes are small. Survey effort increased again after 1986 (882 colony-level observations from 1987 to 2005), with annual surveys following consistent methodology covering most of the Georgia Basin in most years during this period (2005 is the last year with data entered as of October 2007). However, due to a generally increasing search effort through this period, absolute population trends based on counts of herons at nesting colonies are difficult to ascertain.

Volunteer based surveys have also been conducted for many years on the coast of British Columbia, including the wintertime Christmas Bird Count (CBC), wintertime Coastal Waterbird Survey (CWS) and summertime Breeding Bird Survey (BBS). The primary advantage of these data sets is that they are measuring actual population numbers. However, caution needs to be exercised in interpretation of data with these surveys for several reasons. All three volunteer surveys have had variable survey effort through the years, variable effort across locations and variation in participants through time. Furthermore, CBC and BBS surveys have had variation in the time of year of surveys and in the skill level of volunteers (CWS has multiple standardized survey times and engages participants in formal training). The CWS should be considered to have the most robust data for several primary reasons: participants are relatively well trained, survey locations are geo-referenced and visited multiple times per year and results have been analyzed through well-designed statistical procedures (Badzinski et al. 2005). However, results from CWS have been analyzed for only one five year period (1999/2000 to 2003/04), which limits their utility compared to CBC and BBS data for which longer data sets are available.

Abundance

Population size has been difficult to estimate for the Pacific Great Blue Heron because colonies are not stable entities and are difficult to track in a standardized fashion, and most coastal areas, especially outside the Strait of Georgia, have not been systematically surveyed (Butler 1997; Vennesland 2000; Gebauer and Moul 2001).

It is thus not surprising that the weakest information on the Pacific Great Blue Heron is from outside the Strait of Georgia, where few projects have been undertaken. A colony of 9 pairs found near Tahsis in 1989 was the first colony reported from the west coast of Vancouver Island. Since then, 1-3 heron nests were located near Bamfield on the west coast of Vancouver Island and at Rose Harbour, and Ramsay and Murchison Islands in the Queen Charlotte Islands (P. Clarkson & B. Johnston, pers. comm.). Campbell et al. (1990) reported small numbers of herons nesting near Prince Rupert. Nevertheless, herons are seen, usually alone, along much of the coastline

feeding from floating kelp, on wharves and in shallows, although the numbers are very low. Since 1990, much of the coast has been visited during the nesting season by one of us (RWB). Individual adults were sparsely distributed and no concentrations were located. An extensive search by Parks Canada contractors located a few individuals and three nests in Gwaii Haanas National Park Reserve in 2006 (P. Dymont, pers. comm.). This project searched for herons along 1180 km of shoreline on Graham Island and the North end of Moresby Island and resulted in the observation of 19 adults and 6 immature herons. If all 19 adults represented nesting pairs and one of each pair was on a nest, then the number of adults would be 38 and the total number of herons would be 44. At a similar density over the entire 4660 km of coastline in the islands would result in about 174 herons. Engelstoft and Sopuck (2005) surveyed 500 km of shoreline in Gwaii Haanas during the nesting season and counted 8 herons. If those also represented half of the mated pairs, then there might have been 16 herons present (0.032 herons/km). The densities of both surveys are similar (0.037 vs 0.032). We do not have any estimates for other parts of the coast but our observations along much of the central and north coast indicate a very low density there. The approximately 25,000 km of shoreline outside the Strait of Georgia might support about 875 herons, at a similar density to the Queen Charlotte Islands, but there is no way to know the accuracy of this estimate. Given that not all areas may be suitable, it is likely a liberal estimate. No nests have been located in Pacific Rim National Park Reserve, though a maximum of 6 birds were observed in Grice Bay during surveys in the summer of 2007, some of which were flying inland between foraging bouts suggesting they were nesting nearby (Vennesland, unpubl. data). Although herons are scarce there during the nesting season, up to 100 birds use mudflats near Tofino in August and September after the nesting season (P. Clarkson, pers. comm.).

The most recent published estimate of population size for the Pacific Great Blue Heron in British Columbia is about 3600 nesting adults, of which 3300 were thought to occur in the Strait of Georgia and 300 elsewhere on the coast (Gebauer and Moul 2001, based on data in Butler 1997). Based on 2005 data for the Georgia Basin (1833 active nests estimated in 46 colonies), recent work on the Queen Charlotte Islands (c. 200 herons, P Dymont, pers. comm.), and our estimate of 900 herons outside the Strait of Georgia on the mainland coast, we believe a better estimate of population size to be about 4000-5000 nesting adults in Canada.

Censuses of Pacific Great Blue Herons in neighbouring Washington State have not been as thorough as in British Columbia, but recent attempts to find herons there estimate the population at about 5500 nesting adults (Eissinger 2007). No information is available from Alaska, though populations are likely small as on British Columbia's north coast. In total, the global population of Pacific Great Blue Heron is likely between 9,500 and 11,000 nesting adults.

Fluctuations and trends

The trend in Pacific Great Blue Heron populations has been assessed in this report from surveys at nesting colonies, Christmas Bird Counts (CBC), Coastal

Waterbird Surveys (CWS), Breeding Bird Surveys (BBS) and population modelling. Results are variable, with some measures showing declines (nesting productivity from colony surveys, CBC, BBS, and demographic modelling), others apparent stability (nest counts from colony surveys) and one an increase (CWS), though see further for discussion.

Colony surveys – trends from colony size information

Counts of pairs at colonies give a distorted view of trends because survey effort has been variable through time (generally increasing), and herons move between colonies and regions within and between years (Simpson 1979). However, if many colonies are included, the overall trend in numbers might capture inter-colony movement and reflect local changes in abundance. The method here is to sum the annual increases and decreases at colonies (e.g., $\sum [Colony\ X\ Year\ 2 - Colony\ X\ Year\ 1; Colony\ Y\ Year\ 2 - Colony\ Y\ Year\ 1; etc]$ across all colonies). In this way, Figure 4 attempts to illustrate the dynamic nature of heron colonies in the region by showing between-year changes in the number of active nests at samples of colonies.

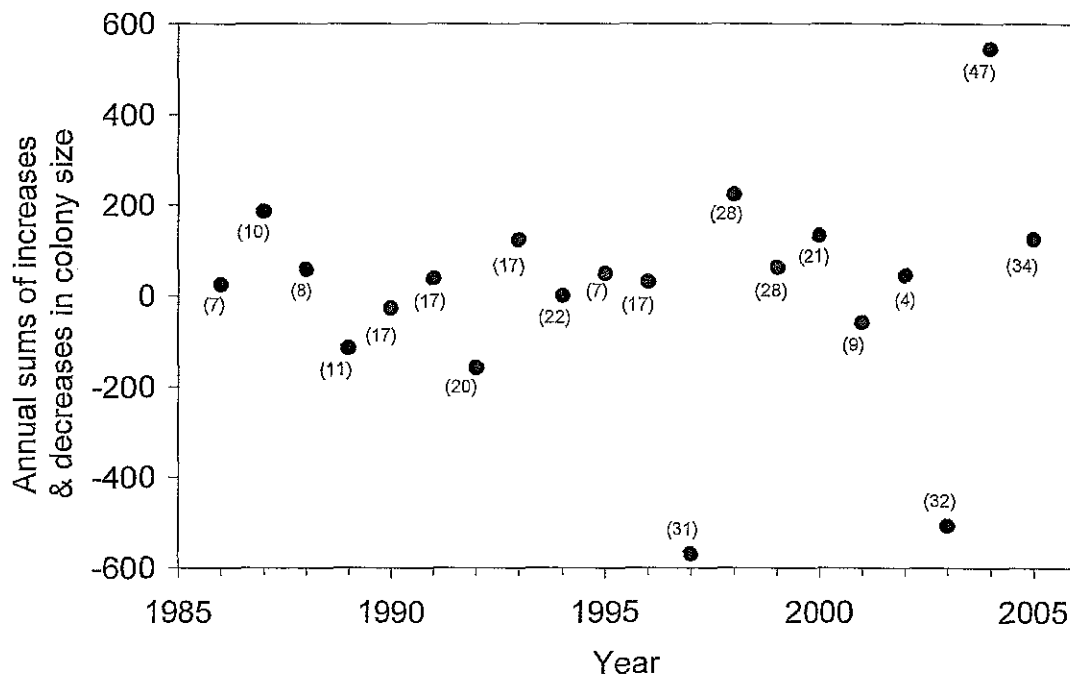


Figure 4. Annual sums of increases and decreases in the number of nesting pairs at Pacific Great Blue Heron colonies in south-coastal British Columbia from 1986 to 2005. Annual colony sample sizes are provided in brackets.

Sums of increases and decreases in the number of nesting pairs at colonies from 1986 to 2005 showed that the number of nesting pairs leaving and entering colonies from year to year appears to have remained relatively stable over the period 1986 to 2005 (Figure 4). A bias of this method is that it draws samples only from colonies that

have multiple observations in consecutive years. Thus, this method gives a snapshot of a relatively small sample of regularly visited and stable colonies and may not illustrate exact trends in colony occupation. Nevertheless, we feel confident that any drastic changes in the nesting population would be evident through this analysis.

The large negative sum in 1997 (-569) occurred mostly because of large declines at the two largest colonies in the Strait of Georgia (Point Roberts and Pacific Spirit Park). Both colonies recovered in numbers in subsequent years, although Pacific Spirit Park was abandoned completely in 2004. Point Roberts was abandoned completely in 2003 and a new location was colonized in 2004 – this event is illustrated in Figure 4 by the large negative value in 2003 and the large positive value in 2004 when these birds colonized the new location.

Colony surveys – trends in nesting success and productivity from 1970's to present

This section outlines analyses of data on Pacific Great Blue Heron nesting success (measured by the proportion of nesting pairs that fledge at least one young) and nesting productivity (measured by the mean number of fledglings per active nesting attempt and per successful nesting attempt). As previously outlined, a particular challenge with this dataset is that survey effort has increased markedly through time. Thus, it should be noted that some analyses are anecdotal in nature and the time periods included vary.

Nesting success (the proportion of nesting pairs that successfully raise at least 1 fledgling) for herons on the coast of British Columbia currently is much lower than in the past. Forbes et al. (1985a) estimated that about 92% of nesting pairs were successful during the period 1977 to 1981. A literature review by Forbes et al. (1985a) showed a continent wide success rate of 80%. Vennesland (2000) estimated that less than half of all nesting attempts were successful in 1998 to 1999 and this trend has been documented in future years as well (Vennesland 2003; McClaren 2005; Chatwin et al. 2006).

Mean nesting productivity (fledglings per active nesting attempt) on the coast of British Columbia in recent years has been the lowest of any studies in North America or British Columbia (Vennesland and Butler 2004). In 1971-1986, mean nesting productivity was 1.7 fledglings per active nesting attempt and 2.55 fledglings per successful nesting attempt (R. Vennesland, unpubl. data.). These values are roughly typical for North America at that time (Vennesland 2000). Reported productivity values for south-coastal British Columbia over recent years are 0.82 fledglings per active nesting attempt, and 1.98 fledglings per successful nesting attempt in 1999 (Vennesland and Butler 2004), 0.82 fledged young per active nesting attempt and 1.84 fledged young per successful nesting attempt in 2002 (Vennesland 2003), and 1.3 fledglings per active nesting attempt and 1.7 fledglings per successful nesting attempt in 2004 (McClaren 2005). Nesting productivity has therefore reduced to nearly half of historic levels (Figure 5).

Figure 5 presents a summary of trends in nesting productivity per active nesting attempt from 1971 to 2005. Prior to 1987, most studies ignored nesting failure and only documented the number of fledglings from successful nesting attempts. As many studies in recent years have shown, nesting failure has an important influence on overall nesting productivity (e.g., Butler et al. 1995; Vennesland and Butler 2004). Due to this oversight, few observations prior to 1987 are available for analysis. Consequently, our analysis here groups colony level observations into three time periods: 1971 to 1986 (relatively low annual effort – 19 observations total), 1987 to 1995 (increased annual effort – 125 observations total), and 1997 to 2005 (maximum annual effort – 251 observations total). One year (1996) was not included because no data on productivity was collected in that year. The data show that nesting productivity has declined significantly across the three time periods (Figure 5).

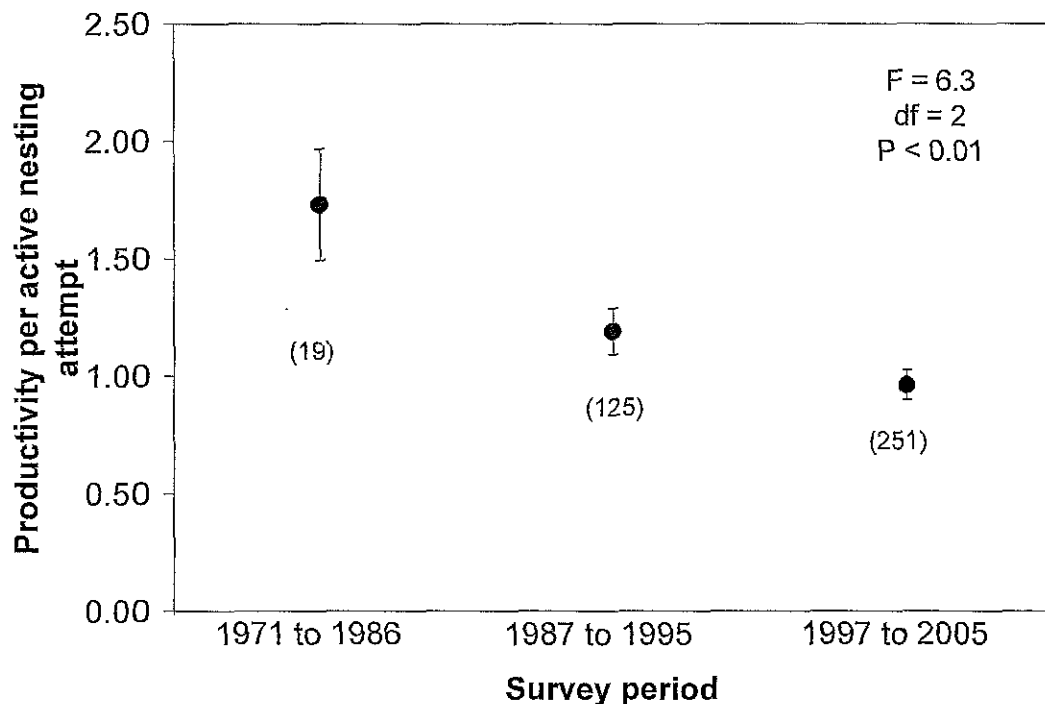


Figure 5. Mean productivity for all active nesting attempts for Pacific Great Blue Heron colonies in south-coastal British Columbia from 1971 to 2005. Productivity per active nesting attempt is the mean number of fledglings produced in all active nesting attempts. Sample sizes of colony-level observations in each period are shown in brackets. No observations were available in 1996. Errors bar represent one standard error of the mean.

Figure 6 presents a summary of trends in nesting productivity per successful nesting attempt from 1977 to 2005. As this dataset has been collected more consistently than for productivity per active nesting attempt, an analysis was possible with annual colony-level observations. However, for clarity the figure is shown with data grouped into years. The analysis was conducted using 'Proc Genmod' in SAS (Version 9). Hypothesis testing was conducted using a poisson generalized linear model (Agresti 2002), adjusting for overdispersion, a likely consequence of having some colonies repeatedly measured over time (Agresti 1996). Nesting productivity per successful nesting attempt declined significantly over this period (Figure 6).

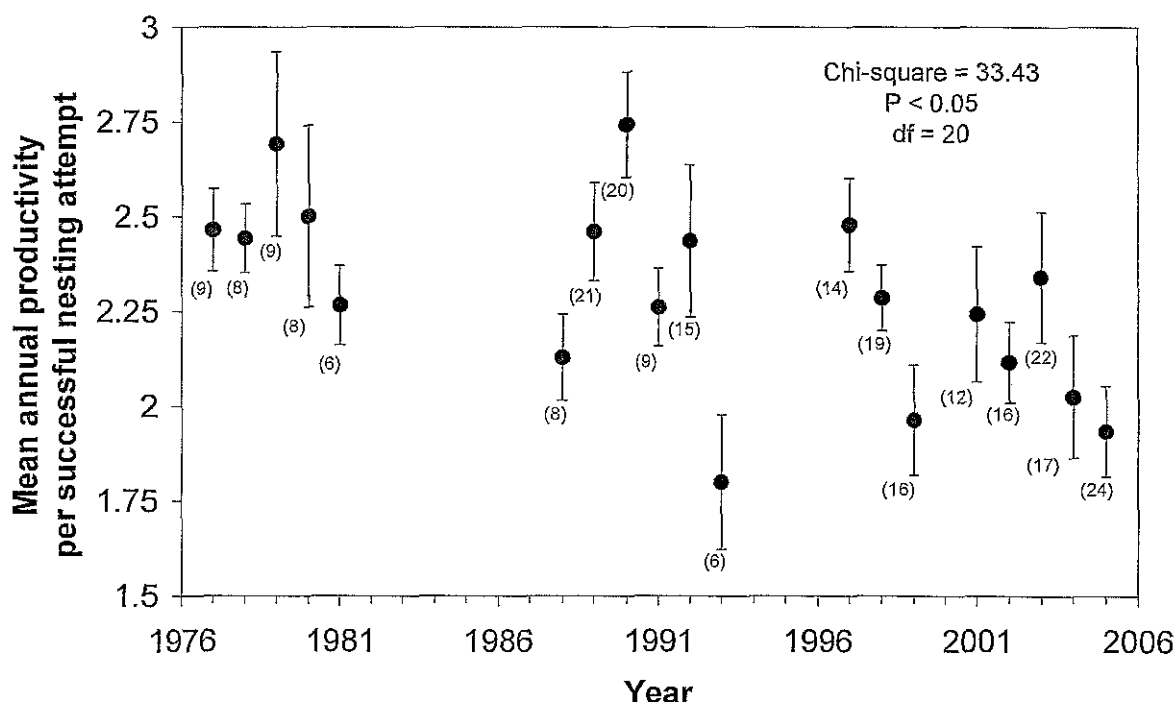


Figure 6. Mean annual nesting productivity for all successful nesting attempts at Pacific Great Blue Heron colonies in south-coastal British Columbia from 1977 to 2005. Productivity per successful nesting attempt is the mean number of fledglings produced in all nests that fledged one or more young. Data from 1982-1987, 1994-1996 and 2000 were excluded due to samples sizes under $n = 5$. The annual number of colonies analyzed is provided in brackets. Error bars represent one standard error of the mean.

Colony surveys – trends in the effects of colony size

A 1999 study showed that nesting productivity per active nesting attempt increased significantly with colony size, presumably due to higher rates of nest failure at small colonies, but that productivity per successful nesting attempt had no relationship with colony size (Vennesland and Butler 2004). Here we look at the effect of colony size on productivity over time. Due to a large and variable dataset, the figures for this

analysis are shown with data grouped into colony size categories. However, the analyses were conducted on raw colony-level observations using 'Proc Genmod' in SAS (Version 9). Hypothesis testing was conducted using a logistic generalized linear model (Agresti 2002), adjusting for overdispersion, a likely consequence of having some colonies repeatedly measured over time (Agresti 1996).

Using Pacific Great Blue Heron data from 1987 to 2001, productivity per active nesting attempt increased significantly with colony size (Figure 7), and using data from 1977 to 2005, productivity per successful nesting attempt decreased significantly with colony size (Figure 8). Herons in large colonies therefore were more successful in their nesting attempts over all (due to lower levels of nest failure). However, when excluding nesting failure (i.e., looking at successful nests only) herons in large colonies raised fewer offspring per nesting attempt than herons in smaller colonies.

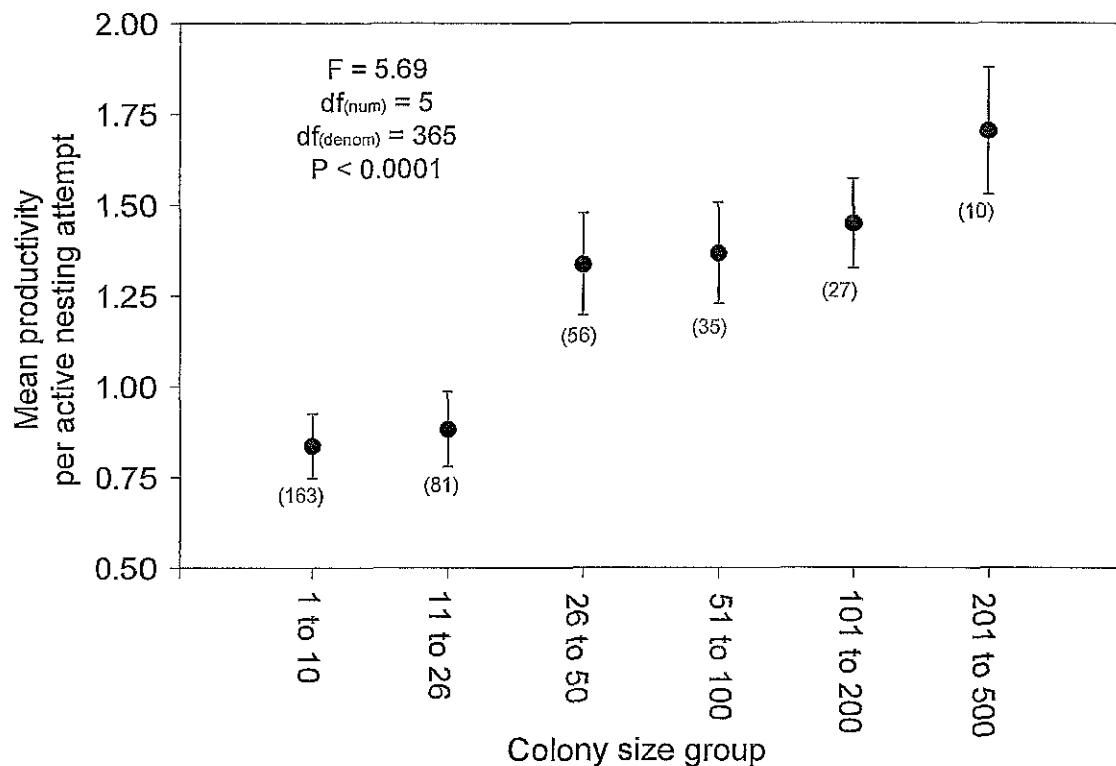


Figure 7. Mean productivity per active nesting attempt for colony size categories of Pacific Great Blue Herons in south-coastal British Columbia from 1987 to 2001. Productivity per active nesting attempt is the mean number of fledglings produced in all initiated nesting attempts. Data from 1994 and 1995 were excluded due to samples sizes under $n = 5$. Error bars represent one standard error of the mean.

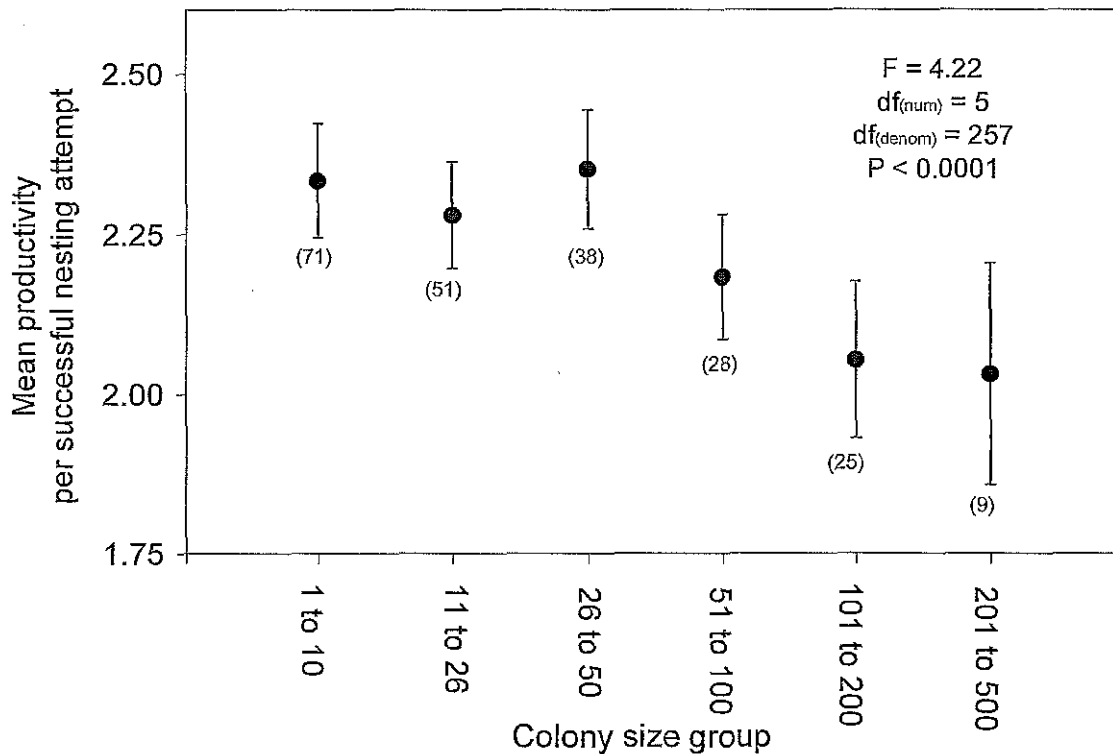


Figure 8. Mean productivity per successful nesting attempt for colony size categories of Pacific Great Blue Herons in south-coastal British Columbia from 1977 to 2001. Productivity per successful nesting attempt is the mean number of fledglings produced in all nests that fledged one or more young. Data from 1982-1987, 1994-1996 and 2000 were excluded due to samples sizes under $n = 5$. Error bars represent one standard error of the mean.

The relatively high productivity per active nesting attempt at larger colonies (Figure 7) implies that nest failure is relatively unimportant at these colonies (as reported by Vennesland and Butler 2004). However, previous studies have identified high levels of nesting failure on the coast of British Columbia as an important reason for low levels of nesting productivity (Gebauer and Moul 2001; Vennesland and Butler 2004). More importantly, the data presented here show that the loss of young from successful nesting attempts also is an important reason for low levels of productivity observed in the Strait of Georgia (as per the significant decline in Figure 6). This is particularly a concern for larger colonies that have lower productivity per successful nesting attempt than at smaller colonies (Figure 8).

Furthermore, most nesting pairs breed in large colonies and all these colonies are localized in a small part of the sub-species' range (the lower Strait of Georgia). In 2005, 68% of 1833 nesting pairs ($n = 46$ colonies) were concentrated at six colonies of more than 100 nesting pairs each. Four of these six colonies were located in the lower Fraser Valley, with the other two on southern Vancouver Island and the southern Gulf Islands. This therefore illustrates a particular concern for the Pacific Great Blue Heron in Canada; namely, that these large colonies are localized in a small area that is affected

by increasing human and predator disturbance and habitat declines.

Butler and Vennesland (2000) hypothesized that herons may leave large colonies due to increased disturbance and further disperse in their nesting as they try and find sites relatively free from eagle and human disturbances. However, the opposite pattern recently has been documented in Washington State. Eissinger et al. (2007) showed that the proportion of nesting pairs in small colonies is declining while the number in large colonies is increasing, perhaps an attempt by herons to dilute predation risk. If this pattern also occurs in Canada and if productivity continues to decline, herons may find themselves with no options – either suffer high levels of nest failure at small colonies or low numbers of fledglings at large colonies.

Colony surveys –effective range size

Although Pacific Great Blue Heron productivity has declined significantly (by both active nesting attempts and successful nesting attempts) since the 1970s, colony occupancy appears to be generally stable (Figure 4). However, some population retraction and severe nesting productivity issues have been observed along the margins of the Strait of Georgia. The number of herons observed nesting on the Sunshine Coast dropped from 97 in 1978 (Forbes et al. 1985b) to 4 in 2004 (the last year we have records for that area). About 90 pairs of herons nested in Pender Harbour and about 6 small colonies were located along the Sunshine Coast in the 1970s (Simpson 1984). A few colonies were still present there in the 1990s (Butler 1997), but recently only a few herons have been observed breeding there (Vennesland 2000). Furthermore, recent surveys on north-eastern Vancouver Island also are troubling. Chatwin et al. (2006) report that all colonies north of Nanoose Bay failed to raise any young in 2005. The significance of the population retraction on the Sunshine Coast and the absence of productivity on northern Vancouver Island in 2005 to the overall Pacific Great Blue Heron population is not known.

Although the Pacific Great Blue Heron occurs across the coast, the majority of herons nest in the southern Strait of Georgia and northern Puget Sound where the largest human and significant Bald Eagle threats occurs, and this is the only area of the coast where significant successful reproduction occurs. Thus, although the range of the Pacific Great Blue Heron is relatively large, their effective range size in terms of nesting productivity is restricted to the Lower Strait of Georgia area, and especially the Lower Fraser Valley (see further on demographic analyses).

Trends from volunteer-based population surveys

The CDC's historical database of nesting colonies generally is not well suited to detecting population declines because of increased survey effort through time and levels of colony interchange. Therefore, we also must look for other measures of the heron population across the landscape.

Gebauer and Moul (2001) reported that CBC surveys showed populations to be either declining modestly (Lower Fraser Valley) or sharply (Sunshine Coast). We conducted a new analysis of CBC data using data from all coastal count circles (i.e., locations specific to Pacific Great Blue Herons). We limited this analysis to the past three generations to provide relevance to COSEWIC listing criteria. To determine generation time (defined here as the average age of breeding individuals), a population matrix model (as per Caswell 2001) was computed (M. Drever, unpubl. data) assuming survival rates through three life stages (first winter survival rate of 0.273, second year survival rate of 0.5 and annual adult survival rate of 0.727; Butler 1995), an annual nesting productivity of 1.12 fledglings per active nesting attempt (R. Vennesland, unpubl. data for 1986 to 2005) and a maximum life span in the wild of 24 years (Butler 1992). The resulting average age for a breeding Pacific Great Blue Heron in British Columbia was 5.6 years. Given this average age, we have looked at CBC survey data over two periods: from 1991/92 to 2006/07 (assuming a 5 year generation time) and from 1988/89 to 2006/07 (assuming a 6 year generation time).

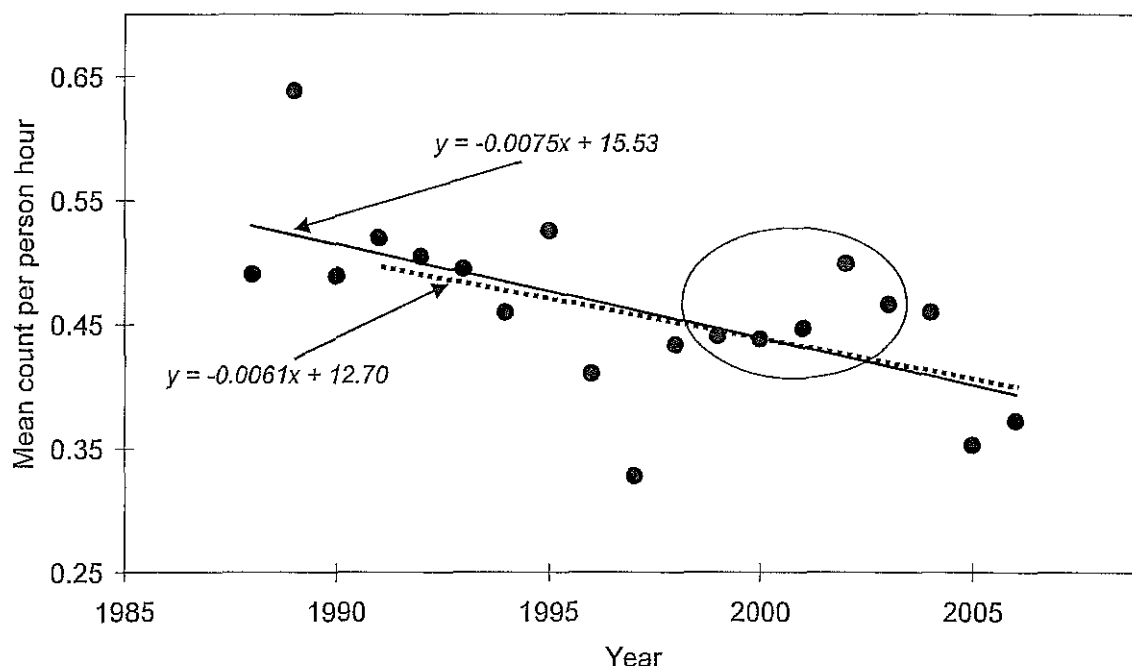


Figure 9. Christmas Bird Count (CBC) data analysis for three generations of the Pacific Great Blue Heron in Canada. Data are shown from the 1988/1989 winter (1988 on figure) to the 2006/2007 winter (2006 on figure). Generation time for the species is calculated at 5.6 years, so trend lines are shown for both 5 years (16 year period – dashed line) and 6 years (19 year period – solid line). Equations are provided for trend lines. The circled data points correspond to the years of CBC data that the Coastal Waterbird Survey analysis (Badzinski et al. 2005) also covers.

Since 1991/92, the relationship between the mean number of herons observed per person hour and year shows a significant 19% decline ($t = -2.18$; $P < 0.05$; $n = 16$; $r^2 = 0.20$). Since 1988/89, the relationship between the mean number of herons observed per person hour and year shows a significant 26% decline ($t = -3.18$; $P < 0.01$; $n = 19$; $r^2 = 0.34$).

Looking regionally with CBC data across south-coastal British Columbia (assuming a 5 year generation time – a conservative estimate given our result of a 5.6 year average age for breeding adults), the lower Fraser Valley showed a nearly significant increase in mean herons observed per person hour ($t = 1.98$; $P = 0.07$; $n = 16$; $r^2 = 0.16$), Vancouver Island showed a significant decline in mean herons observed per person hour ($t = -2.36$; $P < 0.05$; $n = 16$; $r^2 = 0.23$) and the Sunshine Coast showed a significant decline in mean herons observed per person hour ($t = -4.08$; $P < 0.01$; $n = 16$; $r^2 = 0.51$). These results align well with other survey data (see previous) and our demographic analyses (see further) that the lower Fraser Valley is the only region of British Columbia that has effective reproduction and that a range contraction may be occurring in northern parts of the Strait of Georgia. The lower Fraser Valley also has the highest threat to Pacific Great Blue Heron populations and habitat, providing added risk to the sub-species in Canada.

CWS data has indicated a significant increase in Pacific Great Blue Herons in winter on the coast of British Columbia from the period 1999/2000 to 2003/04 (6.9% increase per winter; $P < 0.05$; Badzinski et al. 2005). This result is based on well-designed statistical procedures and, as mentioned previously, the CWS generally has a more robust survey methodology than both CBC and BBS. Both CWS and CBC are conducted during winter, so the results of these surveys as reported here present an apparent contradiction. However, the increasing CWS trend is from a five year period, as opposed to the much longer period analyzed for CBC data. In fact, as shown on Figure 9 the period of the CWS analysis corresponds to a period of increased observations in CBC data (though not a significant increase; $t = 1.69$; $P = 0.19$; $n = 5$; $r^2 = 0.32$). This suggests that the time period in the CWS analysis may be too small to accurately gauge long term trends.

BBS data indicated a significant ($P < 0.05$) decline in herons on the British Columbia Coast of 5.7% over the period 1966 to 1994 (Downes and Collins 1996). However, closer inspection of the BBS data apparently has revealed that one census route was driving the analysis down, and when it was removed the downward population trend was no longer significant (B. Smith, unpubl. data).

Summary of trends in nesting productivity and population status

Counts from colony surveys do not show significant declines in levels of colony occupancy, but these surveys are of limited use for determining population status. Measures of nesting productivity show significant declines, with the number of fledglings per active nest falling by nearly half since the 1970's. Declines in productivity per successful nest may disproportionately affect large colonies in a localized area (about

5000 km² in extent) where most of the breeding for the sub-species occurs. Range contraction may be occurring in one region (the Sunshine Coast), and another region (northern Vancouver Island) has shown an absence of productivity in at least one year. Of annual surveys by volunteer naturalists (CBC, CWS and BBS), one dataset shows a significant 19-26% decline over three generations (CBC), one shows a significant increase, but one that has occurred over a short time period that may have little relevance to overall population trends of the species (CWS), and one shows a significant population decline that has been questioned on statistical grounds (BBS). Although we believe no catastrophic declines have yet occurred (e.g., Figure 4), at least one dataset (Figure 9) shows a significant decline over the past three generations and productivity declines (Figure 5, Figure 6, Figure 8) may bring more significant population declines in the future.

Trends from demographic analyses

Our demographic model for Pacific Great Blue Herons assumes a first winter survival rate of 0.273, second year survival at 0.5 and a subsequent survival of 0.727 (Butler 1995). We started with 1000 nesting females and mean annual nesting success sampled from colonies on Vancouver Island and the lower Fraser Valley between 1988 and 2003. Nesting productivity was significantly higher in the lower Fraser Valley than on Vancouver Island (Figure 10; $F = 15.3$, $df = 1$, $P < 0.01$), as has been previously reported (Vennesland 2000; Vennesland 2003; McClaren 2005; Chatwin et al. 2006).

To maintain the population requires herons to successfully raise fledglings in about 63% of all attempts. On Vancouver Island, the mean nesting success never reached this minimum threshold, whereas colonies in the lower Fraser Valley exceeded this threshold on five of the seven years with available data. In this analysis, the lower Fraser Valley is a source of recruits for Vancouver Island. Using the same analysis, the lower Fraser Valley produces about 66 young for every 1000 females whereas Vancouver Island colonies have a shortfall of 230 young for every 1000 females. Together with our analysis of CBC data (see previous), these results may suggest that over the past three generations the lower Fraser Valley has not been able to compensate for the shortfall in production of juveniles on Vancouver Island (only the lower Fraser Valley has positive population indices), though further research is warranted to confirm this preliminary result.

With the lower Fraser Valley as the source of recruits, this increases the importance of maintaining productivity in this relatively small area (the lower Fraser Valley area is only about 5000 km² in extent), and suggests that efforts should be implemented to restore productivity on Vancouver Island, if possible to do so. It also suggests that the vulnerability of the Pacific Great Blue Heron is greatest where the highest human population resides – in the lower Fraser Valley. Although the range of the Pacific Great Blue Heron is relatively large, its effective range size may be limited to a small and heavily populated region of the province (i.e., the lower Fraser Valley).

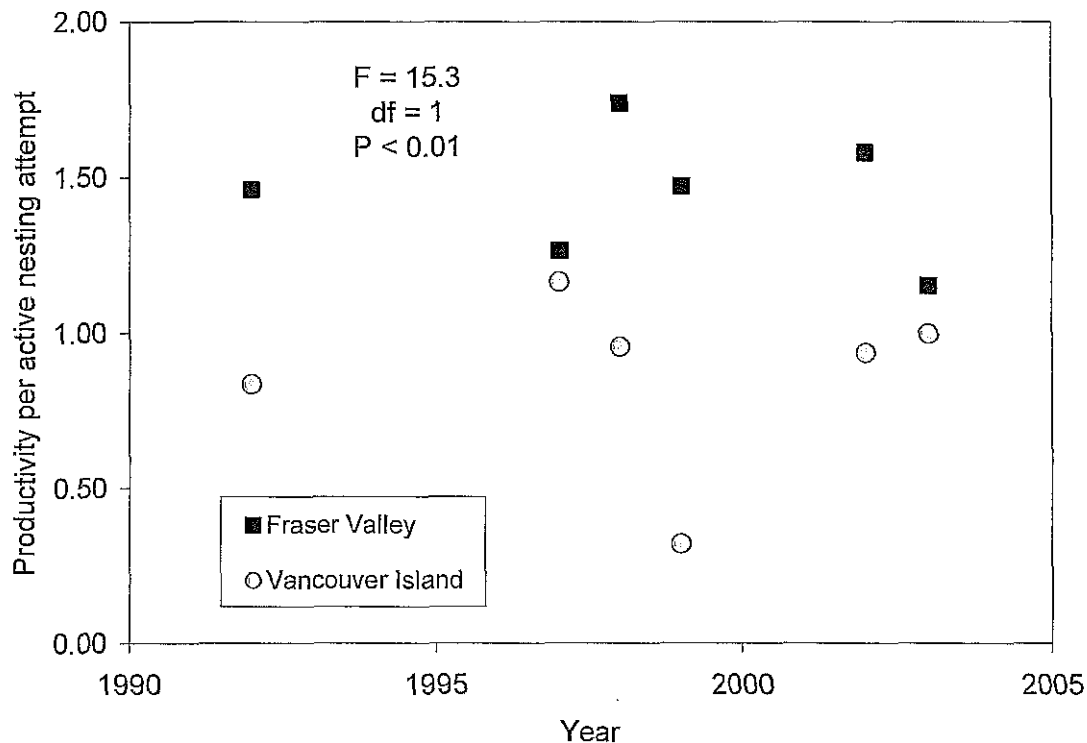


Figure 10. Mean productivity per active nesting attempt for Pacific Great Blue Herons in south-coastal British Columbia from 1992 to 2003 comparing Vancouver Island to the lower Fraser Valley on the mainland (including years from 1987 that have at least 5 colony level observations for each region in each year). Productivity per active nesting attempt is the mean number of fledglings produced in all initiated nesting attempts.

A population matrix model (as per Caswell 2001; M. Drever, unpubl. data) using the same survival rates as our demographic model, an annual nesting productivity of 1.12 fledglings per active nesting attempt (Vennesland, unpubl. data 1988 to 2003) and a maximum life span in the wild of 24 years (Butler 1992), provides a lambda of 0.91, projecting a 9% annual decline in the population across south-coastal British Columbia.

Rescue effect

Rescue effect from the south (i.e., from Washington State) is theoretically high due to the contiguous nature of Puget Sound and Georgia Strait, and the roughly equally sized heron populations between the regions. However, threats to heron populations and habitat south of the border are similar to that of Canada, perhaps with even higher threats and impacts due to the larger, more established human populations there (Georgia Basin Ecosystem Initiative 2002). This could explain why there are higher numbers of species at risk in the heavily developed areas of Puget Sound (Georgia Basin Ecosystem Initiative 2002).

Detailed colony surveys for nesting productivity or population trends are not

available from Washington State. However, we analyzed CBC data for northern Washington State to provide evidence for the probability of rescue effect. We looked at count circles close to the Canada/US border (those within about 100 km of the Strait of Georgia or Juan de Fuca Strait) and assumed a five year generation time (a conservative estimate given our result of a 5.6 year average age for breeding adults). The relationship between the mean number of herons observed per person hour and year showed a significant 34% decline ($t = -3.02$; $P < 0.01$; $n = 16$; $r^2 = 0.35$). Therefore, according to CBC data, Pacific Great Blue Heron populations near to Canada in Washington State recently have declined at a higher rate than in Canada.

From the north rescue effect is low due to the small populations of herons that occur there. In addition, productivity of northern areas is unknown.

LIMITING FACTORS AND THREATS

The major factors currently limiting the persistence of heron populations are nesting failure and reduced nesting productivity arising from eagle predation, human disturbance and habitat declines from development (Norman et al. 1989; Butler et al. 1995; Gebauer and Moul 2001; Vennesland and Butler 2004). Our review of studies and analyses suggest that the Pacific Great Blue Heron requires safe nesting woodlands near good foraging areas, especially in the heavily developed lower Fraser Valley.

Pacific Great Blue Heron nesting productivity has declined to nearly half of historical levels. Furthermore, at least one measure of population size (CBC data) shows a decline in herons over the past three generations (Figure 9). Demographic models using estimates of survival and nesting success from herons in the Strait of Georgia indicate that Vancouver Island is a population sink requiring outside emigration to be sustained. The Sunshine Coast also likely is a population sink. The likely source of recruits is young herons from the lower Fraser Valley. However, reduced nesting productivity of colonies in the lower Fraser Valley has reduced the number of recruits available to maintain populations on Vancouver Island. Rescue effect from Washington State may be limited, as higher declines for populations on CBC surveys are apparent near the Canada/US border.

Many studies have attributed declining nesting productivity, nesting success and populations to the influence of human disturbance and Bald Eagle predation (Norman et al. 1989; Butler et al. 1995; Gebauer and Moul 2001; Vennesland 2003; Vennesland and Butler 2004; McClaren 2005; Chatwin et al. 2006). In recent studies, much of this decline in productivity has been attributed to eagle attacks (Gebauer and Moul 2001; Vennesland and Butler 2004; McClaren 2005; Chatwin et al. 2006), though one study has noted that the influence of eagle attacks could not be separated from the influence of human disturbance (implying an interaction between these disturbance stimuli; Vennesland and Butler 2004). Other studies also have noted the positive influence of humans on eagle populations (Vermeer et al. 1989; Elliott et al. 1998). Humans also may be causing increased eagle attacks on herons due to reduced fish populations for eagle foraging (Vennesland 2000).

Human Disturbance

Moore (1990) showed that for every 1000 increase in the human population of the Lower Fraser Valley, 89 hectares of rural land was converted to urban uses. On Vancouver Island, human population growth has been only slightly lower than near Vancouver. The human population around the Strait of Georgia is projected to increase by more than 50% from 1990 to 2020 (from about 2.5 million to about 4 million; Georgia Basin Ecosystem Initiative 2002). Under present conditions, we can expect increased human disturbance at heron colonies and reduced habitat availability/quality (Gebauer and Moul 2001).

Human activity disturbs nesting Great Blue Herons (Werschkul et al. 1976; Simpson and Kelsall 1978; Vos et al. 1985), and has been linked to reduced nesting productivity (Forbes et al. 1985b; Gebauer and Moul 2001; Vennesland and Butler 2004; Vennesland 2000; reviewed by Parnell et al. 1988). Carlson and McLean (1996) found that the distance of heron colonies from human activity and the width or efficacy of the buffer zone around colonies were positively related to nesting productivity (buffer zones included vegetation, water and fencing). Watts and Bradshaw (1994) reported herons nesting further from human development than would be expected by chance, and Parker (1980) observed that colony size increased with distance from roads.

Several studies have linked the abandonments of Great Blue Heron colonies to human activity, including housing and industrial development, highway construction, logging, vehicle traffic, and repeated human intrusions (Bjorklund 1975; Mark 1976; Werschkul et al. 1976; Simpson and Kelsall 1978; Kelsall and Simpson 1979; Forbes et al. 1985b; Leonard 1985; Vennesland and Butler 2004; Eissinger 2007; see also reviews by Parnell et al. 1988; Hockin et al. 1992; Rodgers and Smith 1995; Nisbet 2000; Vennesland 2000).

In British Columbia for Pacific Great Blue Herons, Vennesland (2000) found that humans were likely involved in 4 of 14 abandonments from 1998 to 1999, but the effect of humans also could not be separated from the effect of eagles that was much more pervasive (meaning there is likely an interaction between these two disturbance stimuli). Forbes et al. (1985b) concluded that 17 of 27 colony abandonments occurred due to human activity near the colony-site, including tree cutting, flooding, vehicle use and researcher activity. Simpson (1984) documented construction work that resulted in adult herons leaving nests and ended with a large loss of nestlings to eagles. Simpson and Kelsall (1978) found that housing construction near to a colony in Sechart in 1978 resulted in the abandonment of about 73% of nests. One study has hypothesized that forest fragmentation caused by humans is allowing easier access to sites by predators such as eagles (Vennesland and Butler 2004), which could at least partly explain the presumed interaction between these disturbance sources mentioned above. In Washington State, Eissinger (2007) reported that logging and birds being shot caused colony abandonments.

Hérons tolerate some human activity near nesting areas (Mark 1976; Kushlan 1979; Webb and Forbes 1982; Butler 1997; Vennesland 2000), and show more tolerance for repeated mechanical disturbances than for pedestrian traffic (Vos et al. 1985; Carlson and McLean 1996; Rodgers and Smith 1995; Vennesland 2000), depending on the timing, frequency and magnitude of the stimulus and the sensitivity of the birds (Roberts and Ralph 1975; Ellison and Cleary 1978; Tremblay and Ellison 1979; Hill et al. 1997; Vennesland 2000; Vennesland and Butler 2004).

Some colonies of Great Blue Herons in British Columbia have become acclimatized to routine human activities, but others have not. Herons nesting in Stanley Park in Vancouver and Beacon Hill Park in Victoria seem unconcerned with the frequent human pedestrians and vehicles directly below their nests (Butler 1997; Vennesland 2000). However, colonies in more rural settings may respond to disturbances at a great distance. At a sensitive colony on Vancouver Island (Quamichan Lake, Duncan), adult herons flushed from their nests when a researcher approached within 200 m before eggs had been laid, 100 m after eggs had been laid, and 10 m after chicks were present (Butler 1991). Vennesland (2000) reported that nesting herons at sensitive sites responded when a researcher approached within 100 m. Herons at sensitive sites might respond at the first sighting of intruders (Vennesland 2000). It must be kept in mind that although no noticeable response is observed by herons at some urban sites, productivity at these locations has been negatively correlated with the local level of human activity (Vennesland 2000; Vennesland and Butler 2004). Thus, our surveys may not properly determine heron response. In other words, no response may be seen but herons may still be disturbed (Vennesland 2000).

Bald Eagle Predation

This subject is covered also in the *Predation* section of this report. Bald Eagles are the primary predator of Pacific Great Blue Herons (Butler 1997; Gebauer and Moul 2001; Vennesland and Butler 2004) and represent a significant limiting factor for heron populations due to increasing population levels and potential influences of humans – resulting in increased predation at heron colonies. Predation and associated disturbance results in significantly higher nest and colony abandonment (Butler et al. 1995; Vennesland and Butler 2004).

The influence of eagle attacks generally has been described in the context of recovering raptor populations after many populations were decimated by human pollution such as DDT (Bednarz et al. 1990; Kjellen and Roos 2000; Butler and Vennesland 2000; Elliott and Harris 2001). This recovery has been ongoing for several decades. The number of nesting eagles increased 30% in the Gulf Islands (Vermeer et al. 1989), and 34% in the Puget Sound (McAllister et al. 1986) from the mid-1970's to the mid-1980s. Eagle populations on the south coast have increased since the mid 1980s (Elliott and Harris 2001) and the rate of attacks on nesting Pacific Great Blue Herons has more than doubled over this time period (Vennesland and Butler 2004). Eagle nesting productivity from 1992 to 1995 was higher in the Strait of Georgia than on the west coast of Vancouver Island or in Johnstone Strait, and was producing a

'considerable' surplus of juveniles (Elliott et al. 1998). The reasons for this increase are unclear, but were probably due to increasing prey populations (e.g., gull populations enhanced by human refuse), declining contaminant levels in prey (Vermeer et al. 1989; Elliott et al. 1998), and possibly reduced persecution (Vennesland 2000). It is also possible that reduced fish populations have caused eagles to search out alternate sources of food (Vennesland 2000). It is unclear how current eagle populations compare with historical numbers, or how eagle populations compared to heron populations prior to the influence of Europeans. Given the magnitude of increase over the past few decades, it is unlikely that they are significantly below historical levels, but due to a lack of historical information any conclusions on eagle population trends will inherently be speculative.

The influence of Bald Eagles might be negatively affecting habitat use by Pacific Great Blue Herons (Butler and Vennesland 2000; Vennesland and Butler 2004). For example, soon after a landowner felled trees that exposed a colony on Vancouver Island in 2005, eagles began to enter the colony at which time the herons abandoned the site (Vennesland 2006). Eagle attacks on nesting herons have escalated in recent years (Vennesland and Butler 2004) and this increased level of predation likely has put many herons on the run in search of new nesting habitat. Interestingly, some herons also are nesting near eagle nests where they might be afforded a reduced level of disturbance from other predators (Koonz 1980; Butler 1995; Vennesland 2000). In addition, some herons are nesting in urban settings. Two large colonies are established in Stanley Park and Beacon Hill Park in downtown Vancouver and Victoria, respectively. On the face of it, these behaviours indicate how adaptable herons are to a changing environment, but it might also reflect an attempt to find relative safety from increasing predatory attacks.

SPECIAL SIGNIFICANCE OF THE SPECIES

The Pacific Great Blue Heron is non-migratory and confined to the northeast coast of the Pacific Ocean. It has high public appeal as a symbol of wetland conservation and environmental quality.

EXISTING PROTECTION OR OTHER STATUS DESIGNATIONS

In British Columbia, the Great Blue Heron, its' nests and eggs are protected year-round from persecution (Section 34), hunting (Section 26[1]), and harassment (Section 27[3]) by the British Columbia *Wildlife Act* (1982; updated 1999). Herons also are protected from hunting through Article 11:3 of the *Migratory Birds Convention Act* (1994) and Sections 5(4) and 6(a) of the *Migratory Birds Regulations* (Butler and Baudin 2000). A few scare/kill permits were provided up to 1998 to reduce heron depredation of hatchery fish stocks, but these have since been revoked (R. Butler, pers. obs.).

Both the *fannini* and the *herodias* subspecies of Great Blue Heron have been designated as 'Blue list' species by the British Columbia Ministry of Environment. "Blue-listed" species are considered to be vulnerable and "at risk", but not yet endangered or

threatened. The *fannini* subspecies of Great Blue Heron is listed as Special Concern by the Committee on the Status of Endangered Wildlife in Canada and is on Schedule 3 of the federal *Species at Risk Act*.

TECHNICAL SUMMARY

Ardea herodias fannini

Pacific Great Blue Heron

Grand Héron Bleu

Range of Occurrence in Canada: British Columbia; Yukon

Extent and Area Information	
Extent of occurrence (EO)(km²) From GIS analysis	243,952 km ²
Specify trend in EO	Unknown, possibly declining on peripheries of range
Are there extreme fluctuations in EO?	No
Area of occupancy (AO) (km²) From GIS analysis – see Figure 2	188,331 km ²
Specify trend in AO	Unknown, as per colony survey and CBC data possibly declining on peripheries of range (outside of lower Fraser Valley)
Are there extreme fluctuations in AO?	No
Number of known or inferred current locations	49 nesting locations (2005)
Specify trend in #	Unknown
Are there extreme fluctuations in number of locations?	Not likely
Specify trend in area, extent or quality of habitat	Declining

Population Information	
Generation time (average age of parents in the population)	Estimated at 5.6 years
Number of mature individuals	Est. 4000-5000
Total population trend:	Various, but CBC data show decline
% decline over the last 10 years or 3 generations.	Significant decline (18-30%) over past three generations on CBC survey data
Are there extreme fluctuations in number of mature individuals?	Not likely
Is the total population severely fragmented?	For breeding locations – Range wide, No; In Lower Fraser Valley, Yes
Specify trend in number of populations	Unknown
Are there extreme fluctuations in number of populations?	No
List populations with number of mature individuals in each:	Unknown

Threats (actual or imminent threats to populations or habitats)
Primary threats are from Bald Eagle predation, human disturbance and habitat destruction. Human influences are especially acute in the lower Fraser Valley (the centre of the sub-species' range).

Rescue Effect (immigration from an outside source)	
• <i>Status of outside population(s)? USA (Washington State):</i>	Similar to Canada, but near Canada show stronger CBC declines than in Canada
• <i>Is immigration known or possible?</i>	Yes
• <i>Would immigrants be adapted to survive in Canada?</i>	Yes
• <i>Is there sufficient habitat for immigrants in Canada?</i>	Unknown, habitat is declining near US border (lower Fraser Valley)
• <i>Is rescue from outside populations likely?</i>	Unknown, presumably depends on declines south of border

Quantitative Analysis	N/a
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Current Status	COSEWIC: Special Concern (1997)
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Author of Technical Summary: Ross Vennesland, October, 2007.

Recommended Status and Reasons for Designation

[This table is to be completed in the Interim Report by the SSC;
COSEWIC will approve or modify the text in this section for the Final Report]

Recommended Status:	Alpha-numeric code:
Reasons for Designation: [Note especially if it is a Canadian endemic with 100% of its distribution in Canada]	
<u>Applicability of Criteria</u> Criterion A (Declining Total Population): Criterion B (Small Distribution, and Decline or Fluctuation): Criterion C (Small Total Population Size and Decline): Criterion D (Very Small Population or Restricted Distribution): Criterion E (Quantitative Analysis):	

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BIOGRAPHICAL SUMMARY OF REPORT WRITERS

Ross Vennesland studied biology and physical geography at Simon Fraser University for his undergraduate education, completing his B.Sc. degree in 1996. He went on to complete his M.Sc. degree in biology at Simon Fraser University in 2000, studying the behavioural ecology and conservation biology of the Great Blue Heron. During and after his schooling, Ross worked as a private consultant for federal and provincial governments, academic institutions and other organizations, concentrating primarily on ornithological work. From 2002 to 2006, he worked as the Senior Ecosystems Biologist for Species at Risk for the Lower Mainland Region of the British Columbia Ministry of Environment. In that capacity, he worked with a diverse array of organisms including birds, fish, plants, small mammals, amphibians and invertebrates and chaired several recovery teams and the South Coast Conservation Program (www.sccp.ca), a landscape-level conservation program for the region. He is now the Species at Risk Recovery Specialist for Parks Canada at the Western and Northern Service Centre in Vancouver.

Rob Butler received a Bachelor of Science and Master of Science degree at Simon Fraser University and a Doctor of Philosophy in Zoology from the University of British Columbia. He is a Senior Research Scientist with Environment Canada's Canadian Wildlife Service and Adjunct Professor of Biological Sciences at Simon Fraser University in British Columbia. His research specialties are avian migration, ecology and conservation. Dr. Butler is considered a world authority on the Great Blue Heron from his doctoral research, scientific publications and his authoritative book *The Great Blue Heron* (Univ. of B.C. Press, 1997). Dr. Butler is a scientific advisor to the IUCN Heron Specialist Group, Western Hemisphere Shorebird Reserve Network and the Important Bird Areas. He is past President of the *Waterbird Society*, Chair and founding member of the Heron Working Group, and President of the Pacific Wildlife Foundation. He has won numerous awards for his research work on bird migration and conservation in Canada and abroad and he is a Fellow of the American Ornithologists' Union.

COLLECTIONS EXAMINED

No collections were examined for this report.



SR4

STAFF REPORT

ELECTORAL AREA SERVICES COMMITTEE MEETING OF SEPTEMBER 7, 2010

DATE: August 31, 2010

FILE NO:

FROM: Tom R. Anderson, General Manager

BYLAW NO:

SUBJECT: Draft Subdivision Servicing Bylaw

Recommendation:

That the Draft Subdivision Servicing Bylaw be forwarded to the Ministry of Transportation and Infrastructure for consideration.

Purpose:

To obtain Committee direction to move forward with the Draft Bylaw.

Financial Implications:

N/A

Interdepartmental/Agency Implications:

All key departments within the Regional District participated in the drafting of the bylaw. The Ministry of Transportation and Infrastructure will ultimately be required to approve the bylaw so it is important to undertake early consultation in order to determine if they have any significant problems.

Background:

In 2008, the Planning and Development Department received approval and funding to proceed with the drafting of a new Subdivision Servicing Bylaw for the Regional District. Landworks Consultants were hired to undertake the work due to their significant involvement in shaping the *Green Bylaws Toolkit* which promotes alternative development standards.

An interdepartmental steering committee within the Regional District was formed with representation from Engineering, Environment, Public Safety, Parks, Building Inspection and Planning to provide guidance to the consultant in the drafting of the bylaw. The final draft of that work is presented to the Committee which will now also play a key role in setting new standards for future development in the Regional District.

Many of the standards outlined in the Bylaw may be new to this region but are in actual fact quite commonly found in other local governments servicing bylaws. Other standards found in our draft bylaw are considered "leading edge" and have been incorporated into the bylaw as a

way to push the “green” agenda as directed at the start of this project. In his presentation to the Committee on May 18, 2010, the Consultant, highlighted these new standards and identified those which are moving the “green” initiative forward. After considerable discussion, the Committee passed the following recommendation:

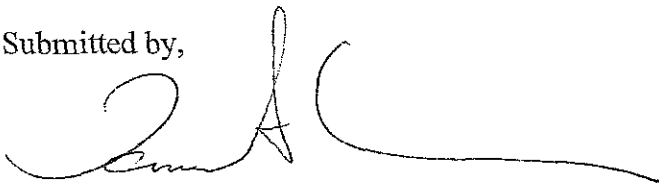
“That the “Report on Subdivision Servicing Bylaw” and draft “Subdivision Servicing Bylaw No. 3215, 2010 prepared by Landworks Consultants Inc. be received, and that EASC members be requested to forward their comments on the draft bylaw to Tom Anderson, General Manager, over the course of the next couple of weeks.”

To this date, no comments have been received. As such, it is requested that the Committee provide direction to have staff and the consultant meet with the Ministry of Transportation and Infrastructure to outline just how these new standards may impact their part of the development approvals process. It is our belief that our proposed alternate road and drainage standards and related maintenance may cause some consternation with Ministry officials so we feel we should meet to try and address any of these concerns prior to moving the bylaw forward through our formal process.

It is proposed that once Ministry of Transportation and Infrastructure comments have been received, a report will be forwarded to the Committee as an update and for further consideration of the bylaw.

Directors are requested to bring their previously distributed copies of the Report on Subdivision Servicing Bylaw and the Draft Subdivision Servicing Bylaw.

Submitted by,

A handwritten signature in black ink, appearing to read 'Tom Anderson', followed by a long horizontal line extending to the right.

Tom R. Anderson,
General Manager
Planning and Development Department

TRA/ca

PK1

Minutes of the Cobble Hill Parks and Recreation meeting held at 7:00 p.m. on Thursday, September 9th 2010 in the Arbutus Ridge Boardroom.

Those present: John Krug – Chair, Ian Sparshu, Lynn Wilson, Bill Turner, Gord Dickenson, Ruth Koehn, Alan Seal and Regional Director Gerry Giles.
Regrets: Richard Shaw



The meeting was called to order at 7:02 p.m. by Chair Krug.

Moved/seconded

that the agenda be adopted with the addition of the 2011 budget, the volunteer work group and the Fairfield Road right of way allowance.

MOTION CARRIED

Moved/seconded

that the minutes of the May 27th 2010 meeting be adopted as circulated.

MOTION CARRIED

- 1) Highways Works Yard: it was agreed that a general clean up should take place to make the area more presentable and that the committee would meet on site on Saturday, September 11th at 10 a.m. to review the area as well as look at the Farmers Institute Field and the potential for a pathway connecting Evergreen to the Twin Cedars development. Whether or not there is any resale or scrap metal value in the existing chain link fence is also to be determined.

Moved/seconded

that the commission/volunteers undertake a general clean up of the works yard by securing the well heads with a more appropriate casing than tires, cleaning away the two piles of old blacktop, removing the old power pole and then developing and installing a sign for the property as well as other minor items.

MOTION CARRIED

Moved/seconded

that the Farmers Institute and Evergreen Independent School be contacted to ascertain whether there is an interest in working together to craft a vision for the Watson Avenue wetland boardwalk, the parkland donated by the Mann development, the works yard, the Farmers Institute property and Evergreen Independent School property.

MOTION CARRIED

- 2) Galliers Park Washroom: the needs of the Cobble Hill Improvement District for housing their new well were explained and information was provided about adding a washroom onto their pump house building.

Moved/seconded

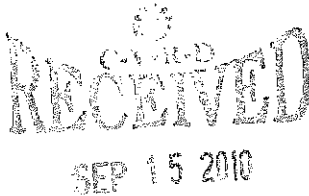
that the Cobble Hill Parks and Recreation Commission recommend to the CVRD that the Cobble Hill Improvement District be permitted to build an above ground pump house subject to the design being approved by the commission and with the provision of a full service washroom being included in the design.

MOTION CARRIED

- 3) New Business Items: an update was provided on the local advisory group helping to plan for the old highways works yard. They crafted the questionnaire that was distributed at the fair and to date there have been 28 questionnaire responses received. More surveys will be ordered. The Cowichan Volunteer program will not be accessed by the parks commission.
- 4) 2011 Budget: it was agreed the Parks Chair would ask for an update on the Cobble Hill Parks 2010 budget including expenditures to date and that we would meet on October 6th to determine possible 2011 priorities. This could include the train station washroom.
- 5) South Cowichan Parks Report: Ian provided an update on the suggestions of the South Cowichan Parks Commission thus far regarding the Mill Bay Historic Church. These include building a foundation under the Church, no improvements to the hall and restoring the Church to some semblance of its former glory.
- 6) Directors Report included an update on the Cobble Hill Fall Fair amongst other items of community interest.
- 7) Next meeting October 6, 2010 at 7 p.m. in the Arbutus Ridge Boardroom.
- 8) Meeting adjourned at 8:50 p.m.

John Krug, Chair

PK 2



Minutes of the regular meeting of the Area H Parks Commission held at North Oyster Community Hall on Thursday, August 26, 2010 at 6:30 p.m.

PRESENT: Chairperson Bruce Mason, Don Pigott, Snuffy Ladret, Mary Marcotte, Secretary Barbara Waters.

ABSENT: Brad Uytterhagen, Murray McNab

Bruce Mason called the meeting to order.

**APPROVAL OF
AGENDA**

**Moved
Seconded**

That the agenda be approved.

MOTION CARRIED

**ADOPTION OF
MINUTES**

The minutes of the regular meeting of July 25, 2010 were adopted with one correction.

**BUSINESS
ARISING FROM
THE MINUTES**

**B1 Heart Lake
Development**

The Heart Lake Development was given third reading at the CVRD and the matter is now in the hands of the Province, awaiting approval.

**B2 Wiggins
Application**

Dr. Wiggins has requested a meeting with Area Director Mary Marcotte for further discussion of a new proposal.

**B3 Memorial
Plaque**

The memorial plaque has still not been installed in the picnic table at Elliott's Beach. Don Pigott will follow up with the contractor.

**B4 Bush Creek
Bridge**

The developer has offered to donate \$25,000 towards this project. This money will need to be put in trust prior to the project going to 4th reading. Other requirements include cleaning up garbage in the proposed parkland area, putting up fencing, and arranging to get the proposed farmland area back into the ALR. A discussion ensued regarding local engineering resources available, experienced and at reasonable cost. Budgets for existing local bridges were noted. A qualified volunteer is available to do the profiles at no cost.

**B5 Elliott's Beach
Maintenance
Contract**

Our understanding is that the current contractor for other Area H parks is now being paid to maintain this park, but it is not apparent that any work has been done there.

Moved
Seconded

That the Area H Parks Commission request information from the CVRD Parks Department regarding current payment for maintenance of Elliott's Beach park; and that we also request copies of related work logs for this and the other Area H parks.

MOTION CARRIED

CORRESPONDENCE

No correspondence.

REPORTS:

R1 Yellow Point Park

Recently a driver deliberately drove his car through the ditch in the parking lot area where rocks were placed to prevent damage caused by such actions. Although damage to the park was minor this time, larger rocks will be installed. The park otherwise is looking good.

R2 Blue Heron Park

Signage is being installed as previously reported. Park usage continues to be high.

R3 Raven Park

There has been some recent usage of this park. No problems noted.

R4 Elliott's Beach

See "Business Arising" re: memorial plaque and maintenance contract. Park usage continues to be high. Some minor vandalism has been noted.

R5 Michael Lake

No report.

R6 Trillium Park

Usage of this park continues to be high, and no current problems noted.

UNFINISHED BUSINESS

UB1 Wedding Policy

Moved
Seconded

That the policy regarding weddings in Area H parks is not to include an item requiring a damage deposit.

MOTION CARRIED

UB2 Memorial Plaque Policy

Referred to next meeting.

NEW BUSINESS

**NB 1 Parks Hats
and T-Shirts**

Parks commission members noted that it is important to wear hats and t-shirts with CVRD parks logos on them when visiting Area H parks. New hats and t-shirts to be requested.

**NB2 Broom in
Yellow Point Park**

Don Pigott has agreed to contact Brannan Lake institution to request a work party to remove broom in Yellow Point Park.

NB3 DL 109

Information was received that the first nations application for a woodlot license in DL 109 has been rejected because of concerns regarding impacts on local water supply and sensitive habitat issues.

**Moved
Seconded**

That the Area H Parks Commission pursue designation of DL 109 and DI 51 as interpretive forest sites, recreation sites, and/or recreation trails.

MOTION CARRIED

A discussion ensued. Mary Marcotte agreed to ask the CVRD for support on this issue, and Don Pigott agreed to approach tenure forester Emma Neill for advice regarding how to proceed with the application for this designation.

NEXT MEETING

Thursday, September 23, 2010, 6:30 p.m., North Oyster Community Hall.

ADJOURNMENT

Moved

That the meeting be adjourned.

MOTION CARRIED

The meeting was adjourned at 7:20 p.m.

Barbara Waters, Secretary
August 30, 2010

INI

FCABC RECAP - 2010 UBCM RESOLUTIONS

Following are some of the 2010 UBCM resolutions going forward at their annual convention that may have interest for fire/rescue

Please take the time to discuss these resolutions with your City or Regional District representatives and/or CAOs that will be attending.

The comments following the resolution in red are made by Administrator Ann Hancock, and if you require any further information on these subjects, contact the FCABC office or see documents/reports posted to the FCABC members only SharePoint site.

B3 PROVINCIAL REGULATION OF FIREWORKS

Columbia Shuswap RD

WHEREAS British Columbia experienced an active fire season this summer due to extremely dry weather conditions and the misuse and abuse of fireworks causes significant property damage and personal injury, and generates unnecessary costs for taxpayers;

AND WHEREAS the *Community Charter* enables local governments to regulate fireworks, however lack of staffing and funding drastically affects the ability of local governments to provide enforcement:

THEREFORE BE IT RESOLVED that a province-wide approach is needed for the safe manufacturing, transportation, retail, wholesale and use of fireworks;

AND BE IT FURTHER RESOLVED that the provincial government be requested to regulate the use of fireworks in British Columbia by a permit system, including public education, enforcement, international and municipal cross border transportation, and cost recovery where loss can be directly attributed to the use and abuse of fireworks.

ENDORSED BY THE SOUTHERN INTERIOR LOCAL GOVERNMENT ASSOCIATION

*UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse***

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee notes that the UBCM membership has endorsed resolutions calling for the Province to control and regulate fireworks (2005-B74; 1989-B6). Members have also endorsed resolutions requesting local government authority to regulate or prohibit the possession of fireworks, and the ability to authorize police or other designated officials to seize fireworks if possession of fireworks contravenes a bylaw (1992-B1; 1988-B29).

The Committee notes that this resolution was originally submitted as 2009-LR19. Since the resolution did not meet the criteria for emergency debate, it was referred automatically to the 2010 resolutions cycle.

The FCABC has sent numerous resolutions to the provincial & federal governments on the items mentioned above (as well as keeping of statistics by the OFC) but to date no action has been taken – responses from the OFC & provincial government indicate that this is a local government issue to resolve

B4 TRANSFORMING THE FIRE/RESCUE SERVICE REPORT RECOMMENDATIONS

Bulkley-Nechako RD

WHEREAS the Ministry of Public Safety and Solicitor General will be considering a report titled "Public Safety in British Columbia: Transforming the Fire/Rescue Service Report" which will affect the provision of fire rescue services in the rural areas of the Province;

AND WHEREAS concerns have been raised about the impact upon local governments of the recommendations being put forward by the Fire Services Liaison Group to the provincial government:

THEREFORE BE IT RESOLVED that UBCM request that the provincial government hold consultation meetings for local governments to provide direct input to the Province regarding the proposed Fire Rescue Service Report recommendations.

ENDORSED BY THE NORTH CENTRAL LOCAL GOVERNMENT ASSOCIATION

*UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse***

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee notes that the UBCM membership endorsed resolution 2009-B72, which suggested to the Province that the new draft model for the fire/rescue system posed significant financial and liability implications for rural volunteer fire fighters, with potential negative effects on the recruitment and retention of volunteer fire fighters in rural and remote areas of the province.

UBCM identified a number of measures proposed in the new model that would have financial implications, and requested that the costs of each measure be identified, and that new revenue sources to support the measure be outlined and discussed with local government before any changes were made. It is very important that local government fully understand the costs of changing the model for the delivery of fire services.

The Province has expressed awareness of the challenges faced by many volunteer fire departments from a retention and recruitment perspective, and is willing to consider the new model's impact on small rural fire departments.

The PSSG ministry has proposed to set up a Leadership Group to discuss the recommendations made, but to date no action has been taken. FSLG Chair Gamble wrote to the North Central Local Government Association about the possibility of further input through the Leadership Group and also stated:

It might be also of interest to you to know that UBCM was a part of the Fire Services Liaison Group (FSLG), however, earlier this year they indicated to us and to the Province that they no longer wanted to participate as a member of the FSLG, and we ask that you encourage the members of the North Central Local Government Association to request that UBCM reconsider this position and that they have a member of their Executive Board remain at the table as an FSLG member to provide direct input on behalf of the local government members of their Association.

B5 FIRE RESCUE SERVICE

Bulkley-Nechako RD

WHEREAS the provincial government is desirous to enforce the new model of the fire rescue service:

THEREFORE BE IT RESOLVED that UBCM request that the provincial government fund the changes and the ongoing costs with the money they collect from the Insurance Premium Tax.

ENDORSED BY THE NORTH CENTRAL LOCAL GOVERNMENT ASSOCIATION

*UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse***

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee notes that the UBCM membership has consistently endorsed resolutions calling on the provincial government to fund fire and rescue services through the insurance premium tax (2009-B27; 2008-B13; 2006-B24; 2005-B13; 2004-B11; 2002-B14; 2001-B39).

The provincial government in responding noted that fire insurance premium tax imposed under the Fire Services Act was repealed in Budget 98, and clarified that the tax revenue generated from the 4.4 per cent tax paid by insurance companies on property insurance premiums is intended to be a general revenue source. The Province's position is that directing insurance premium tax into general revenues is the appropriate use of the revenue, and any proposed transfer of tax revenue to local governments must be evaluated in the context of a balanced provincial budget and provincial program funding needs.

FSLG Chair Gamble wrote to the North Central Local Government Association and stated:

The member associations of the Fire Services Liaison Group as well as FCABC have approached the Provincial government numerous times over the past few years to have all or portions of the Insurance Premium Tax returned to local governments and/or the Office of the Fire Commissioner to assist with training, recruitment and retention, and public education in communities served by fire rescue services. We applaud the position you have taken on this issue as well as your recommendation and unlike previous attempts by others we hope your resolution is heard and acted upon by the Province.

This resolution speaks to core funding for volunteer road rescue groups – FYI.....

B6 FUNDING OF ROAD-SIDE RESCUE SERVICES

Fort St. James

WHEREAS volunteer organizations in many small communities provide road rescue and vehicle extrication services to motorists both inside and outside of municipal jurisdictions but are required to provide their own specialized training, equipment, and liability insurance;

AND WHEREAS the majority of road accidents requiring rescue or vehicle extrication services occur outside municipal boundaries but only fees for service are recovered through the Provincial Emergency Program:

THEREFORE BE IT RESOLVED that UBCM lobby the provincial government to provide core funding for training, equipment, and insurance for volunteer road rescue and vehicle extrication organizations.

ENDORSED BY THE NORTH CENTRAL LOCAL GOVERNMENT ASSOCIATION
UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse**

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee notes that the UBCM membership has consistently endorsed resolutions requesting reimbursement for costs associated with responding to motor vehicle accidents (2006-B64; 2005-B4; 2004-B6; 2001-B6; 2001-B8; 2000-B15).

Currently, the Provincial Emergency Program (PEP) reimburses fire departments that respond to police or ambulance calls in the unorganized areas of the province at a rate set by policy. PEP also provides WCB and liability coverage for these calls and reimburses for repair or replacement of lost or damaged equipment.

The current policy and reimbursement rates for out of boundary road rescue calls were developed through the deliberations of a road rescue task group.

B9 FIRST RESPONDER SUPPLIES

Cariboo RD

WHEREAS the BC Ambulance Service has historically provided replacement oxygen and various medical supplies to first responders following first responder incident calls, but recently this practice has been discontinued in many locations throughout the province;

AND WHEREAS for many volunteer fire departments, the discontinuation of the provision of these resources creates a funding pressure that could result in a loss of first responder services to many of the small and rural communities that need this service the most;

AND WHEREAS first responder services are provided in support of the BC Ambulance Service and the providers of these services should not be expected to incur the cost of the required resources;

THEREFORE BE IT RESOLVED that the Union of British Columbia Municipalities lobby the provincial government to reinstate the provision of replacement oxygen and various medical supplies to first responder groups on a province-wide basis.

NOT PRESENTED TO THE NORTH CENTRAL LOCAL GOVERNMENT ASSOCIATION
UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse**

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee notes that UBCM members have endorsed a number of general resolutions over the years requesting provincial funding for the first responder program (2004-B26; 1999-B7; 1995-B75; 1994-B16).

A letter was sent to UBCM in June asking that :

We are writing UBCM to ask that you communicate with BCAS to ensure that all consumables used by First Responders are replenished and that BCAS communicate this to all BCAS unit chiefs for consistency across the province.

B45 BC AMBULANCE SERVICES RESPONSE TIME

Maple Ridge

WHEREAS the administration and delivery of health care service is the responsibility of the Province of British Columbia; AND WHEREAS the British Columbia Ambulance Service, operating under the authority of the Emergency and Health Services Commission to provide public ambulance service across the province, has a target to respond within 9 minutes to 90% of the most serious calls (Delta/Echo) from its metro/urban stations and in 2009 responded within 9 minutes to only 52% of those calls placing the citizens of this province at risk;

THEREFORE BE IT RESOLVED that the Union of British Columbia Municipalities call upon the Province of British Columbia to direct sufficient resources to meet the response time criteria to ensure that citizens of this province have access to timely high quality care during medical emergencies.

ENDORSED BY THE LOWER MAINLAND LOCAL GOVERNMENT ASSOCIATION
UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse**

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee notes that the UBCM membership endorsed resolution 2007-B50, which requested that the Province restore funding to the BC Ambulance Service so that citizens could expect a timely response from qualified personnel throughout the province.

In response to this resolution, the BC Ambulance Service (BCAS) advised that there had been no cuts in service, and that its budget had been increased by 57 percent over the preceding six years, to \$283.5 million in 2007/08 vs. \$181 million in 2001/02.

The BCAS also noted that they were looking at ways of improving service delivery including upgrading remote ambulance stations to rural designations, which require standby paramedics rather than paramedics on call by pager. BCAS indicated that the introduction of the standby shift for one ambulance per rural station had improved the average response time by approximately 15 per cent in rural communities throughout British Columbia.

In some cases where fire departments are providing First Responder services at no cost to BCAS, if dispatched, the BC fire service is filling some gaps in service by BCAS, where increased funding, cars and/or personnel are needed.

B59 FIRE SMART CANADA COMMUNITY PROGRAM

Kaslo

WHEREAS many communities small and large in British Columbia are threatened by potential wildfire occurrences adjacent to and within their communities;

AND WHEREAS community wildfire protection plans and operational fuel management projects on public and private lands can significantly reduce the threat and impact of a wildfire event;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities initiate a Fire Smart Canada Community Program similar to the FireWise program in the United States and the Partners in Protection Fire Smart Canada proposal.

ENDORSED BY THE ASSOCIATION OF KOOTENAY & BOUNDARY LOCAL GOVERNMENTS

*UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: **Endorse with Proposed Amendment***

*THEREFORE BE IT RESOLVED that the Union of BC Municipalities **request that the Province** initiate a Fire Smart Canada Community Program similar to the FireWise program in the United States and the Partners in Protection Fire Smart Canada proposal.*

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee advises that the UBCM membership has not previously considered a resolution requesting the establishment of a Fire Smart Canada Community Program, but members have more broadly supported programs aimed at reducing fire risk within interface areas.

The FireWise program in the United States is similar to the Fire Smart program that the Ministry of Forests and Range has in place which provides information to local communities and individuals as to what actions they can take to reduce the threat of wildfires.

An amendment is proposed to clarify that the Province would be requested to initiate such a program.

The problem with any Voluntary Public Information program is getting by-in by communities and citizens if there is no funding or incentives to participate in the program. Public education has proven to be a successful tool in public safety and prevention of damage.

B61 RESTORATION OF EMERGENCY MANAGEMENT TRAINING FUNDING

Hudson's Hope

WHEREAS the provincial government cut core funding for emergency management, emergency social service and first responder training for the 2009/2010 fiscal year and transferred some of it to year-by-year special access gaming grants, administered by the BC Association of Emergency Managers and the Emergency Social Services Association, that have been denied for the 2010/2011 fiscal year;

AND WHEREAS this financial assistance was relied upon by many small and rural communities and their volunteer organizations to provide critical services throughout vast areas of the province;

AND WHEREAS adequate training is imperative for an effective local emergency program which provides for the safety and well being of the citizens of BC, along with being legislated by Section 6 of the *Emergency Program Act*;

THEREFORE BE IT RESOLVED that UBCM lobby the provincial government to restore core funding for emergency management, emergency social services, and first responder training to at least the 2008/2009 levels and to continue working with the BC Association of Emergency Managers, the Emergency Social Services Association and other stakeholders to improve emergency program training for every community in BC;

AND BE IT FURTHER RESOLVED that should the Province of British Columbia mandate a compulsory occupational health and safety policy for emergency program volunteers that adequate funding for the necessary training of volunteers be provided.

ENDORSED BY THE NORTH CENTRAL LOCAL GOVERNMENT ASSOCIATION

UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: *Endorse with Proposed Amendment*

THEREFORE BE IT RESOLVED that UBCM lobby the provincial government to restore core funding for emergency management, emergency social services, and first responder training to at least the 2008/2009 level and to continue working with the BC Association of Emergency Managers, the Emergency Social Services Association and other stakeholders to improve emergency program training for every community in BC.

AND BE IT FURTHER RESOLVED that should the Province of British Columbia mandate a compulsory occupational health and safety policy for emergency program volunteers that adequate funding for the necessary training of volunteers be provided.

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee advises that the UBCM membership has not previously considered a resolution requesting the reinstatement of core funding for emergency management training.

The Committee proposes an amendment to omit the second enactment clause of the resolution, as it imposes a mandatory compulsory health and occupational safety program for all emergency program volunteers. A mandatory program of this nature would impose additional costs on both the Province and local governments.

See also resolutions C4 and C5.

At the 2010 FCABC annual general meeting a similar resolution from Agassiz was passed

B68 COMMUNITY WILDFIRE PROTECTION PLANNING

Strathcona RD

WHEREAS the majority of funds available under the Strategic Wildfire Prevention Program have been used for mitigation work related to the pine beetle infestation in the BC interior;

AND WHEREAS there are insufficient funds remaining to allow coastal communities to assess, prioritize and abate wildland interface hazards in a similar fashion:

THEREFORE BE IT RESOLVED that the UBCM request continued funding of the Strategic Wildfire Prevention Program by the Province of BC for British Columbia's coastal communities.

NOT PRESENTED TO THE ASSOCIATION OF VANCOUVER ISLAND & COASTAL COMMUNITIES

UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: *Endorse with Proposed Amendment*

THEREFORE BE IT RESOLVED that the UBCM request the Province to continue to provide funding of the Strategic Wildfire Prevention Program for British Columbia's coastal communities.

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee advises that the UBCM membership has not previously considered a resolution calling on the Province to continue to provide funding for the Strategic Wildfire Prevention Program.

The Strategic Wildfire Prevention Program has been very successful in assisting local governments in dealing with local wildfire issues and the Committee recognizes that, as referenced by the sponsor, mitigation work related to the pine beetle infestation was a priority early on in the program. However, the demand for assistance under the program has been greater than the funding available and there are still a number of local governments that would benefit from a continuation of the program.

An amendment is proposed to ensure that all communities would be able to apply for assistance under the Strategic Wildfire Prevention Program, should the Province continue to provide funding for the program.

The proposed amendment is worded so that funding be extended only to "coastal communities" when it has been stated that "the demand for assistance....is greater than the funding available" indicates continued funding for all local communities

B69 TRAVEL AUTHORIZATION PERMIT EXEMPTIONS FOR EMERGENCY RESPONSE VEHICLES

Central Kootenay RD

WHEREAS the Ministry of Transportation and Infrastructure, Commercial Vehicle Safety and Enforcement Branch has implemented a travel authorization permitting process, as outlined in the Compliance Circular dated June 15, 2009, requiring fire apparatus - operated by or on behalf of a municipality or other authority responsible for public fire control operations - that exceeds legal axle weights as listed in the BC *Commercial Transport Act* and Commercial Transport Regulation to obtain a conditional permit that may limit, prohibit and make direction respecting use on provincial roadway routes:

AND WHEREAS emergency response personnel, in the interest of public safety, just respond to incidents by the most accessible, expedient and direct route possible thereby deeming the travel authorization permitting process impractical and detrimental to emergency response operations:

THEREFORE BE IT RESOLVED that the Province of British Columbia, Ministry of Transportation and Infrastructure be requested to reconsider its position and exempt public and not for profit emergency response vehicles from the requirement for travel authorization permits on provincial roadways.

ENDORSED BY THE ASSOCIATION OF KOOTENAY & BOUNDARY LOCAL GOVERNMENTS
UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: *Endorse*

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee advises that the UBCM membership has not previously considered a resolution requesting an exemption for emergency response vehicles from the requirement for travel authorization permits on provincial roadways. The Committee notes that this resolution was originally submitted as 2009-LR12. Since the resolution did not meet the criteria for emergency debate, it was referred automatically to the 2010 resolutions cycle.

Both Fire Chief Neil Moroz and Safetek Emergency Vehicle's John Witt have represented BC fire departments on a working group to have Overweight Permits for fire apparatus simplified. A letter is to be written to the Transportation & Highways Minister requesting that Overweight Permits be issued to include the whole Regional District that the apparatus is located in, to enable Mutual Aid responses.

B109 MARIJUANA GROW-OPS

Cariboo RD

WHEREAS illegal marijuana grow operations are an ongoing problem in British Columbia and increasingly in rural areas posing substantial public safety and social risks to neighbouring properties, communities, and society at large;
AND WHEREAS regional districts have been requested to assist the RCMP in any way possible to combat the effects of grow operations and other illegal drug manufacturing properties:
THEREFORE BE IT RESOLVED that the Union of British Columbia Municipalities work with the provincial government, the RCMP and regional districts to develop the necessary strategies and tools that will enable regional districts to assist in the elimination of illegal marijuana grow-ops and other drug manufacturing operations in rural areas and to ensure that environmental and safety concerns left in the aftermath of such operations are addressed.

NOT PRESENTED TO THE NORTH CENTRAL LOCAL GOVERNMENT ASSOCIATION
UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: *Endorse*

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee advises that the members have not previously considered a resolution requesting that the province work with regional districts to assist in the elimination of illegal marijuana grow-ops and other drug manufacturing operations in rural areas and to ensure that environmental and safety concerns left in the aftermath of such operations are addressed. However, the UBCM has previously endorsed a resolution requesting that a provincial strategy be developed to address the problems created by marijuana grow-ops and other illegal drug activities.

The award winning Public Safety Initiative, developed by Surrey Fire Chief Len Garis on behalf of the FCABC, has a non-criminal fire inspection basis to eliminate the safety hazards of grow operations in neighbourhoods, but it is not mandatory in Regional Districts to do fire inspections.

B116 6-STOREY WOOD FRAME RESIDENTIAL BUILDINGS

Maple Ridge

WHEREAS the British Columbia Building Code was recently amended to permit the construction of six storey wood frame residential buildings from the previous maximum of four storeys;
AND WHEREAS the addition of two storeys of wood frame construction will require new design elements and construction techniques that address issues such as water ingress, seismic events and firefighting capabilities and the British Columbia Building Code does not require any type of additional certification for professionals, trades or contractors involved in the design and construction of six storey wood frame buildings:
THEREFORE BE IT RESOLVED that UBCM urge the provincial government to establish additional qualifications for professionals, trades and building contractors involved in the construction of six storey wood frame residential buildings.

ENDORSED BY THE LOWER MAINLAND LOCAL GOVERNMENT ASSOCIATION
UBCM RESOLUTIONS COMMITTEE RECOMMENDATION: *Endorse*

UBCM RESOLUTIONS COMMITTEE COMMENTS:

The Resolutions Committee advises that the UBCM membership has not previously considered a resolution calling on the Province to establish additional qualifications for professionals, trades and building contractors involved in the construction of six storey wood frame residential buildings.

The Committee notes that this resolution was originally submitted as 2009-LR10 and, since it did not meet the criteria for emergency debate, was referred automatically to the 2010 resolutions cycle.

The Fire Services Liaison Group when consulted on the changes to the Building Code for 6 storey wood frame construction asked for six key items to be included. The final changes came out with only 3 of these being included. Staff in the policy branch of Ministry of Housing had committed to keep the fire service aware of any further changes to the BC Building or BC Fire Codes.

Part II of Section C contains those resolutions that are referred to other resolutions within the resolutions book: C1 - C37

C4 FUNDING FOR EMERGENCY SOCIAL SERVICE TRAINING

Elkford

WHEREAS the Province of British Columbia has eliminated the funding provided to the Provincial Emergency Program for emergency social services training through the Justice Institute of BC for 2010/2011;
AND WHEREAS trained emergency social service responders are a critical component of the emergency response program:

THEREFORE BE IT RESOLVED that the Union of BC Municipalities request that the Province of British Columbia reinstate the funding to train emergency social service volunteers for 2010/2011.

ENDORSED BY THE ASSOCIATION OF KOOTENAY & BOUNDARY LOCAL GOVERNMENTS

UBCM RESOLUTIONS COMMITTEE COMMENTS:

Refer to resolution B61.

C5 EMERGENCY MANAGEMENT TRAINING

Sunshine Coast RD

WHEREAS the BC Association of Emergency Managers was unable to secure grant funding for emergency management training for the 2010/2011 fiscal year despite the withdrawal of sponsored training from the Provincial Emergency Program budget in March 2009;

AND WHEREAS it is imperative that all local governments have access to emergency management training in order to respond to emergency situations and safeguard the lives and property of the people of British Columbia:

THEREFORE BE IT RESOLVED that the UBCM urge the Solicitor General to reinstate core funding for emergency management training.

ENDORSED BY THE ASSOCIATION OF VANCOUVER ISLAND & COASTAL COMMUNITIES

UBCM RESOLUTIONS COMMITTEE COMMENTS:

Refer to resolution B61.

C6 RELEASE OF LICENSED MEDICAL MARIJUANA SITES INFORMATION

Sooke

WHEREAS Health Canada licences medical marijuana sites in communities and has no provision to notify local authorities to provide information on these sites;

AND WHEREAS a local government recently experienced an incident at a licensed medical marijuana site that protective services would not have attended if they had known it was a registered site;

AND WHEREAS, due to the safety risks imposed on both occupants and local authorities and the difficulty in monitoring fire and safety standards on these sites due to lack of information, local authorities should receive regular information as to registered medical marijuana sites:

THEREFORE BE IT RESOLVED that the Union of BC Municipalities urge the federal government to:

- a. require those persons applying for a medical marijuana site be required to comply with local building code and inspection requirements prior to Health Canada issuing the licence; and
- b. release the information as to registered medical marijuana sites to local authorities.

ENDORSED BY THE ASSOCIATION OF VANCOUVER ISLAND & COASTAL COMMUNITIES

UBCM RESOLUTIONS COMMITTEE COMMENTS:

Refer to resolution A4.

C7 MARIJUANA LICENSES

Merritt

WHEREAS the federal government issues licenses for the conduct of legal marijuana grow operations for medical use and such grow operations are frequently conducted in an environment that constitutes a danger to health and safety within the community:

THEREFORE BE IT RESOLVED that the Province of British Columbia lobby the federal government for changes to the legislation permitting legal marijuana grow operations which would require mandatory building inspections by government building officials on an annual basis of any such licensed properties (or risk forfeiture of the license).

ENDORSED BY THE SOUTHERN INTERIOR LOCAL GOVERNMENT ASSOCIATION

UBCM RESOLUTIONS COMMITTEE COMMENTS:

Refer to resolution A4.

C28 LOTTERY / GAMING FUNDS FOR NON-PROFITS

Grand Forks

WHEREAS the Province of British Columbia has removed gaming funding from many local nonprofit organizations; AND WHEREAS the BC Gaming Commission continues to draw millions of dollars from local communities through "Scratch & Win", "6-49", "Keno", "Pull-tabs" and "Black Jack" (21), as well as through internet gaming:

THEREFORE BE IT RESOLVED that the Union of BC Municipalities petition the Province of British Columbia to return gaming revenues to communities through grants to local sports, cultural, health and social organizations.

ENDORSED BY THE ASSOCIATION OF KOOTENAY & BOUNDARY LOCAL GOVERNMENTS

UBCM RESOLUTIONS COMMITTEE COMMENTS:

Refer to resolution B116.

C30 REINSTATEMENT OF GAMING GRANT FUNDING TO NON-PROFIT GROUPS

Delta

WHEREAS the Province of British Columbia has historically funded non-profit groups through the proceeds obtained through gaming and a recent Cabinet decision has been made to eliminate this funding for adult groups;

AND WHEREAS non-profit groups across British Columbia contribute significantly to environmental, sporting, arts, cultural and community initiatives, and these contributions will be greatly diminished due to the removal of gaming grant funding:

THEREFORE BE IT RESOLVED that the Province of British Columbia be requested to reinstate gaming grant funding to adult non-profit groups.

NOT PRESENTED TO THE LOWER MAINLAND LOCAL GOVERNMENT ASSOCIATION

UBCM RESOLUTIONS COMMITTEE COMMENTS:

Refer to resolution B116.



MEMORANDUM

DATE: September 15, 2010

TO: Tom R. Anderson, General Manager, Planning and Development Department

FROM: Brian Duncan, Chief Building Inspector

SUBJECT: BUILDING REPORT FOR THE MONTH OF AUGUST, 2010

There were 37 Building Permits and 1 Demolition Permit(s) issued during the month of August, 2010 with a total value of \$ 3,390,835

Electoral Area	Commercial	Institutional	Industrial	New SFD	Residential	Agricultural	Permits this Month	Permits this Year	Value this Month	Value this Year
"A"	0	100,000	45,000	980,540	10,000	0	8	70	1,135,540	7,856,205
"B"	0	3,500	0	546,980	237,510	0	9	104	787,990	10,060,545
"C"	0	0	0	0	36,240	0	3	63	36,240	7,752,539
"D"	0	0	25,000	154,200	142,400	0	5	34	321,600	5,130,080
"E"	400,000	30,720	0	0	500	0	4	38	431,220	4,398,604
"F"	0	0	0	84,980	86,400	0	2	18	171,380	1,031,366
"G"	0	0	0	384,165	92,060	0	5	31	476,225	3,527,630
"H"	0	0	0	0	30,640	0	2	17	30,640	1,115,882
"I"	0	0	0	0	0	0	0	15	0	1,450,783
Total	\$ 400,000	\$ 134,220	\$ 70,000	\$ 2,150,865	\$ 635,750	\$ -	38	390	\$ 3,390,835	\$ 42,323,634

B. Duncan, RBO
Chief Building Inspector
BD/db

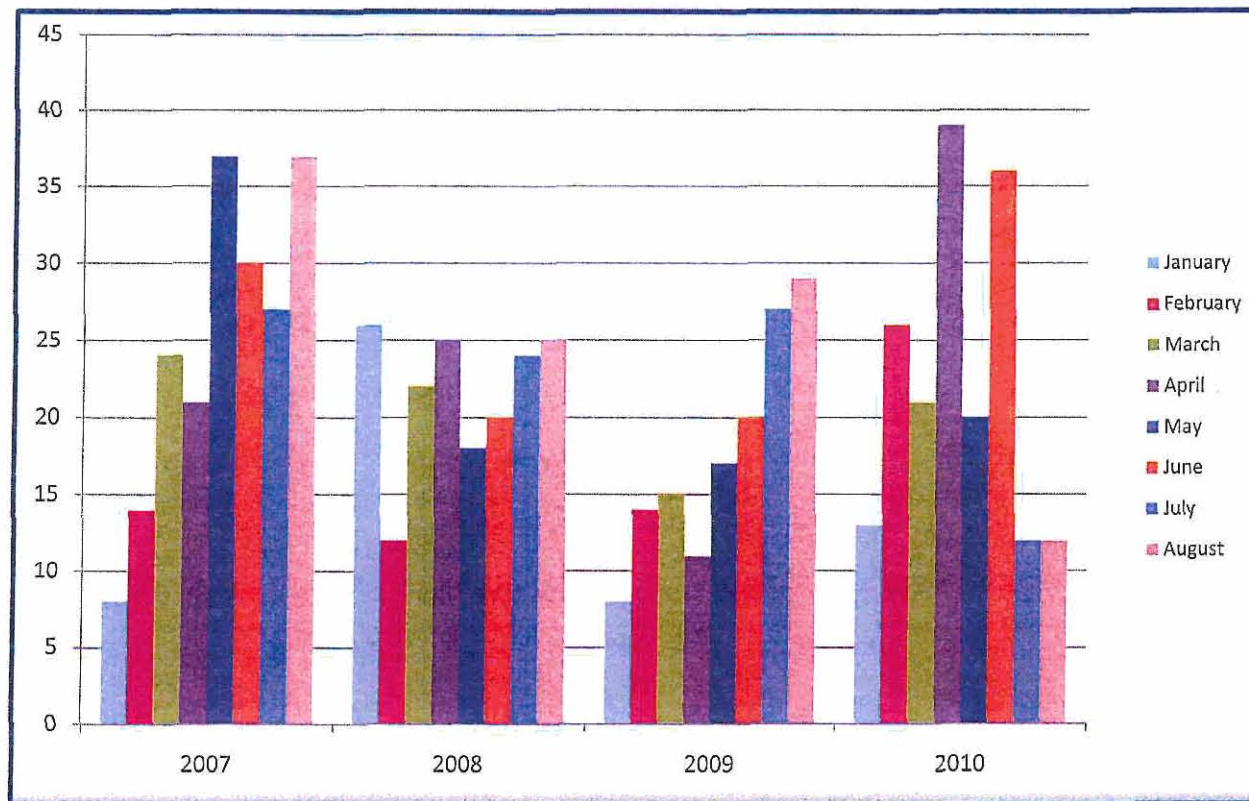
NOTE: For a comparison of New Housing Starts from 2007 to 2010, see page 2
For a comparison of Total Number of Building Permits from 2007 to 2010, see page 3

INSQ



Total of New Housing Starts

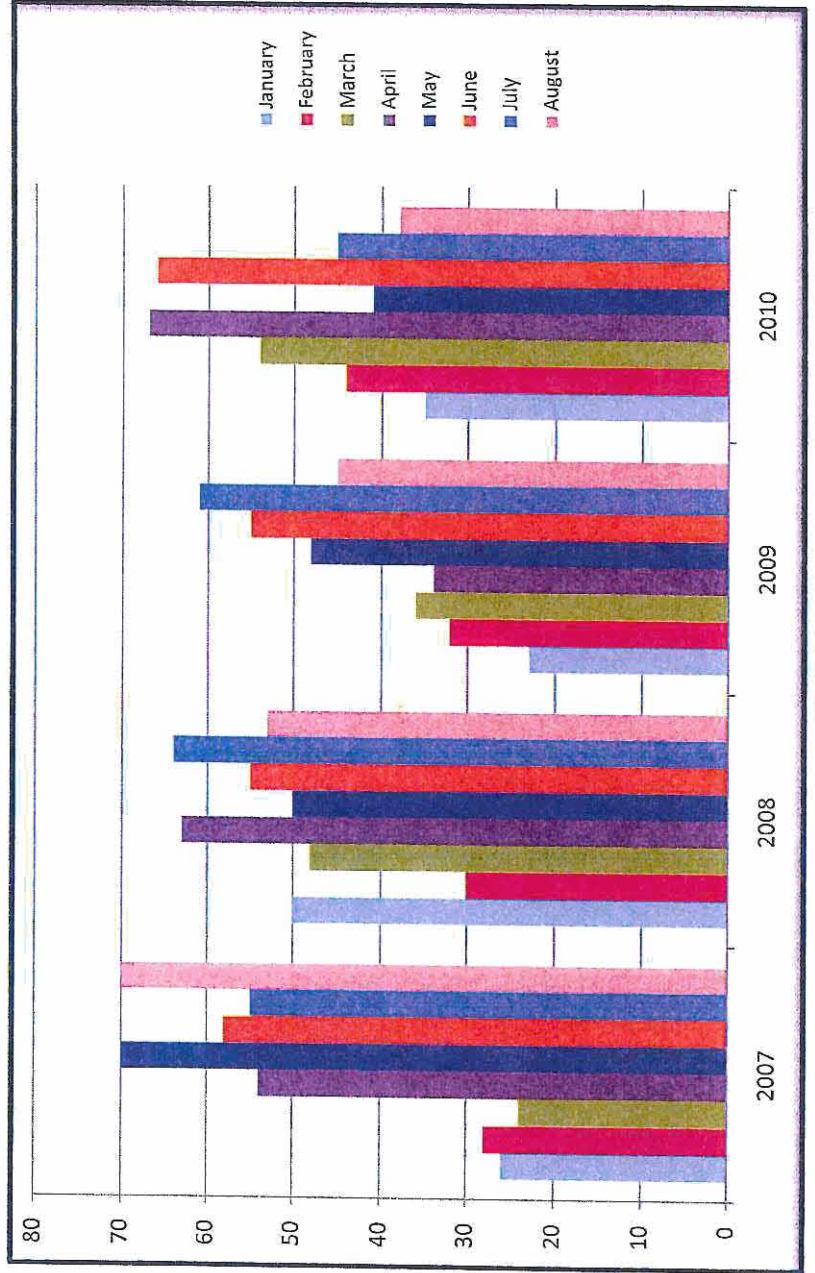
	2007	2008	2009	2010
January	8	26	8	13
February	14	12	14	26
March	24	22	15	21
April	21	25	11	39
May	37	18	17	20
June	30	20	20	36
July	27	24	27	12
August	37	25	29	12
YTD Totals	198	172	141	179





Total Building Permits Issued

	2007	2008	2009	2010
January	26	50	23	35
February	28	30	32	44
March	24	48	36	54
April	54	63	34	67
May	70	50	48	41
June	58	55	55	66
July	55	64	61	45
August	70	53	45	38
YTD Totals	385	413	334	390





CVRD

COWICHAN VALLEY REGIONAL DISTRICT

SUBMISSION FOR A GRANT-IN-AID (ELECTORAL AREAS)

Submitted by Director K. Cossey Area B

Grantee:

Grant Amount \$ 2,000.00

NAME: O.U.R. Ecovillage

ADDRESS: P.O. Box 530

Shawnigan Lake BC V0R 2W0

Contact Phone No: Brandy Gallagher (250) 743-3067

PURPOSE OF GRANT: Assist with the Cowichan Wine
+ Culinary Festival

REQUESTED BY:

Director Requesting Grant

ACCOUNT NO.	AMOUNT	GST CODE
<u>01-2-1950-0340-112</u>	<u>2,000.00</u>	<u>10.0</u>

FOR FINANCE USE ONLY

BUDGET APPROVAL [Signature]

VENDOR NO. _____

Disposition of Cheque:

Mail to above address: _____

Return to _____

Attach to letter from _____

Other _____

Approval at Regional Board Meeting of _____

Finance Authorization _____

Tammy Knowles

From: Sharon Moss
Sent: Monday, September 13, 2010 8:11 AM
To: Tammy Knowles
Subject: FW: Cowichan Wine and Culinary Festival.

Tammy,
Please prepare the necessary paperwork for the following grant-in-aid from Ken Cossey.
Thanks,
S

-----Original Message-----

From: Ken Cossey [mailto:kcossey@seaside.net]
Sent: Sunday, September 12, 2010 4:02 PM
To: Brandy Gallagher
Cc: Sharon Moss; elke@cobworks.com; info; Patrick and Marisa Jackson
Subject: Re: Cowichan Wine and Culinary Festival.

Sharon,

Please prepare a grant-in-aid form Electoral Are B (Shawnigan Lake) for \$2,000.00.

Thanks

Ken

----- Original Message -----

From: "Brandy Gallagher" <brandy@ourecovillage.org>
To: <kcossey@uniserve.com>
Cc: "Patrick and Marisa Jackson" <jacksonpatrick0@gmail.com>; "info" <info@ourecovillage.org>; <elke@cobworks.com>
Sent: Wednesday, September 08, 2010 10:43 AM
Subject: RE: Cowichan Wine and Culinary Festival.

> Hi Ken...this is really great news!! Thanks so much and now what about
> you
> both coming for dinner at 6:00pm - do you want to come and speak just
> before
> or after dinner? We then have the 7:00pm Guest Speaker - Carolyn Herriott
> who is speaking on the "Zero Mile Diet" in OUR Zero Mile Meal Bistro
> (outdoor) - this will be great fun!!

>
> In community,
> Brandy

>

> -----Original Message-----

> **From:** kcossey@uniserve.com [mailto:kcossey@uniserve.com]
> **Sent:** September 8, 2010 10:16 AM
> **To:** Brandy Gallagher
> **Subject:** RE: Cowichan Wine and Culinary Festival.

>

>

>

> Brandy,

>

> I can get provide the \$2,000.00 requested.
>
>
> Cheers
>
> Ken
>
> Quoting Brandy Gallagher <brandy@ourecovillage.org>:
>
>> Hi Lori..it would be great if you could make the festival dinner evening.
>> Also, I just got it in my head that maybe you could be a speaker?! We
> have
>> a slot left open for 3:00 on the Saturday, September 18th and I wondered
>> about you perhaps talking for 45 minutes about the Cowichan Bay "Slow
> Food"
>> Designation? It is pretty low key but it would be a great way to have
> word
>> out there for the massive amount of people who come through this festival
> at
>> any given time. Even an info table onsite during the festival would be a
>> great representation (though I do not know if such a thing exists for
>> your
>> Slow Food promotion?).
>>
>>
>>
>> I just want to re-send the below part of my last email where I am asking
> if
>> you might consider contributing some of your Area Grant in Aid fund to
>> assist with this South Cowichan event (that again brings through more
>> than
>> 1500 people on OUR site alone - more than other funded projects such as
>> Special Woodstock etc). This is an annual event as is hugely growing in
> its
>> reach in relation to helping folks understand food security issues,
>> Permaculture Design solutions for sustainable food production, and a
>> holistic means of living lightly in our local community. Hopefully well
>> worth supporting. I ask this all the more of the local area Directors
> from
>> the South End because OUR entire Grant-In-Aid (\$20,000) did not happen
> this
>> year when all funds were subscribed to the SportsPlex..meaning we need to
>> ask through other venues of the CVRD for 2010.
>>
>>
>>
>> Thanks so much for the great conversation this evening Ken and for the
>> assurance of an Area B contribution of up to \$2000 towards this important
>> South Cowichan ongoing event. We are asking that each of the other Area
>> Directors consider matching (or more) this contribution in order to
>> assist
>> in covering the \$12,000 value of activities which are provided free of
>> charge to the community (not including the meal and speaker which is an
>> affordable evening of \$40/pp). We are hoping to continue this project
> into
>> the indefinite future and ask that you help to make this a reality that
> will

>> bring 1000's of people per day into the South Cowichan and towards a
 >> brighter future in the Cowichan food security reality.
 >>
 >>
 >>
 >> Please let me know your thoughts..
 >>
 >>
 >>
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 >>
 >>
 >> In community,
 >>
 >>
 >>
 >> Brandy Gallagher BSW, MA
 >>
 >> Sustainable Community Solutions Consulting - SC2
 >>
 >> Exec. Director - O.U.R. Community Association
 >>
 >> O.U.R. ECOVILLAGE
 >>
 >> <<http://www.ourecovillage.org>> www.ourecovillage.org
 >>
 >> http://twitter.com/OUR_Ecovillage
 >>
 >>
 >>
 >> *Stay informed and get OUR Newsletter by signing up to
 >> <<http://ourecovillage.org/>> "join OUR mailing list" - right side
 >> of
 >> home page!
 >>
 >>
 >>
 >>
 >> "Come to the edge."
 >>
 >> "We can't. We're afraid."
 >>
 >> "Come to the edge."
 >>
 >> "We can't. We will fall!"
 >>
 >> "Come to the edge."
 >>
 >> And they came.
 >>
 >> And he pushed them.
 >>
 >> And they flew.
 >>
 >> ~Guillaume Apollinaire
 >>
 >>

>>
>> _____
>>
>> From: lori iannidinardo [mailto:lianni@shaw.ca]
>> Sent: September 7, 2010 12:14 PM
>> To: Brandy@ourecoovillage.org
>> Subject: FW: Cowichan Wine and Culinary Festival.
>>
>>
>>
>>
>>
>>
>> -----Original Message-----
>> From: lori iannidinardo [mailto:lianni@shaw.ca]
>> Sent: Tuesday, September 07, 2010 11:45 AM
>> To: 'Brandy Gallagher'
>> Subject: RE: Cowichan Wine and Culinary Festival.
>>
>>
>>
>> Hi Brandy,
>>
>> Thanks for the invite I hope to attend. Lori briger@shaw.ca is what I
>> have
>> for Brian
>>
>>
>>
>> -----Original Message-----
>> From: Brandy Gallagher [mailto:ourbrandy@shaw.ca]
>> Sent: Tuesday, September 07, 2010 1:39 AM
>> To: Ken Cossey (Area B) Cossey (Area B); Lori Iannidinardo -; Gerry Giles
> -
>> Area C
>> Cc: Lee Gross
>> Subject: Cowichan Wine and Culinary Festival.
>>
>>
>>
>> Hi to Ken, Lori, Gerry and Brian (can someone please send me Brian's
> current
>> email address as the one I had just bounced?)
>>
>>
>>
>> Please accept this letter of invitation to participate in the Cowichan
> Wine
>> and Culinary Festival for the South End of Cowichan. We are very pleased
> to
>> again have the local community invite OUR ECOVILLAGE to participate in
> this
>> community festival - though not as a local winery obviously but as a Food
>> Security Community Education organization.
>>
> <http://ourecoovillage.org/our-activities/events-calendar/cowichan-wine-culina>

>> ry-festival/
>>
>>
>>
>> This event is full of workshops, local music presentations, speakers,
>> area
>> food crafters who have an educational booth onsite for free, and with a
> big
>> big drum role: OUR Saturday evening presentation of a local foods feast
> in
>> the Zero Mile Meal Bistro with special guest speaker extraordinaire
> Caroline
>> Heriott http://www.earthfuture.com/gardenpath/Zero_Mile_Diet.htm
>>
>> Introducing her new book "The Zero Mile Diet" (complete with book
> signing).
>>
>>
>>
>>
>> This whole weekend is a major kick-off for the 'Protect OUR ECOVILLAGE
>> Forever' Campaign where participants can include themselves in options
>> to:
>> 1) purchase member ownership in OUR ECOVILLAGE community project, 2)
> donate
>> to The Land Conservancy of BC project to Covenant the whole community
>> project (and receive a 100% charitable tax receipt), and/or 3) become a
>> contributor to the "Ethical Trust for Community Investment" a new
>> Canadian
>> model for community investing in community through local commonshare
>> projects and receiving a significant investment bonus through Revenue
> Canada
>> Taxation rebate program.
>>
>>
>>
>> This is such an important time for keeping this project alive in
> perpetuity
>> but also for providing a toolkit for all other community groups who wish
> to
>> create projects that are: by community, for community, through community.
>> Trail-blazing continues.
>>
>>
>>
>> We are working towards the best ever Cowichan Wine and Culinary Festival
>> here at OUR ECOVILLAGE (only one of 15 venues in the Cowichan). With
>> this
>> we are very much in need of a long term lease of an event tent system
> which
>> is currently onsite for sale at OUR ECOVILLAGE. This tent system could
> also
>> be perhaps used by a number of other community groups. The festival
>> needs
>> to obtain some type of 'challenging weather' insurance in way of a tent
>> system and there are so many other expenses with this festival which are
>> indeed not financially sustainable - therefore we need to do some

> community
 >> building and ask for support as quickly as possible.
 >>
 >>
 >>
 >> Thanks so much for the great conversation this evening Ken and for the
 >> assurance of an Area B contribution of up to \$2000 towards this important
 >> South Cowichan ongoing event. We are asking that each of the other Area
 >> Directors consider matching (or more) this contribution in order to
 >> assist
 >> in covering the \$12,000 value of activities which are provided free of
 >> charge to the community (not including the meal and speaker which is an
 >> affordable evening of \$40/pp). We are hoping to continue this project
 > into
 >> the indefinite future and ask that you help to make this a reality that
 > will
 >> bring 1000's of people per day into the South Cowichan and towards a
 >> brighter future in the Cowichan food security reality.
 >>
 >>
 >>
 >> Please provide any feedback as soon as possible.
 >>
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 >>
 >> In community,
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 >>
 >> Brandy Gallagher BSW, MA
 >>
 >> Sustainable Community Solutions Consulting - SC2
 >>
 >> Exec. Director - O.U.R. Community Association
 >>
 >> O.U.R. ECOVILLAGE
 >>
 >> <<http://www.ourecovillage.org>> www.ourecovillage.org
 >>
 >> http://twitter.com/OUR_Ecovillage
 >>
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>>
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>> "Come to the edge."
>>
>> And they came.
>>
>> And he pushed them.
>>
>> And they flew.
>>
>> ~Guillaume Apollinaire
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C2

RE



CVRD

SEP 13 2000

COWICHAN VALLEY REGIONAL DISTRICT

SUBMISSION FOR A GRANT-IN-AID (ELECTORAL AREAS)

Financial Services Department

Submitted by Director L. DUNCAN Area Cowichan Station Station Glenora

Grantee:	NAME: <u>Cowichan Green Community</u>	Grant Amount \$ <u>250</u>
ADDRESS:	<u>181 Station Street</u>	
	<u>Duncan B.C. V9L 1M8</u>	
Contact Phone No:	<u>250-748-8506</u>	
PURPOSE OF GRANT:	<u>Support - Cowichan Community LATS Festival</u>	
REQUESTED BY: <u>Loren Duncan</u> Director Requesting Grant		

ACCOUNT NO.	AMOUNT	GST CODE
<u>01-2-1950-0291-116</u>	<u>250.00</u>	<u>10.0</u>

FOR FINANCE USE ONLY

BUDGET APPROVAL [Signature]

VENDOR NO. _____

Disposition of Cheque:

Mail to above address: _____

Return to _____

Attach to letter from _____

Other _____

Approval at Regional Board Meeting of _____

Finance Authorization _____

Loren Duncan

From: Audra Stacey [audra@cowichangreencommunity.org]
Sent: Thursday, August 26, 2010 9:11 AM
To: meldorey@shaw.ca; kcossey@seaside.net; loren_duncan@telus.net; ggiles12@shaw.ca;
briger@shaw.ca; haywooddr@telus.net; lianni@shaw.ca; k.k@shaw.ca; marym@island.net;
morrison.director@shaw.ca
Subject: Cowichan Green Community's third annual harvest & sustainability festival

Hello all,

September 25th the Cowichan Green Community will be hosting our third annual fall harvest and sustainability festival. This year the festival is moving to Charles Hoey Park in the heart of downtown Duncan and we are celebrating the move with a new name - the Cowichan Community EATS Festival (Equity...Abundance...Taste...Sustainability).

The EATS festival is a fundraiser for the Cowichan Green Community to support CGC's many food security initiatives. It is also a food drive for local emergency food providers. The Cowichan Green Community staff, members, and volunteers have worked hard this year on many projects and programs: Warmland House garden and greenhouse, Quamichan Middle School Farm to School launch, the Buy Local! Buy Fresh! Map, Wild Food Walk series, car share, Seeds for Change speaker series, Earth Day, Solar Days, Preserving the Harvest workshops, and much more.

In past years your contributions have helped immensely in offsetting the various costs of putting together this festival. We are again asking for your support. This year the festival is incorporating a local pancake breakfast, as well as mini-market of local vendors, musical entertainment, pie contests, and we are unveiling our incredible new Food Security Mural.

We sincerely appreciate any monetary donation you can contribute. If you need any more information please feel free to contact me.

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