



## Notice of Meeting and Meeting Agenda Planning and Protective Services Committee

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Wednesday, October 16, 2024

9:30 AM

6th Floor Boardroom  
625 Fisgard St.  
Victoria, BC V8W 1R7

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Z. de Vries (Chair), K. Williams (Vice Chair), B. Desjardins, M. Little, C. McNeil-Smith, D. Thompson,  
A. Wickheim, R. Windsor, C. Plant (Board Chair, ex officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

### 1. Territorial Acknowledgement

### 2. Approval of Agenda

### 3. Adoption of Minutes

#### 3.1. [24-992](#) Minutes of the July 17, 2024 Planning and Protective Services Committee Meeting

**Recommendation:** That the minutes of the Planning and Protective Services Committee meeting of July 17, 2024 be adopted as circulated.

**Attachments:** [Minutes - July 17, 2024](#)

### 4. Chair's Remarks

### 5. Presentations/Delegations

*The public are welcome to attend CRD Board meetings in-person.*

*Delegations will have the option to participate electronically. Please complete the online application at [www.crd.bc.ca/address](http://www.crd.bc.ca/address) no later than 4:30 pm two days before the meeting and staff will respond with details.*

*Alternatively, you may email your comments on an agenda item to the CRD Board at [crdboard@crd.bc.ca](mailto:crdboard@crd.bc.ca).*

### 6. Committee Business

**6.1.**      [24-1015](#)      Shirley-Jordan River Official Community Plan Amendment and  
Rezoning Application RZ000284

**Recommendation:** The Planning and Protective Services Committee recommends to the Capital Regional District Board:  
That proposed Bylaw No. 4598, "Shirley-Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024" and Bylaw No. 4599, "Juan de Fuca Land Use Bylaw, 1992, Amendment No. 162, 2024" be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and be accepted in accordance with the requirements of section 445 of the Local Government Act.

**Attachments:**      [Staff Report: Shirley-Jordan River OCP Amend't & Rezoning App RZ000284](#)  
[Appendix A: Staff Report to the JdF LUC \(October 15, 2024\)](#)

**6.2.**      [24-792](#)      Previous Minutes of Other CRD Committees and Commissions for  
Information

**Recommendation:** There is no recommendation. The following minutes are for information only:  
a) Development and Planning Advisory Committee minutes of June 24, 2024  
b) Local Government Emergency Program Advisory Commission minutes of June 6, 2024  
c) Local Government Emergency Program Advisory Commission minutes of August 1, 2024

**Attachments:**      [Minutes: Development & Planning Advisory Cttee - Jun 24, 2024](#)  
[Minutes: LG Emerg Program Advisory Commiss - Jun 6, 2024](#)  
[Minutes: LG Emerg Program Advisory Commiss - Aug 1, 2024](#)

**7. Notice(s) of Motion**

**7.1.**      [24-1024](#)      Motion with Notice: Peninsula and Area Agricultural Commission  
(Director Windsor)

**Recommendation:** The Planning and Protective Services Committee recommends to the Capital Regional District Board:  
THEREFORE BE IT RESOLVED that the Capital Regional District explores assuming responsibility of the Peninsula and Area Agricultural Commission as a regional committee.

**Attachments:**      [Memo: Notice of Motion](#)

**8. New Business**

**9. Adjournment**

The next meeting will be held in 2025.

To ensure quorum, please advise Tamara Pillipow (tpillipow@crd.bc.ca) if you or your alternate cannot attend.



## Meeting Minutes

### Planning and Protective Services Committee

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Wednesday, July 17, 2024

9:30 AM

6th Floor Boardroom  
625 Fisgard St.  
Victoria, BC V8W 1R7

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#### PRESENT

Directors: Z. de Vries (Chair), K. Williams (Vice Chair), B. Desjardins (EP), M. Little, C. McNeil-Smith, D. Thompson, R. Windsor, C. Plant (Board Chair, ex officio)

Staff: T. Robbins, Chief Administrative Officer; K. Lorette, General Manager, Planning and Protective Services; S. Carby, Senior Manager, Protective Services; C. Vrabel, Manager, Fire Services; N. Brotman, Research Planner, Regional and Strategic Planning; M. Lagoa, Deputy Corporate Officer; T. Pillipow, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: Director A. Wickheim

The meeting was called to order at 9:31 am.

#### 1. Territorial Acknowledgement

Vice Chair Williams provided a Territorial Acknowledgement.

#### 2. Approval of Agenda

**MOVED** by Director Thompson, **SECONDED** by Director Williams,  
That the agenda for the July 17, 2024 Planning and Protective Services  
Committee meeting be approved.  
**CARRIED**

#### 3. Adoption of Minutes

##### 3.1. [24-729](#)

Minutes of the March 20, 2024 Planning and Protective Services  
Committee Meeting

**MOVED** by Director Little, **SECONDED** by Director Williams,  
That the minutes of the Planning and Protective Services Committee meeting of  
March 20, 2024 be adopted as circulated.  
**CARRIED**

#### 4. Chair's Remarks

Chair de Vries noted that the Regional Water Supply Commission meets  
immediately after this meeting.

## 5. Presentations/Delegations

There were no presentations.

### 5.1. Delegations

- 5.1.1. [24-745](#) Delegation - Katie Underwood; Representing Tenant Farmers and the South Island Farmers Institute: Re: Agenda Item 6.3. Bylaw No. 4602: Foodlands Access Service  
K. Underwood spoke to Item 6.3.
- 5.1.2. [24-749](#) Delegation - Shellie MacDonald; Representing Haliburton Community Organic Farm: Re: Agenda Item 6.3. Bylaw No. 4602: Foodlands Access Service  
S. MacDonald spoke to Item 6.3.

## 6. Committee Business

- 6.1. [24-536](#) Bylaw Notice Enforcement and Adjudication System  
K. Lorette spoke to Item 6.1.
- Discussion ensued regarding:
- staff reporting back annually on efficiencies gained
  - notification to participating municipalities
- MOVED by Director Williams, SECONDED by Director Little,  
The Planning and Protective Services Committee recommends to the Capital Regional District Board:**
- 1) That a Bylaw Notice Enforcement and Adjudication System be endorsed;
  - 2) That staff be directed to prepare bylaws, policies and agreements for the implementation of the Bylaw Notice Enforcement and Adjudication System provided for in the Local Government Bylaw Notice Enforcement Act, for the Board's approval; and
  - 3) That staff be directed to work with Court Services Branch, Ministry of Attorney General to request the Lieutenant Governor in Council of the Province of British Columbia enact a Regulation under Section 29 of the Local Government Bylaw Notice Enforcement Act, applying the Act to the Capital Regional District.
- CARRIED**
- 6.2. [24-679](#) Wildfire Resilient Futures Initiative Grant Application  
K. Lorette presented Item 6.2. for information.
- Discussion ensued regarding:
- clarification of the scope of work
  - the direct benefits resulting from collaboration with our partners in the region

**6.3.**      [24-681](#)      Bylaw No. 4602: Foodlands Access Service

K. Lorette spoke to Item 6.3.

Discussion ensued regarding:

- expediting the establishment of this service
- the timeline and potential risks of municipal consent vs. alternative approval process
- future plans for the lease that the City of Victoria holds on a portion of the proposed land

**MOVED by Director Windsor, SECONDED by Director Thompson,  
The Planning and Protective Services Committee recommends to the Capital  
Regional District Board:**

- 1) That Bylaw No. 4602, "Foodlands Access Service Establishing Bylaw No. 1, 2024", be introduced and read a first, second and third time;
- 2) That participating area approval be obtained by regional alternative approval process; and
- 3) That Bylaw No. 4602, be forwarded to the Inspector of Municipalities for approval.

**MOVED by Director Windsor, SECONDED by Director Williams,  
That the main motion be amended to add the following wording as line 4)  
"Subject to consideration of approval by the municipal inspector, the timing of  
the AAP, and staff reporting at the September board meeting on the feasibility  
that the CRD expedite farming in 2025 through this service."  
CARRIED**

The question was called on the main motion as amended:

**The Planning and Protective Services Committee recommends to the Capital  
Regional District Board:**

- 1) That Bylaw No. 4602, "Foodlands Access Service Establishing Bylaw No. 1, 2024", be introduced and read a first, second and third time;
- 2) That participating area approval be obtained by regional alternative approval process; and
- 3) That Bylaw No. 4602, be forwarded to the Inspector of Municipalities for approval.
- 4) Subject to consideration of approval by the municipal inspector, the timing of the AAP, and staff reporting at the September board meeting on the feasibility that the CRD expedite farming in 2025 through this service.

**CARRIED**

**6.4.**      [24-682](#)      Previous Minutes of Other CRD Committees and Commissions for Information

The following minutes were received for information:

- a) Local Government Emergency Program Advisory Commission minutes of August 17, 2023
- b) Local Government Emergency Program Advisory Commission minutes of February 1, 2024
- c) Local Government Emergency Program Advisory Commission minutes of March 15, 2024

**7. Notice(s) of Motion**

There were no notice(s) of motion.

**8. New Business**

There was no new business.

**9. Adjournment**

**MOVED** by Director Thompson, **SECONDED** by Director Little,  
That the July 17, 2024 Planning and Protective Services Committee meeting be  
adjourned at 10:19 am.  
**CARRIED**

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CHAIR

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RECORDER



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## REPORT TO PLANNING AND PROTECTIVE SERVICES COMMITTEE MEETING OF WEDNESDAY, OCTOBER 16, 2024

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**SUBJECT** Shirley-Jordan River Official Community Plan Amendment and Rezoning Application RZ000284

### **ISSUE SUMMARY**

To consider whether the proposed Bylaw No. 4598, "Shirley-Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024", and Bylaw No. 4599, "Juan de Fuca Land Use Bylaw, 1992, Amendment No. 162, 2024" are consistent with the 2018 Regional Growth Strategy (RGS).

### **BACKGROUND**

Section 445 of the *Local Government Act (LGA)* requires that all bylaws adopted by a regional district board after the board has adopted a RGS be consistent with the RGS. Since the proposal includes an amendment to the Shirley-Jordan River Official Community Plan (OCP) and the Juan de Fuca Land Use Bylaw, a determination of consistency with the RGS must be made prior to first reading.

The 3.3 ha subject property (the "Land") is located in the community of Jordan River on the northern side of West Coast Road (12036 West Coast Road). The property is currently designated Pacific Acreage (PA) in the Shirley-Jordan River Official Community Plan, Bylaw No. 4001 (the "OCP") and the application is to change the subdivided property to a CO (Commercial) designation with an amendment to support smaller minimum lot sizes. The Land is zoned C-1A Neighbourhood Commercial under the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040 (the "Zoning Bylaw"). The Land is outside of the flood inundation area in Jordan River identified by BC Hydro.

The applicant's primary objective for this application is to improve the viability and access to rural commercial land within Jordan River. The proposal includes a country market, a micro-brewery with ancillary onsite store, and a picnic area, lounge and special events area that serves the community, supports local tourism, and provides opportunities for local ownership of commercial lands. The community values expressed by the OCP identify goals and objectives for servicing rural areas, supporting local employment opportunities, and promoting opportunities for pedestrian connectivity to reduce motor vehicle trips to address potential impacts to the environmental and enhance local character.

For additional information, please refer to the staff report to the Juan de Fuca Land Use Committee (JdF LUC) of Tuesday October 15, 2024 attached as Appendix A.

### **ALTERNATIVES**

#### *Alternative 1*

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That proposed Bylaw No. 4598, "Shirley-Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024" and Bylaw No. 4599, "Juan de Fuca Land Use Bylaw, 1992, Amendment No. 162, 2024" be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and be accepted in accordance with the requirements of section 445 of the

*Local Government Act.*

*Alternative 2*

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That proposed Bylaw No. 4598, “Shirley-Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024” and Bylaw No. 4599, “Juan de Fuca Land Use Bylaw, 1992, Amendment No. 162, 2024” be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and not be accepted in accordance with the requirements of section 445 of the *Local Government Act*.

*Alternative 3*

That this report be referred back to staff for additional information based on Planning and Protective Services Committee direction.

**IMPLICATIONS**

*Alignment with Board & Corporate Priorities*

Capital Regional District (CRD) Corporate priority 8a is focused on managed growth, keeping approved plans current and monitoring for effectiveness. In the Juan de Fuca Electoral Area, this includes reviewing referrals of proposed OCP amendments and assessing for RGS consistency. This is an important part of ensuring ongoing effectiveness of growth management in the region.

*Climate Implications*

The proposed commercial development will improve access to rural commercial land within Jordan River. The proposal also includes a village gathering place that serves the community, supports local tourism, and provides opportunities for local ownership of commercial lands. The proposed development has the potential for a reduction in car trips for local residents who would otherwise need to drive to more distant locations for shopping and recreation.

*Environmental Implications*

On March 19, 2024 the JdF LUC received a staff report that included an environmental assessment and preliminary groundwater assessment. These studies can be found in Appendix A of this report.

A Qualified Environmental Professional (QEP) confirmed that there are no wetlands or watercourses on the land or within 50m of its boundaries. It was also determined that the property does not occur within or in proximity to a Riparian Assessment Area or a Riparian Development Permit Area.

The initial proposal included a groundwater study; however, comments received from Pacheedaht First Nation (PFN) expressed concern regarding potential impacts to local water availability with particular interest in Bliss Spring. In response, the applicant submitted an additional groundwater study. The supplementary assessment focused on quantity and quality testing from the well to be used by the brewery, which is located at an elevation above Bliss Spring. Anticipating that the brewery will likely have the highest water demand, findings from this assessment confirmed that the immediate aquifer is capable of meeting a maximum potential demand of 350,000 litres per year. Additional information can be found in Appendix B of this report.

### *First Nations Implications*

The subject property is located within the asserted traditional territory of the Pacheedaht and T'Sou-ke First Nations and each Nation was invited to participate in the land use review process to better inform consideration of the proposal.

PFN stated concerns on potential impacts to the delivery of emergency services and the aquifer that the local area relies on. The PFN encouraged the applicant to respond by providing information on the Bliss Spring water resource and address pedestrian accessibility to the site.

T'Sou-ke First Nation is to be informed and involved in any archaeological findings identified during the construction on the property and that an archaeological chance and find procedure should be implemented during the construction.

### *Regional Growth Strategy Implications*

CRD Regional Planning staff have reviewed the proposed OCP amendment and Land Use Bylaw amendment and believe that they are consistent with the 2018 Regional Growth Strategy.

RGS Objective 1.1 – Managing and Balancing Growth, provides a description of regional land use designations including that of the Rural/Rural Residential Policy Area that applies for the property in question. This definition states that: *“Commercial uses are local serving and such uses and other employment opportunities result in minimal impact on the surrounding community and to the environment. Low-impact tourism uses complement rural character.”*

The application aligns with this definition of rural commercial uses as it will be primarily serving the local community while providing employment opportunities. While not intended to become future urban areas requiring extensive services, commercial uses serving the local community by providing employment opportunities in a rural context can be supported if impacts to the local community and environment are minimal.

RGS Objective 1.2 – Protect the Integrity of Rural Communities, seeks to avoid the creation of future urban areas through development that complement rural form, density, and character. The application proposes onsite well and septic systems, which support a rural scale of development rather than an urban scale seen in neighbouring incorporated communities where community level services are available. The proposed rural servicing will require permitting and licensing at the time of development.

RGS Objective 5.1 – Realize the Region's Economic Potential, includes the economic development consideration to: *“[Find] ways to expand and diversify the economy of formerly resource-dependent communities in Sooke and the Juan de Fuca Electoral Area, such as through low-impact recreation and tourism.”* The proposed land use aligns with this objective.

CRD staff are of the opinion that the proposed OCP amendment is consistent with the direction provided by the RGS, and that this application does not alter the Shirley-Jordan River OCP's work towards the overall goals and objectives expressed by the community's long-term collective vision. The amendment does not impact the OCP's alignment with the RGS.

### *Service Implications*

Implications for CRD services are not expected as the land is not located within community water, sewer or fire protection local service areas. Covenant CA5916759 is registered on the title of the property and requires that all buildings and structures be equipped with an automatic sprinkler system that fully meets the requirements of the National Fire Protection Association (NFPA).

### *Social Implications*

Should the proposal proceed, a public hearing pursuant to Part 14, Division 3 of the *LGA* will be required subsequent to the amendment passing second reading by the CRD Board. Property owners within 500m of the subject property will be sent notice of the proposed bylaw amendment and a public hearing will be advertised in the local paper and on the CRD website.

### **CONCLUSION**

The purpose of Bylaw Nos. 4598 and 4599 is to amend the Shirley-Jordan River Official Community Plan, Bylaw No. 4001, by redesignating a 3.3 ha portion of the subject property from Pacific Acreage (PA) to Commercial (CO) with amendments, and amend the Wildwood Terrace Neighbourhood Commercial (C-1A) zone of the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, by permitting additional commercial uses and a smaller average and minimum parcel size to facilitate subdivision. The proposed bylaws are consistent with the RGS.

### **RECOMMENDATION**

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That proposed Bylaw No. 4598, “Shirley-Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024” and Bylaw No. 4599, “Juan de Fuca Land Use Bylaw, 1992, Amendment No. 162, 2024” be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and be accepted in accordance with the requirements of section 445 of the *Local Government Act*.

Submitted by:	Patrick Klassen, RPP, MCIP, Senior Manager, Regional Planning
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

### **ATTACHMENT**

Appendix A: Staff Report to the Juan de Fuca Land Use Committee of Tuesday October 15, 2024: Zoning Bylaw & Official Community Plan Amendment Application for Lot A Section 4 Renfrew District Plan EPP131465; PID: 032-229-046



**REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE  
MEETING OF TUESDAY, OCTOBER 15, 2024**

**SUBJECT**      **Zoning Bylaw & Official Community Plan Amendment Application for Lot A  
Section 4 Renfrew District Plan EPP131465; PID: 032-229-046**

**ISSUE SUMMARY**

The landowner has submitted an application to redesignate a 3.3 ha portion of the subject property from the *Pacific Acreage* to the *Commercial* land use designation and amend the *Commercial* designation policies; and to amend the Wildwood Terrace Neighbourhood Commercial (C-1A) zone to permit additional commercial uses and facilitate subdivision.

**BACKGROUND**

The 3.3 ha subject property (the “Land”) is located in the community of Jordan River on the northern side of West Coast Road. The Land is zoned C-1A under the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040 (the “Zoning Bylaw”) (Appendix A). The property is currently designated *Pacific Acreage* in the Shirley-Jordan River Official Community Plan, Bylaw No. 4001 (the “OCP”) and is subject to the Commercial and Industrial development permit (DP) area. The Land is not located within community water, sewer or fire protection local service areas. Covenant CA5916759 is registered on the title of the property and requires that all buildings and structures be equipped with an automatic sprinkler system that fully meets the requirements of the National Fire Protection Association (NFPA).

The Land was the subject of a zoning bylaw amendment in 2021 to adjust the WT-4/C-1A zone boundary and permit a country market and micro-brewery with ancillary onsite store, picnic area, lounge and special event area. Development permit DP000378 was approved and in October 2022, and is awaiting issuance to address the form and character of a proposed microbrewery.

The landowner (the “applicant”) has submitted an application to amend the C-1A zone for the purpose of permitting a subdivision to create a commercial bare land strata and to include additional neighbourhood commercial uses with changes to the siting and development requirements. The application includes an OCP amendment to remove the 3.3 ha lands from the PA designation, which primarily supports rural residential, agricultural and small-scale neighbourhood commercial uses, and add it to the *Commercial* designation with an amendment to support smaller minimum lot sizes. At its meeting of March 19, 2024, the Juan de Fuca Land Use Committee (the “LUC”) recommended referral of proposed Bylaw No. 4598 & 4599 to the Shirley-Jordan River Advisory Planning Commission (the “APC”); CRD departments; Pacheedaht First Nation; T’Sou-ke First Nation; BC Hydro; BC Parks; District of Sooke; Island Health; the Ministry of Forests – Archaeology Branch; Ministry of Water, Land and Resource Stewardship – Water Protection Section; Ministry of Transportation & Infrastructure; RCMP; and the Sooke School District # 62.

In response to the comments received during the referral process the applicant has modified the setbacks in the amendments proposed for the C1-A zone (Appendix B) to provide space for a public trail offered as a community amenity contribution. The applicant has also updated the concept plan (Appendix C) and provided a subdivision plan from SU000770 (Appendix D), an environmental assessment (Appendix E), and a groundwater assessment to supplement the initial report (Appendix F). The proposal includes a village gathering place that serves the community, supports local tourism, and provides opportunities for local ownership of commercial lands. Staff have prepared Bylaw No. 4598 for the proposed amendments to the OCP (Appendix G) and Bylaw No. 4599 for the proposed amendments to the C1-A zone (Appendix H) in accordance with the applicant’s proposal.

## **ALTERNATIVES**

### *Alternative 1*

The Land Use Committee recommends to the Capital Regional District Board:

1. That the referral of proposed Bylaw No. 4598, “Shirley - Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024”; and proposed Bylaw No. 4599, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 162, 2024”; to the Shirley-Jordan River Advisory Planning Commission; Pacheedaht First Nation; T’Sou-ke First Nation; CRD departments; BC Hydro; BC Parks; District of Sooke; Island Health; Ministry of Forests – Archaeology Branch; Ministry of Water, Land and Resource Stewardship – Water Protection Section; Ministry of Transportation & Infrastructure; RCMP; and Sooke School District # 62 be approved and comments be received;
2. That proposed Bylaw No. 4598 be read a first and second time;
3. That proposed Bylaw No. 4599 be read a first and second time;
4. That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director of the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4598 and Bylaw No. 4599;
5. That prior to the adoption of proposed Bylaw No. 4599, the landowner provides an amenity contribution by registering a statutory right-of-way adjacent to West Coast Road in favour of the Capital Regional District for the purpose of establishing a public trail; and that staff be directed to ensure that all conditions are satisfied towards completion and registration.

### *Alternative 2*

The Land Use Committee recommends to the Capital Regional District Board:

That proposed Bylaw No. 4598, “Shirley - Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024”; and proposed Bylaw No. 4599, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 162, 2024” not proceed.

## **IMPLICATIONS**

### *Legislative Implications*

The APCs were established to make recommendations to the Land Use Committee on land use planning matters referred to them related to Part 14 of the *Local Government Act* (LGA). The Shirley-Jordan River APC considered the application at its meeting on April 23, 2024.

Should the proposal proceed, a public hearing pursuant to Part 14, Division 3 of the LGA will be required subsequent to the amendment passing second reading by the CRD Board. Property owners within 500 m of the subject property will be sent notice of the proposed bylaw amendment and a public hearing will be advertised in the local paper and on the CRD website.

### *Regional Growth Strategy Implications*

The RGS designates the subject property as Rural/Rural Residential, which includes lands used for rural and rural residential purpose. While not intended to become future urban areas requiring extensive services, commercial uses serving the local community by providing employment opportunities in a rural context can be supported if impacts to the local community and environment are minimal.

Section 445 of the LGA requires that all bylaws adopted by a regional district board after the board has adopted a regional growth strategy (RGS) be consistent with the RGS. Since the proposal includes an amendment to the OCP, the bylaw will be considered by the Planning and Protective Services Committee and the CRD Board for determination of consistency with the RGS prior to first reading.

### *First Nations Implications*

The subject property is located within the asserted traditional territory of the Pacheedaht and T’Sou-ke First Nations. Each nation was invited to participate in an application review process with staff and the applicant to better inform consideration of the proposal.

### *Referral Comments*

Referrals were sent to 12 agencies, CRD departments, Juan de Fuca Electoral Area Parks and Recreation Advisory Commission and to the Shirley – Jordan River APC. Comments received are summarized below and included in Appendix I.

Pacheedaht First Nation stated concerns on potential impacts to the delivery of emergency services and the aquifer that the local area relies on. The PFN encouraged the applicant to respond by providing information on the Bliss Spring water resource and address pedestrian accessibility to the site.

T'Sou-ke First Nation requested to be informed and involved in any archaeological findings identified during the construction on the property and that an archaeological chance-find procedure should be implemented during the construction.

The RCMP expressed that they had no comments or concerns on the proposal.

Ministry of Forests - Archaeology Branch stated that there are no known archaeological sites recorded on the subject property, and there is no available modelling for archaeological potential in the immediate area. Should archaeological or cultural features be identified during construction, a permit under the *Heritage Conservation Act* will be required.

Ministry of Transportation & Infrastructure stated that they have no objections or concerns. However, the proposed bylaws will require Ministry approval in accordance with Section 52 the *Transportation Act*.

CRD First Nations Relations stated that while there are registered archaeological sites within ~570 m of the property, a Provincial *Heritage Conservation Act* permit is not required prior to development. However, First Nations Relations explained that there could be significant delays in acquiring a permit if archaeological deposits, features, or materials are identified during development, and recommended prior consultation with a qualified professional Archaeologist.

CRD Protective Services confirmed that the subject property is not located within a fire service area and acknowledged the sprinkler fire suppression covenant registered on title.

The Juan de Fuca Community Parks and Recreation Advisory Commission reviewed the application at its meeting on April 23, 2024, and provided the following recommendation by resolution:

**MOVED** by Commissioner McAndrews, **SECONDED** by Commissioner Sloan that the Juan de Fuca Electoral Area Parks and Recreation Advisory Commission state to the Juan de Fuca Land Use Committee that the Commission's interests are affected by the proposal (RZ000284) and that the Commission supports the continued safe trail connectivity and recreation in the community including connecting backcountry trails and active transportation routes.

The Shirley-Jordan River Advisory Planning Commission met on April 23, 2024, to consider the application with 14 members of the public in attendance and made the following motion:

**MOVED** by Fiona McDannold, **SECONDED** by Vivi Curutchet that the Shirley-Jordan River Advisory Planning Commission recommends to the Juan de Fuca Land Use Committee support for Zoning and Official community Plan Amendment application RZ000284.

#### *Official Community Plan Context and Policy Implications*

The applicant's primary objective for this application is to improve the viability of and access to rural commercial land within Jordan River. The Shirley-Jordan River OCP designates the subject property as *Pacific Acreage*, which supports 2.0 ha residential parcels, agriculture uses, and small-scale neighborhood commercial activities. In order to support an average lot size of 0.4 ha and a minimum of 0.2 ha, this application proposes an OCP amendment to redesignate the subject property from *Pacific Acreage* to *Commercial*, and to update the corresponding policies. The proponent's land use analysis provided during the initial application (Appendix J) suggested that the proposed C-1A zone amendments are better suited to *Commercial* designation, which supports small-scale commercial; civic, institutional, tourism, recreation, silviculture; community parks; and light industrial uses. However, the *Commercial* designation currently applies only to parcels in the flood inundation area around Jordan River that are also designated as *Restricted Development*. The present *Commercial* designation policies support a minimum lot size of 120 ha, which prevents subdivision and limits the availability of land for commercial development in Jordan River. This proposal includes a text amendment to policy 484 N of the OCP that reduces the minimum

parcel size from 120 ha to an average parcel size of 0.4 ha and a minimum of 0.2 ha, and to policy 484 R that adds a 120 ha minimum parcel size restriction to the *Restricted Development* designation to address the flood hazard concerns related to failure of the dam above Jordan River.

#### Section 208 – Regional Growth Strategy

In keeping with the RGS, OCP policies support compact rural settlements that are not intended to become future urban areas requiring extensive servicing. The application proposes onsite well and septic systems, which support a rural scale of development rather than an urban scale seen in neighbouring incorporated communities where community level services are available. The proposed rural servicing will require permitting and licensing at the time of development. The proposed OCP amendment will be reviewed by the Planning and Protective Services Committee for determination of consistency with the RGS prior to first reading of the bylaw to amend the OCP (Bylaw No. 4598).

#### Section 310 – Water

The proposed OCP and zone amendments are in keeping with the existing permitted commercial uses. Uses not supported by the OCP due to their association with potential hazardous spills and contamination, such as a gas stations and bulk fuel sales, are not included in the proposal. The initial proposal included a groundwater study; however, comments received from Pacheedaht First Nation expressed concern regarding potential impacts to local water availability with particular interest in Bliss Spring. In response, the applicant submitted an additional groundwater study. The supplementary assessment focused on quantity and quality testing from the well to be used by the brewery, which is located at an elevation above Bliss Spring. Anticipating that the brewery will likely have the highest water demand, findings from this assessment confirmed that the immediate aquifer is capable of meeting a maximum potential demand of 350,000 litres per year (extrapolated to 3,000,000 litres per year in 10 years for the entire development) without impacting availability. However, the study advised that it is possible that continuous pumping at the maximum potential demand could affect the flows of Bliss Spring. The groundwater reports advised that potential contamination of the aquifer is not anticipated and recommended that wells should be constructed in accordance with Provincial licensing and permitting requirements, that water meters be used, that regular water quality testing be undertaken, and that there be further investigation of potential impacts to Bliss Spring during the licensing process.

#### Section 333 – Connectivity and Section 335 – Park Land Acquisition

The OCP states that residents have expressed interest in a network of local trails developed in both the communities of Shirley and Jordan River. This network should connect residential areas with commercial nodes, local and regional parks and trails, and other community-based amenities. There is also a community concern for providing safe routes for school-aged children when travelling independently in their community and to school bus stops. To address the goals of the OCP and in response to the comments from the JdF Parks and Recreation Advisory Commission the applicant has offered a public trail in the form of a statutory right-of-way in favour of the CRD as a community amenity contribution. The proposed trail location is identified on the updated concept plan.

#### Section 392 – Reducing the Number of Vehicle Trips

One of the ways that residents of Shirley and Jordan River can contribute to reducing greenhouse gas emissions is through reducing the number of vehicle trips. Delivery of medical and community outreach programs at a venue in Shirley or Jordan River could see the service providers making one or two round trips within the Plan area instead of multiple trips outside the community by residents travelling elsewhere to access services. Increased recreational and social opportunities for youth within the Plan area would reduce the need for parents to take their children to and from activities in Sooke. Support for locally owned and/or operated neighbourhood commercial uses and farm gate sales can also reduce the travel necessary for employment or to purchase food and other goods. Installation of Electric Vehicle infrastructure is also supported.

#### Land Use Analysis

The subject property is zoned C-1A by the Juan de Fuca Land Use Bylaw. Permitted uses of the C-1A zone include convenience stores; civic uses; food and beverage processing; country market; and retail stores. The zone specifically excludes gas bars, gas stations, bulk fuel sales, auto repair, carwashes, or any use for which a permit is required under the *Environmental Management Act* or *Regulation*. Accessory uses

include residential; screened outdoor storage; onsite store; picnic area; lounge; special event area in conjunction with *Liquor Control and Licensing Act*; as well as buildings or structures that support a permitted principal use.

The C-1A zone, which only applies to the subject property, specifies a minimum parcel size of 3.3 ha, maximum height of 9 m; parcel coverage of 25%; maximum floor area of 2,000 m<sup>2</sup>; and setbacks of 7.5 m (front); 6.0 m (side); and 10.0 m (rear). The zone was amended by Bylaw No. 4381 in December 2021, to add food and beverage processing, a country market, and accessory uses related to a manufacturer liquor license as permitted uses.

The proposed amendments to the C-1A zone include reducing the minimum parcel size to an average of 0.4 ha and a minimum of 0.2 ha; increasing the maximum height of buildings and structures to 12 m; replacing the maximum total floor area with a floor space ratio (FSR) of 0.4; reducing the side yard setback to 3.0 m and the rear yard setback to 5.0 m, except that a 9.0 m minimum setback is required from residential and rural zones; and specifying minimum front and flanking yard setbacks of 7.5 m from a public road.

In order to make land available for a public trail, pedestrian access, natural vegetation, landscaping, and to be consistent with the commercial industrial development permit area guidelines of the OCP, parking spaces are proposed to be setback a minimum of 7.5 m from lot lines abutting West Coast Road and 3.0 m from other lot lines. Parking would also be permitted on strata common property, rather than only on the property for which it is required. Finally, the applicant proposes adding restaurant, personal service, office, and health services uses as permitted uses to the zone.

The proposed commercial bare land strata arrangement with smaller lots is intended to allow for financing and development at an individual business level, as well as to promote an opportunity for clustering and building character diversity, rather than the single-owner model with larger, more uniform building design and leased commercial spaces (Appendices B, C, D, & J).

The proposal is supported by an environmental assessment (Appendix E) and groundwater studies (Appendix F) that assessed the feasibility of implementing ten individual commercial wells. The March 27, 2024, groundwater study reported that the well to be used by the brewery (Well ID: 69081) was tested at a rate of ~45 L/min and that, while the area influenced by pumping the well was relatively large during the test, the amount of well interference on neighbouring domestic wells was relatively small. Based on the brewery's projected water use, the study extrapolated a water usage rate of 5.7 L/minute in 10 years once the development has been fully built out. The professional commented that the interference would be proportionately much less than the test demonstrated; however, there is potential for future impact on Bliss Spring. This will need to be further studied as the brewery's water usage becomes better understood through the Provincial licensing process.

Staff are of the opinion that the proposed zoning amendments are in keeping with the direction provided by the OCP, and that the proposed OCP amendments are consistent with the other policies of the Plan. Staff recommend that the referral comments be received, that proposed Bylaw Nos. 4598 and 4599 be read a first and second time, that a public hearing be held with respect to the bylaws, and that prior to adoption, the landowner register a statutory right-of-way in favour of the CRD for a public trail along the property boundary shared by West Coast Road.

## **CONCLUSION**

The purpose of Bylaw Nos. 4598 and 4599 is to amend the Shirley-Jordan River Official Community Plan, Bylaw No. 4001, by redesignating a 3.3 ha portion of the subject property from *Pacific Acreage* to *Commercial* with amendments, and to amend the Wildwood Terrace Neighbourhood Commercial (C-1A) zone of the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, by permitting additional commercial uses and a smaller average and minimum parcel size to facilitate subdivision. Staff have prepared the proposed Bylaws and recommend receipt of the referral comments, first and second reading, and advancement to public hearing. Staff also recommend that prior to adoption, the landowner work with staff to register a statutory right-of-way in favour of the CRD along West Coast Road.

## **RECOMMENDATION**

The Land Use Committee recommends to the Capital Regional District Board:

1. That the referral of proposed Bylaw No. 4598, “Shirley - Jordan River Official Community Plan Bylaw No. 5, 2018, Amendment Bylaw No. 2, 2024”; and proposed Bylaw No. 4599, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 162, 2024”; to the Shirley-Jordan River Advisory Planning Commission; Pacheedaht First Nation; T’Sou-ke First Nation; CRD departments; BC Hydro; BC Parks; District of Sooke; Island Health; Ministry of Forests – Archaeology Branch; Ministry of Water, Land and Resource Stewardship – Water Protection Section; Ministry of Transportation & Infrastructure; RCMP; and Sooke School District # 62 be approved and comments be received;
2. That proposed Bylaw No. 4598 be read a first and second time;
3. That proposed Bylaw No. 4599 be read a first and second time;
4. That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director of the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4598 and Bylaw No. 4599;
5. That prior to the adoption of proposed Bylaw No. 4599, the landowner provides an amenity contribution by registering a statutory right-of-way adjacent to West Coast Road in favour of the Capital Regional District for the purpose of establishing a public trail; and that staff be directed to ensure that all conditions are satisfied towards completion and registration.

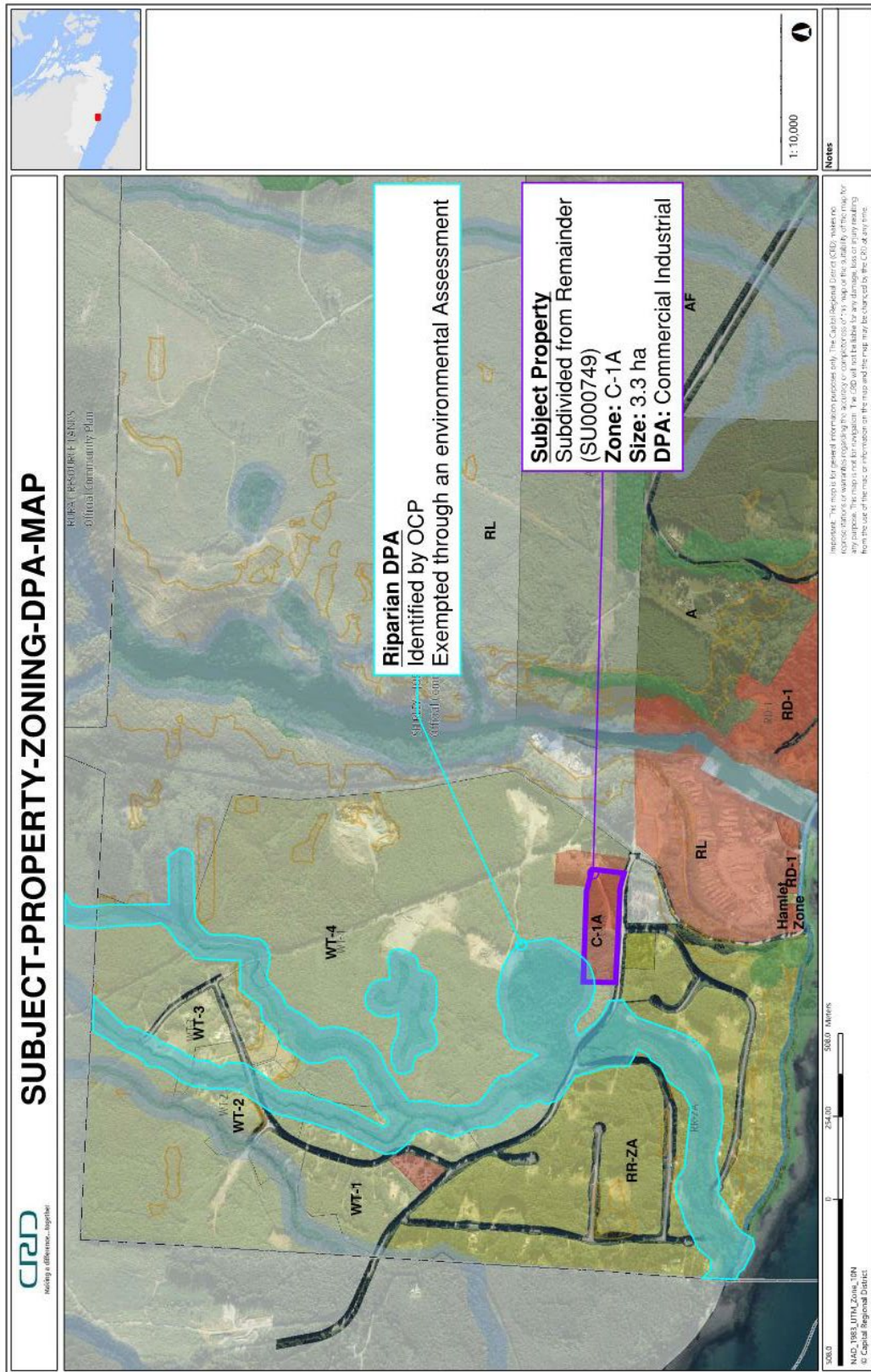
Submitted by:	Iain Lawrence, RPP, MCIP, Senior Manager, Juan de Fuca Administration
Concurrence:	Kevin Lorette, P.Eng, MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

## **ATTACHMENTS**

- Appendix A: Location, Zoning, and DPA Map
- Appendix B: Proposed Amendments to the C-1A zone
- Appendix C: Updated Concept Plan
- Appendix D: Plan of Subdivision SU000770
- Appendix E: Environmental Assessment
- Appendix F: Groundwater Reports
- Appendix G: Bylaw No. 4598 – Proposed Amendments to the OCP
- Appendix H: Bylaw No. 4599 – Proposed Amendments to the C-1A
- Appendix I: Referral Comments
- Appendix J: Project Details



Appendix A: Location, Zoning, and DPA Map



Appendix B: Proposed Amendments to the C-1A Zone

**Legend**

- **BLUE** text shows those regulations to be added to the C-1A zone
- **RED** text shows those regulations to be removed from the C-1A zone.

**6G.0 WILDWOOD TERRACE NEIGHBOURHOOD COMMERCIAL ZONE - C-1A Bylaw 3759**

**6G.01 Permitted Uses**

In addition to the uses permitted in Section 4.15 of Part 1 of this Bylaw, the following uses and no others shall be permitted in the Wildwood Terrace Neighbourhood Commercial C-1A Zone:

- (a) Convenience Store;
- (b) Retail Store, excluding gas bars, gas stations or bulk fuel sales, auto repair or car wash, or any use for which a permit is required under the *Environmental Management Act or Regulation*;
- (c) Civic Uses;
- (d) Food and Beverage Processing; *Bylaw 4381*
- (e) Country Market; *Bylaw 4381*
- (f) **Restaurant**; *Bylaw 4599*
- (g) **Personal Services**; *Bylaw 4599*
- (h) **Offices**; *Bylaw 4599*
- (i) **Health Services**; *Bylaw 4599*

**6G.02 Permitted Accessory Uses**

In addition to the uses permitted by Section 23.01 of Part 2 of this Bylaw, the following Accessory Uses in conjunction with a permitted Principal Use and no others shall be permitted in the C-1A Zone:

*Bylaw 4599*

- (a) Residential;
- (b) Screened storage yard;
- (c) Buildings or structures accessory to the above uses; ~~pursuant to Part 1, Subsection 4.04.~~
- (d) Onsite store, picnic area, lounge and special event area accessory to a manufacturer liquor licence subject to the *Liquor Control and Licensing Act*. *Bylaw 4381*

**6G.023 Minimum Parcel Size for Subdivision Purposes**

- (a) The minimum parcel size for subdivision purposes is 0.4 ha;
- (b) Notwithstanding Section 6G.03(a) of Part 2 of this Bylaw, lot averaging is permitted with an average lot size of 0.4 ha and a minimum lot size of 0.2 ha.

*Bylaw 4599*

~~For Section 4, Renfrew District, except those parts in Plans 427R, 23879, VIP68644, VIP79213 and VIP82411, as shown on Map Nos. 1 and 2, one 3.3 ha parcel is permitted.~~

**6G.034 Density Provisions**

One dwelling unit in conjunction with a principal use.

**6G.045 Height**



No building or structure, shall exceed ~~9-m~~ 12.0 m in height;

*Bylaw 4599*

**6G.056 Parcel Coverage**

Maximum parcel coverage shall be 25%.

**6G.067 Minimum Frontage for Subdivision Purposes**

Minimum frontage on a highway shall be 16 m.

**6G.078 Maximum Size of ~~Principal~~ all Buildings and Structures**

The Total Floor Area and sum of all buildings and structures on a parcel shall not exceed a Floor Area Ratio of 0.4.

*Bylaw 4599*

~~The maximum size of all buildings and structures shall not exceed a Total Floor Area of 2,000 m<sup>2</sup>.~~

~~*Bylaw 4381*~~

**6G.089 Yard Setback Requirements**

All principal and accessory buildings and structures must meet the following yard requirements:

**(a) Principal buildings and structures are required to be:**

- (i) A minimum of 7.5m from the lot line of a street and or public highway; and
- (ii) A minimum of 3.0m from the lot line of a parcel; and
- (iii) Notwithstanding Pat 2 Section 6G.09 (a) (ii) above; a minimum of 9.0m is required from the lot lines of parcels in Residential, Rural Residential, or Multiple Family Residential zones.

**(b) Accessory buildings and structures are required to be:**

- (i) A minimum of 7.5m from the lot line of a street and or public highway; and
- (ii) A minimum of 3.0m from a lot line of a parcel.

*Bylaw 4599*

~~(c) Front Yards shall be a minimum of 7.5 m;~~

~~(d) Side yards shall be 6 m;~~

~~(e) Rear yards shall be 10 m;~~

~~(f) Where a permitted use in this zone is proposed adjacent to a Rural Residential Zone, no building or structure or use except a fence and/or a retaining wall shall be located in the required yard which separates the two.~~

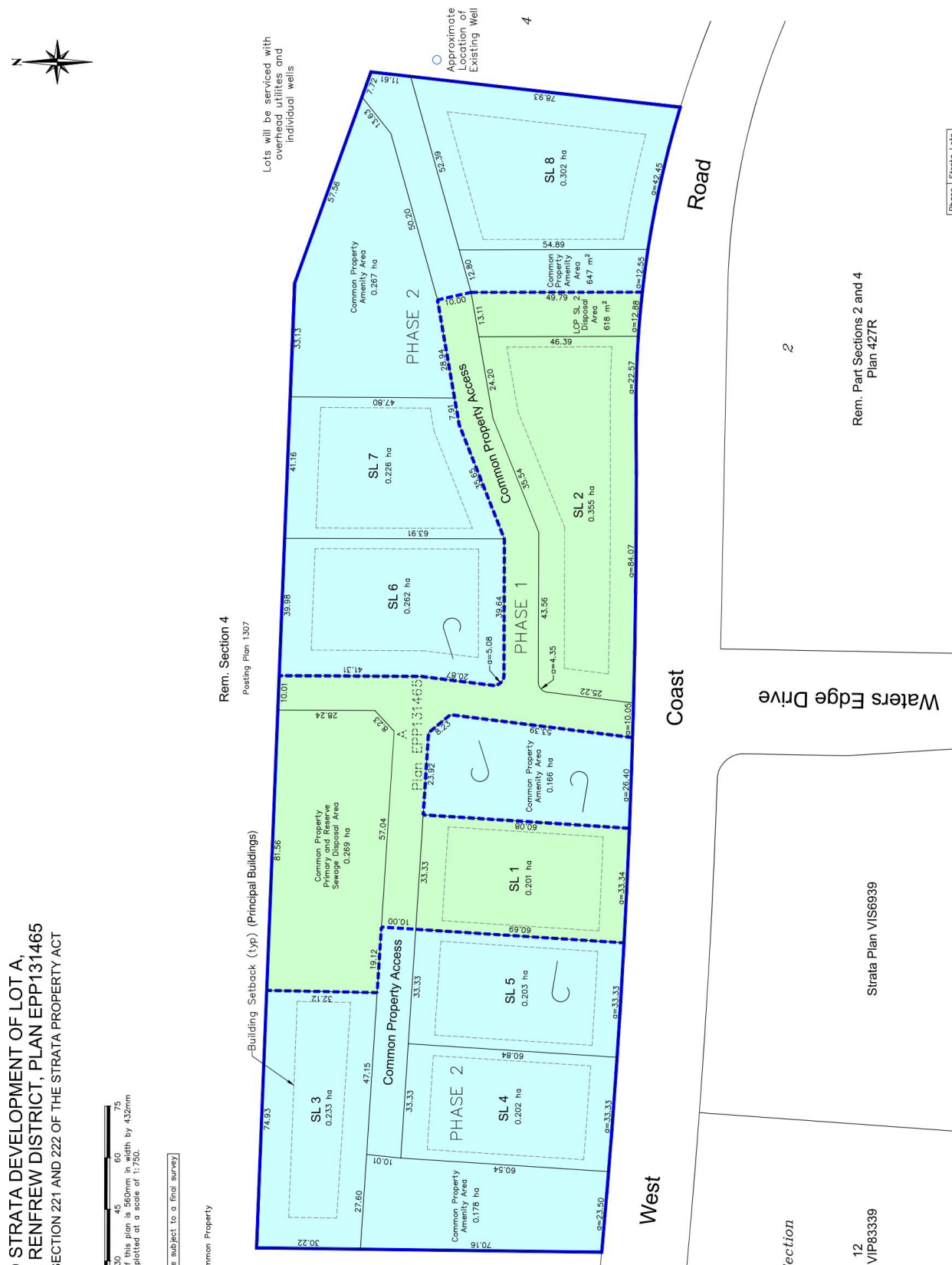
**6G.10 Parking Setback**

- (a) Bare land strata lots may provide parking spaces in accordance with this bylaw sited on common property registered on title to those strata lots;
- (b) For lot lines that abut a public highway, parking spaces provided in accordance with this bylaw shall be a minimum of 7.5m; and
- (c) For lot lines that do not abut a public highway, parking spaces provided in accordance with this bylaw shall be a minimum of 3.0m from a lot line.

## Appendix C: Updated Concept Plan



## Appendix D: Plan of Subdivision SU000770



Appendix E: Environmental Assessment



March 17, 2023

**To:** Darren Lucas  
Capital Regional District  
625 Fisgard Street  
Victoria, BC V8W 1R7

**From:** Julie Budgen, R.P.Bio.  
Corvidae Environmental Consulting Inc.  
6526 Water Street  
Sooke, BC V9Z 0X1

**12036 West Coast Road Assessment Letter for Lot Subdivision (CRD file number SU000749)**

To Darren Lucas,

On February 8<sup>th</sup>, a Qualified Environmental Professional (QEP) with Corvidae performed a site visit at 12036 West Coast Road (PID 009-573-356), to determine if the proposed 2-lot subdivision (CRD file number SU000749) at this location occurs within a Riparian Assessment Area (RAA) or within a Riparian Development Permit Area (DPA) as shown in Schedule D of the Shirley – Jordan River Official Community Plan (OCP)<sup>1</sup>.

The QEP confirmed during the assessment there are no wetlands or watercourses on the proposed lot subdivision or within 50 m of the its boundaries (Figure 1). The area mapped on Schedule D of the OCP that appears in the shape of a wetland was observed in the field to be comprised of a predominantly western redcedar (*Thuja plicata*) canopy and a salal (*Gaultheria shallon*) understory. Soils in this area possess a high clay content and thus have limited drainage capacity, however, no surface water or hydrophytic, wetland-associated vegetation was detected during the site assessment.

Given that the proposed subdivision does not occur within or in proximity to a RAA or Riparian DPA, the proposed development is exempt from requiring a development permit as per Section 534 A of the Shirley – Jordan River OCP. Photos of the property and adjacent forested habitat (including mapped DPAs) have been included in Appendix A.

If you have any questions or concerns, please contact me for further details.

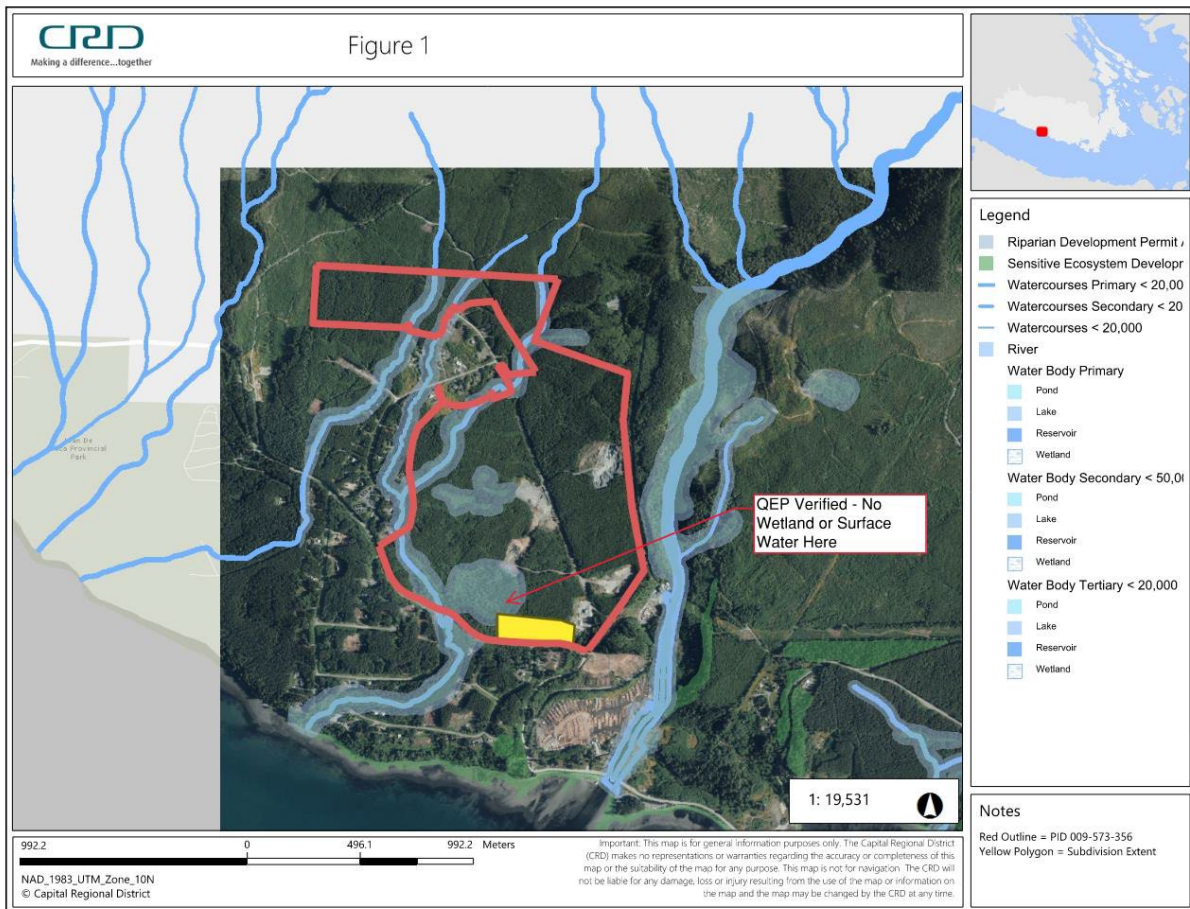
Prepared by,



Julie Budgen, R.P.Biol., B.Sc.,  
Senior Environmental Planner  
250-415-8553

<sup>1</sup> Shirley -Jordan River OCP. 2018 [https://www.crd.bc.ca/docs/default-source/crd-document-library/bylaws/juandefucaelectoralearea/3717---official-community-plan-for-shirley-jordan-river-by-law-no-1-2010b.pdf?sfvrsn=573a9ac\\_6](https://www.crd.bc.ca/docs/default-source/crd-document-library/bylaws/juandefucaelectoralearea/3717---official-community-plan-for-shirley-jordan-river-by-law-no-1-2010b.pdf?sfvrsn=573a9ac_6)









## APPENDIX A – SITE PHOTOS

Photo 1. Northwest view of mapped Riparian DPA. February 8, 2023.



Photo 2. Typical view of forested habitat on the property in the west extent. February 8, 2022.



Appendix F: Groundwater Reports



File: 2205191

March 27, 2024

Totangi Properties Ltd  
Jordan River BC

Attention: [REDACTED]

Re: **Assessment of February 2024 Pumping Test on Well, WID 69081  
(WTN 128906)**

As requested, Hy-Geo Consulting has completed an assessment of the quantity and quality of well WID 69081 (WTN 128906 ) on your property, based on a 24.25 hour pumping test conducted by Independent Pump & Mechanical Ltd., from February 14 to February 15, 2024. The well was investigated as a potential water supply source to support a proposed brewery on the property at 12036 West Coast Road, Jordan River.

It is estimated that the proposed brewery for the subject property would initially need 350,000 L/year (959 L/day) of potable water potentially growing to 3,000,000 L/year (8219 L/day) over 10 years (Totangi Properties, 2024). This would be equivalent to an initial well production rate of 0.18 USgpm growing to 1.51 USgpm, from the well.

This report summarizes the results of pump testing the well and monitoring of potential effects on neighbouring wells. A groundwater assessment report on the southern portion of the property was previously completed by Hy-Geo Consulting (Kohut, 2023).

## **WELL LOCATION**

Well WID 69081 is situated at an elevation just under 55 m, along the southern boundary of PID 9573356 on the north side of West Coast Road at Jordan River (Figure 1). There are numerous existing wells in the general region directly south and west of the property (Figure 1). First Creek lies approximately 360 m west of the well site at an elevation between 45 and 50 m. Another well, WID 18153 (WTN 95648) situated approximately 165 m northeast of WID 69081 was utilized as an observation well during the test pumping of WID 69081.

## **PUMPED WELL WID 69081 (WTN 128906)**

Well WID 69081 is a 6 inch (15.24 cm) diameter well drilled in 2023 by Drillwell Enterprises Ltd., to a depth of 111 feet (33.83 m) and completed with 10 feet (3.05 m) of a screen assembly consisting of 5 feet (1.52 m) of 5 inch (12.7 cm) diameter 50 slot stainless steel well screen set at a depth from 106.5 to 111 feet (32.46 to 33.83 m) in



grey sandy gravel and a 2 foot (0.61 m) length of riser pipe with K packer from 104.5 to 106.5 feet (31.85 to 32.46 m). A copy of the well driller's log is provided in Appendix A.

The driller rated the well at 30 USgpm based on a brief 3 hour bailing test. Non-pumping water level recorded in October 2023 was 71 feet (21.64 m) below top of casing with a stickup of 22 inches (55.9 cm) above ground level. The well lies on a glacial-fluvial terrace that slopes gently southwesterly towards the ocean and is completed in a confined glacio-fluvial sand and gravel aquifer system designated as Aquifer 944 under the *BC Aquifer Classification System* (Bernardinucci and Ronneseth, 2002). The aquifer is classified as a IIB aquifer with a moderate level of demand and moderate vulnerability to contamination from surface sources.



Figure 1. Location of pump tested well WID 69081, Observation Well WID 18153 and neighbouring reported wells. Base map from Province of British Columbia (2024a).

#### OBSERVATION WELL WID 18153 (WTN 95648)

Well WID 18153 is a 6 inch (15.24 cm) diameter well drilled in 2006 by Drillwell Enterprises Ltd., to a depth of 114 feet (34.75 m) and completed open bottom without a screen. The well encountered coarse gravel to 56 feet (17.07 m), and grey sand from 56 to 59 feet (17.07 to 17.98 m) underlain by gravel with sand and cobbles to 114 feet (34.75 m). A copy of the well driller's log is provided in Appendix A. The absence of any reported fine-grained deposits suggests that the aquifer may be unconfined at this location.



The driller rated the well at 10 USgpm based on a brief 1.5 hour air lifting test. Non-pumping water level recorded in July 2006 was 71 feet (21.64 m) below top of casing with a stickup of 18 inches (45.7 cm) above ground level.

## CLIMATE

The region is situated in the *Coastal Western Hemlock Biogeoclimatic Zone* with long, mild, and wet winters, and relatively sunny and dry summers. While a long-term climate station for Jordan River is not available, monthly normal precipitation for the Sooke Lake North climate weather station for the 1981-2010 period has been reported by the Government of Canada (2024) for climate station 1017563 as shown in Figure 2. The region receives about 1497 mm of precipitation on an annual basis (Government of Canada, 2024). Precipitation normally follows a seasonal cycle, with highest rainfall during the fall, winter and early spring months while the summer months are subject to drought conditions.

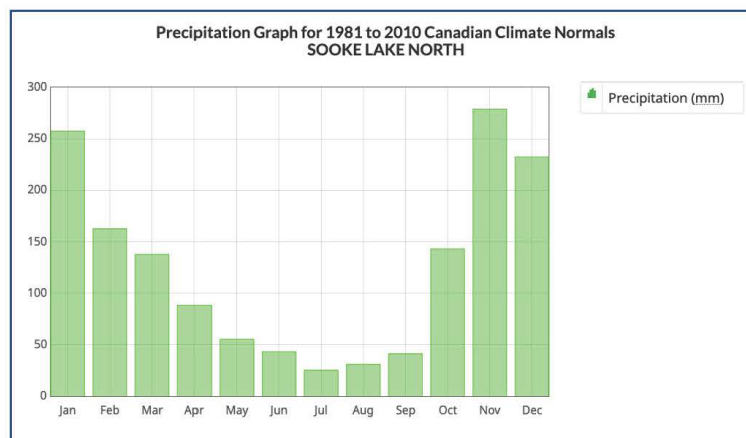


Figure 2. Graph of monthly normal precipitation for Sooke Lake North station (Climate ID. 1017563). Graph from Government of Canada (2024).

## REGIONAL WATER LEVEL FLUCTUATIONS

From historic observation well data in unconsolidated deposits on southern Vancouver Island, groundwater levels in surficial wells generally rise and fall with the seasons in response to available precipitation, becoming highest during the late fall, winter and spring months and declining during the May to September period (Kohut *et al.*, 1984). Historic data from the closest provincial Observation Well 469 at Sooke, shows long-term water levels fluctuating over a narrow range of about 2.5 m with highest water levels during the winter months. Similar natural fluctuations might be expected for Aquifer 944 in the Jordan River area with water levels seasonally high in January and February.

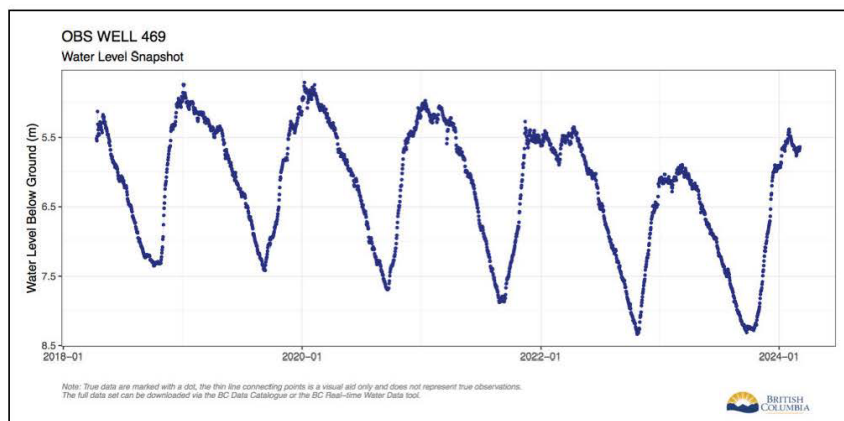


Figure 3. Groundwater level trend in Observation Well 469 at Sooke from 2018 to 2024. Adapted from Province of British Columbia (2024b).

#### PUMPING TEST OF WELL WID 69081 (WTN 128906)

A minimum 24 hour pumping test is the recommended standard for assessing wells completed in unconsolidated aquifers (Ministry of Environment, 2010). The project well WID 69081 was subsequently pump tested by Independent Pump & Mechanical Ltd., at a near constant rate, averaging 45.07 L/min (11.91 USgpm) for 24.25 hours from 8:00 am February 14 to 8:15 am, February 15, 2024. The pumping rate was determined from a totalizing flow metre and periodic measurements by filling of a 45 gallon drum.

Pumped water was discharged into a drainage ditch 200 feet (61 m) down slope away from the wellhead towards the west. Manual water level readings were taken in the project well during the test at prescribed intervals (Ministry of Environment, 2010) and a *Solinst Levellogger® 5* datalogger set in the well also recorded water levels at ten minute intervals. A *Solinst Barologger® 5* barometric data logger was also employed on site during the test.

Water levels in the neighbouring Observation well WID 18153 (WTN 95648) were also monitored during the pumping test with a *Solinst Levellogger® 5* datalogger at ten minute intervals. Upon pump shutdown, recovery water levels in the pumped well WID 69081 were manually taken at prescribed intervals for 7.75 hours. Limited recovery water levels were also taken in Observation well WID 18153 for 5 hours. Recovery water levels were also recorded by the *Solinst Levellogger® 5* dataloggers in both wells.

Water samples were taken from the pumped well near the end of the test and delivered within 20 hours of sampling with ice packs to the Bureau Veritas laboratory in Esquimalt for analysis of chemical and bacteriological parameters. One of the samples was also field filtered by A. Kohut for determination of dissolved metals. All samples were unadulterated and taken from the pumped well and delivered to the laboratory by A. Kohut.

## PUMP TESTING RESULTS

### *Pumped Well WID 69081*

Well test drawdown and recovery data for the pumped well are provided in Appendix B. Appendix C contains a copy of the water quality analytical laboratory report from Bureau Veritas.

The pumping test was started at 8:00 am on February 14 and ended at 8:15 am on February 15, 2024. Figure 4 shows the drawdown in the pumped well during pumping.

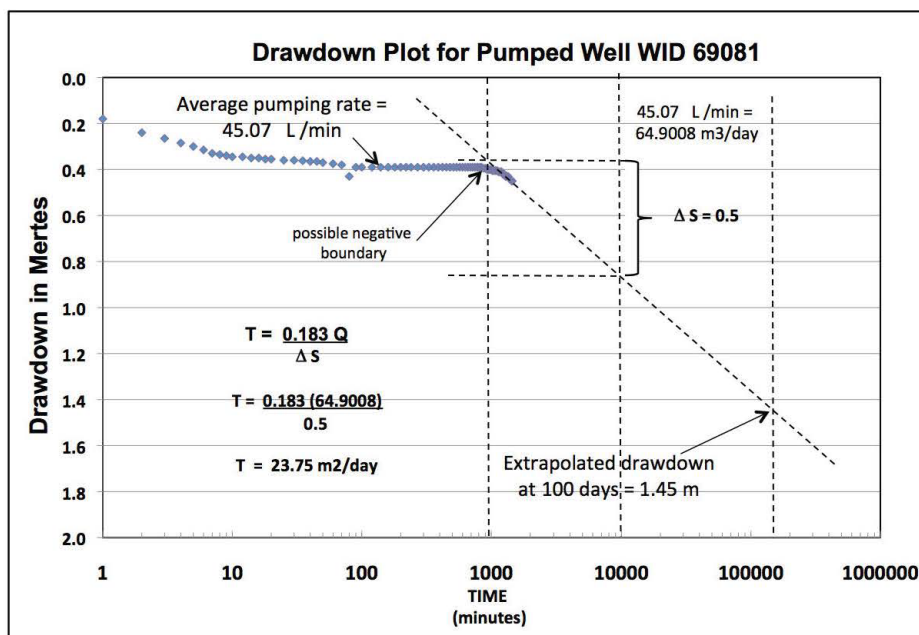


Figure 4. Semi-logarithmic drawdown graph for pumping well.

Drawdown at the end of the test reached 0.45 m below the initial non-pumping water level of 19.12 m below the top of casing at 0.56 m above ground utilizing only 3.5% of the available drawdown of (12.73 m) to the top of the well screen assembly at a depth of 31.85 m (106.5 feet). The water level reached relatively stabilized conditions within 100 minutes of the start of pumping but continued to drawdown slightly as the test progressed. A possible negative boundary condition appears to have been encountered at about 840 minutes into the test (Figure 4). Transmissivity of the aquifer was calculated at 23.75 m<sup>2</sup>/day based on the latter portion of the test.

Figure 5 shows the water level in the well, prior to during and after the pump test as recorded by the datalogger. Prior to the test the water level in the well was rising gradually (Figure 5). Initially on pumping the well drew down very quickly, becoming relatively stable and then drawing down slightly. Minor fluctuations in water level during the test may be related to pumping effects from nearby wells and possibly tidal effects. Upon shutdown the well recovered almost instantaneously but 0.1 m short of a full recovery. Water levels then continued to fall slowly. Figure 6 shows a semi-logarithmic plot of the recovery plot for the well. Recovery was not 100% complete as water levels were gradually falling slightly during and after the test.

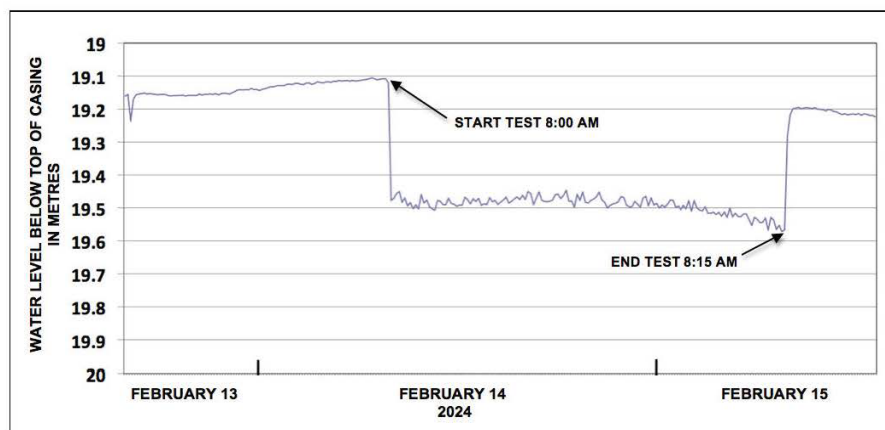


Figure 5. Water level in pumped well.

Given that the well was tested during the wettest time of the year, water levels during the late summer could be much lower reducing the available drawdown in the well by 3.0 metres. Extrapolation of the drawdown in the well to 100 days of continuous pumping as shown in Figure 4, indicates the drawdown would reach 1.45 m. Specific capacity of the well after 100 days would be 46.52 L/min per metre of drawdown. Utilizing this specific capacity and 70 percent of the available summer drawdown of 9.73 m in the well would suggest a long term yield of about 317 L/min or 84 USgpm. It is obvious that the well is capable of supplying much more than the rate at which it was pumped. The ultimate capacity of the well however, would be much less than 317 L/min (84 USgpm) and limited by the well diameter and screen design. Additional pump testing at higher rates would also be required to assess the maximum well capacity. Based on the current test, a well capacity twice that at which it was pumped or 90 L/min (24 USgpm) would be most possible without considering potential well interference effects. The well is therefore, entirely capable of meeting the maximum anticipated projected demand of the brewery for 3,000,00 L/year (8219 L/day). after 10 years. This would be equivalent to a well production rate of 1.51 USgpm (5.72 L/min), from the well.

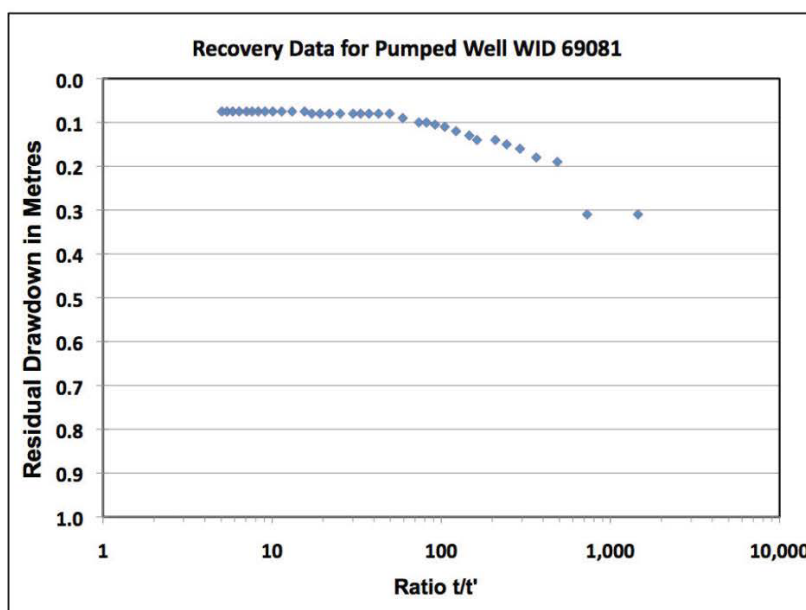


Figure 6. Semi-logarithmic recovery graph for pumped well.

#### Observation Well WID 18153

Figure 7 shows the water level in the observation well, prior to, during and after the pumping test. The water level in the observation well mirrors the water level response of the pumped well except when the pump is shut down. There is only a very minor water level recovery response in the observation well. This suggests that some dewatering of the aquifer has occurred during the pumping test.

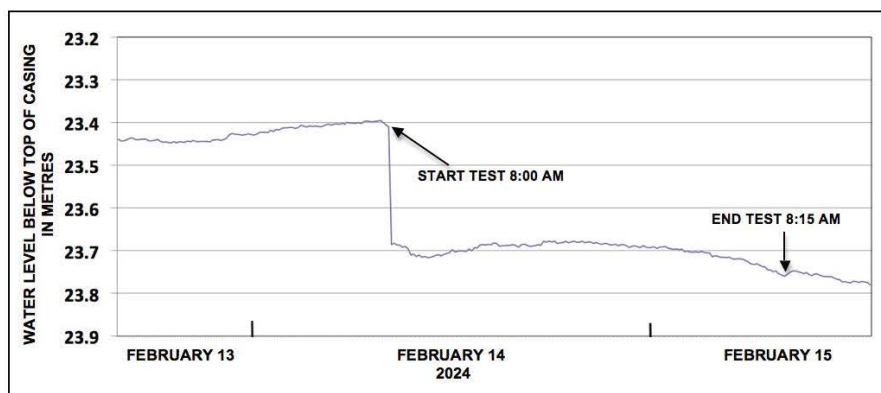


Figure 7. Water level in observation well.



Figure 8 shows the drawdown data for the observation well extracted from the datalogger as the manually taken readings were compromised during the test. Extrapolation of the drawdown data to 100 days indicates that the drawdown would be similar to the extrapolated drawdown in the pumped well.

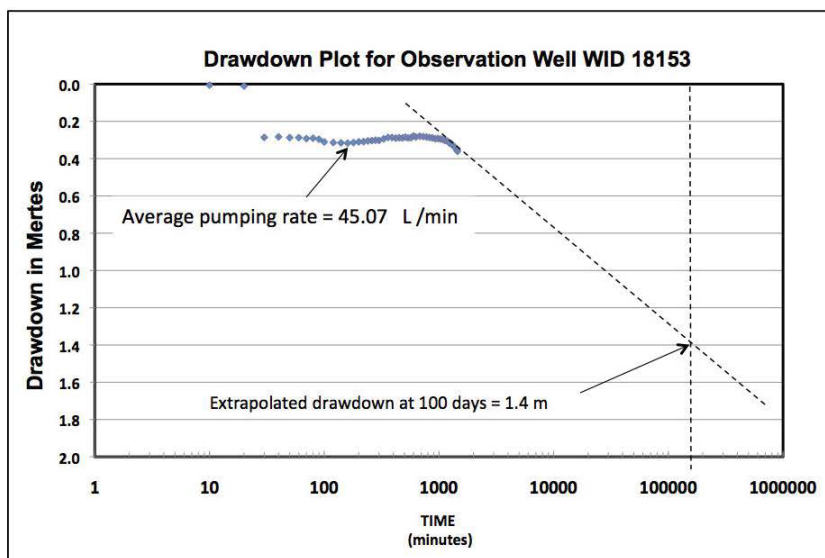


Figure 8. Semi-logarithmic plot of drawdown data in observation well.

Figure 9, indicates the lateral extent of the drawdown cone during the pumping test and after 100 days pumping at a rate of 45.07 L/min (11.91 USgpm). Assuming the aquifer is isotropic, Figure 9 indicates that the pumping test would have affected an area within a radius of 350 m from the pumping well. After 100 days pumping the radius of influence would theoretically extend to 4000 m.

While the radius of the cone of influence of pumping well WID 69801 at a rate of 45.07 L/min (11.91 USgpm) was relatively large (350 m) during the test, the amount of well interference was relatively small at <0.5 m. Similarly, while the radius of the cone of influence pumping well WID 69801 for 100 days would be quite large, again the degree of interference anticipated would also be relatively small at < 1.5m. This degree of well interference would not likely have any significant effect on the safe available drawdown in neighbouring domestic wells.

At a maximum continuous pumping rate of 5.72 L/min or (1.51 USgpm) the projected interference drawdowns would be proportionally much less and only 0.18 m in the observation well after 100 days of pumping. The cone of influence after 100 days, would also not extend to more than 300 m from the pumping well.

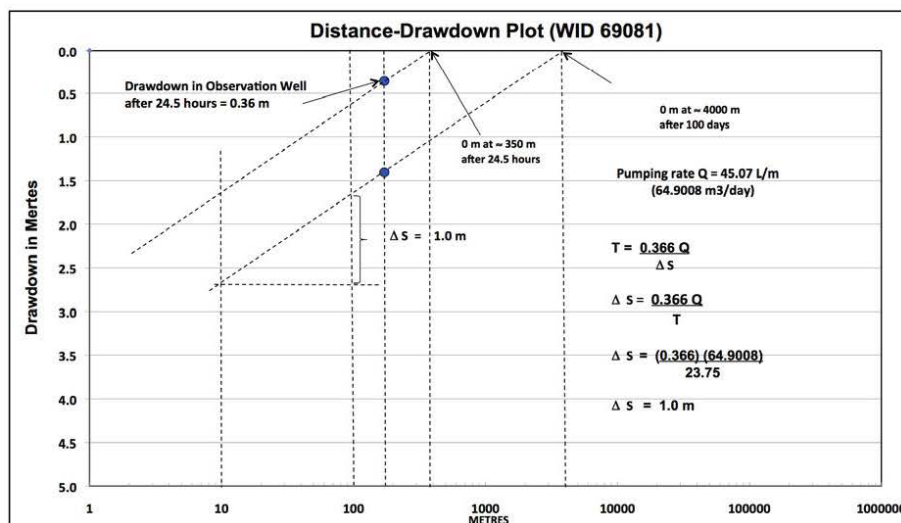


Figure 9. Semi-logarithmic plot of distance versus drawdown with well WID 69081 pumping up to 100 days.

Figure 10 shows the minimum size of the up gradient area that could be contributing recharge to the upper reaches of Aquifer 944 and well WID 69081. Recharge sources would include infiltration of a portion of precipitation falling on the northern portion of Aquifer 944, infiltration from runoff upslope of the aquifer, infiltration from First Creek and from other small creeks up slope. Based on a conservative estimate, for example, of only 2 percent of the annual normal rainfall (1497 mm) over the minimum recharge area, direct infiltration of precipitation, estimated to be 69.54 L/min in itself, would be more than enough to sustain a pumping rate for well WID 69081 at 5.72 L/min or (1.51 USgpm).

Based on the potential extent of the cone of influence of the well up to 300 m after 100 days pumping at 5.72 L/min or (1.51 USgpm) an examination of the location of licensed springs in the vicinity of well WID 69081 was undertaken. Figure 11 indicates that there is one licensed spring, namely Bliss Spring situated within 300 meters of the well.

Bliss Spring is licensed for a total quantity of  $29.55 \text{ m}^3/\text{day}$  or equivalent to 20.52 L/min (Table 2). While currently unknown, there is a possibility that continuous pumping of well WID 69081 at a rate of 5.72 L/min or (1.51 USgpm) could have a minor effect on the flow of Bliss Spring.

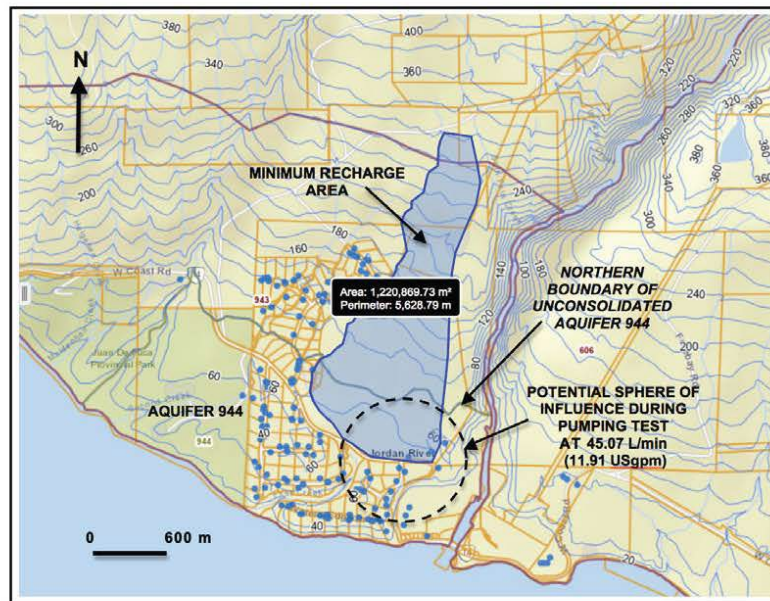


Figure 10. Minimum recharge area and potential cone of influence during pumping test of well WID 69081. Base map from Province of British Columbia (2024a).



Figure 11. Location of licensed springs in the vicinity of well WID 69081. Base map from Province of British Columbia (2024a).



Table 2. Licensed springs in vicinity of well WID 69081.

Licence Number	Priority Date	Stream Name	Purpose	Quantity (MD)
F014458	19430909	Bliss Spring	DOMESTIC	2.273
C123888	20080430	Bliss Spring	DOMESTIC	2.273
F011450	19380816	Bliss Spring	DOMESTIC	4.546
F127744	19410616	Bliss Spring	DOMESTIC	2.273
C061320	19840224	Bliss Spring	DOMESTIC	2.273
C110196	19950825	Bliss Spring	COMM. ENTERPRISE: ENTERPR	2.273
F012739	19380816	Bliss Spring	DOMESTIC	4.546
F014742	19491013	Bliss Spring	DOMESTIC	4.546
F110384	19380816	Bliss Spring	DOMESTIC	2.273
F014458	19430909	Bliss Spring	COMM. ENTERPRISE: ENTERPR	2.273
C110715	19960219	Rudd Spring	COMM. ENTERPRISE: ENTERPR	22.73
C110876	19960401	Rudd Spring	CAMPS & PUB FACIL: PUBLIC	2.273
Total:				54.552

Data from Province of British Columbia (2024a).

## WATER QUALITY RESULTS

Laboratory results of the February 15, 2024 sampling (Table 1), indicate that the water quality of the project well met or exceeded the *Guidelines for Canadian Drinking Water* (Health Canada, 2022) for all parameters tested except for pH at 6.47, True Colour at 128 TCU, Turbidity at 9.9 TU, Total and Dissolved Iron at 9220 and 9560 µg/L respectively and Total and Dissolved Manganese at 202 and 198 µg/L respectively. **No detectable total coliforms or E.coli., bacteria were reported.**

Manganese levels above 20 µg/L and total iron above 300 µg/L are of aesthetic concern and may result in staining of laundry and/or toilet fixtures. Manganese above 120 µg/L is also a health risk for infants consuming the water if it is used to prepare baby formula as it can have effects on neurological development and behaviour; deficits in memory, attention, and motor skills.

The overall mineralization of the water is very low with a total dissolved solids (TDS) content of 90 mg/L. The Langelier Index @ 4.4°C is very low at -2.60 indicating the water is aggressive and corrosive for metal piping.

While bacteriologically potable, the presence of elevated levels of iron, manganese, colour, turbidity and low pH would require treatment for commercial purposes. Elevated levels of these parameters could also lead to potential corrosion issues, staining and deposits in the water system.

Table 1. Summary of water quality analyses.

Parameters/Site and Sampling Date	WELL WID 69081 Jordan River Well Feb 15/24	WELL WID 69081 Jordan River Well Feb 15/24	Canadian DWGuideline 2022	Units
<b>PHYSICAL TESTS</b>				
True Colour	128		< or =15	TCU
Transmittance at 254nm	18			%T/cm
Conductivity	110			µS/cm
Total Hardness (CaCO <sub>3</sub> )	30.9			mg/L
pH	6.47		7.0-10.5	pH units
Total Dissolved solids (TDS)	90		< or = 500	mg/L
Turbidity	9.9		<1.0	NTU
<b>ANIONS</b>				
Alkalinity (Total as CaCO <sub>3</sub> )	41			mg/L
Alkalinity (PP as CaCO <sub>3</sub> )	<1.0			mg/L
Bicarbonate	50			mg/L
Carbonate	<1.0			mg/L
Hydroxide	<1.0			mg/L
Chloride	4.4		< or = 250	mg/L
Fluoride	<0.050		1.5	mg/L
Nitrate (N)	<0.020		10	mg/L
Nitrite (N)	<0.0050		1	mg/L
Total Organic Nitrogen (N)	0.589			mg/L
Total Ammonia (N)	0.29			mg/L
Nitrate plus Nitrite (N)	<0.020			mg/L
Total Nitrogen (N)	0.877			mg/L
Total Organic Carbon (C)	1.5			mg/L
Total Phosphorus (P)				mg/L
Total Sulphide	0.0058		0.05	mg/L
Sulphide (as H <sub>2</sub> S)	0.0062		0.05	mg/L
Sulphate	<1.0		< or =500	mg/L
<b>TOTAL METALS</b>		<b>DISSOLVED METALS</b>		
Aluminum	13.3	5.1	100 and 2900	µg/L
Antimony	<0.50	<0.50	6	µg/L
Arsenic	8.03	7.78	10	µg/L
Barium	7.0	6.7	2000	µg/L
Beryllium	<0.10	<0.10		µg/L
Bismuth	<1.0	<1.0		µg/L
Boron	<50	<50	5000	µg/L
Cadmium	0.031	<0.010	7	µg/L
Chromium	<1.0	<1.0	50	µg/L
Cobalt	<0.20	<0.20		µg/L
Copper	2.30	0.81	1000 and 2000	µg/L
Iron	9220	9560	< or = 300	µg/L
Lead	0.20	<0.20	5	µg/L
Manganese	202	198	20 and 120	µg/L
Mercury	<0.0019		1	µg/L
Molybdenum	<1.0	<1.0		µg/L
Nickel	<1.0	<1.0		µg/L
Selenium	<0.10	<0.10	50	µg/L
Silicon	17200	16000		µg/L
Silver	<0.020	<0.020		µg/L
Strontium	25.5	26.6	7000	µg/L
Thallium	<0.010	<0.010		µg/L
Tin	<5.0	<5.0		µg/L
Titanium	<5.0	<5.0		µg/L
Uranium	<0.10	<0.10	20	µg/L
Vanadium	<5.0	<5.0		µg/L
Zinc	41.9	26.9	< or = 5000	µg/L
Zirconium	<0.10	<0.10		µg/L
Calcium	7.86	8.07		mg/L
Magnesium	2.74	2.84		mg/L
Potassium	0.786	0.786		mg/L
Sodium	6.47	6.32	< or = 200	mg/L
Sulphur	<3.0	<3.0		mg/L
<b>MICROBIOLOGICAL</b>				
Total coliforms	0		ND	CFU/100mL
Escherichia coli (E. coli)	0		ND	CFU/100mL

\* Turbidity guideline applies to a surface water source or a groundwater source under the direct influence of surface water.

ND means none detectable.

Exceedances shown in red font.

The following conclusions on the available water quantity and water quality of well WID 69081 can be made:

1. Well WID 69081 was pump tested for 24.25 hours between February 14 and February 15, 2024 by Independent Pump & Mechanical Ltd., at a near constant rate, averaging 45.07 L/min (11.91 USgpm). The maximum well capacity could be as much as 90 L/min (24 USgpm) without considering potential well interference effects. The well is therefore, entirely capable of meeting the initial demand of 350,000 L/year (959 L/day) and potentially growing to 3,000,000 L/year (8219 L/day) over 10 years. This would be equivalent to an initial well production rate of 0.18 USgpm growing to 1.51 USgpm (5.72 L/min).
2. Analysis of observation well data indicates that during the pumping test, the drawdown cone likely extended over an affected area with a radius of 350 m surrounding the pumping well.
3. While the radius of the cone of influence of the pumping well during the test was relatively large (350 m), the amount of well interference was relatively small at <0.5 m.
4. One licensed spring, namely Bliss Spring is situated within 300 meters of well WID 69081. There is a possibility that eventual pumping of well WID 69081 at 5.72 L/min or (1.51 USgpm) could have some minor effect on this water source after 100 days of continuous pumping. Further investigations of this water source may be warranted as part of a water licence application for the well.
5. Water samples collected at the end of the pumping test and submitted for laboratory testing indicate the water is of potable quality, with no detectable coliform or E.coli bacteria. The presence of Total Iron, Dissolved Iron, Total Manganese and Dissolved Manganese exceeding the aesthetic levels under *Guidelines for Canadian Drinking Water Quality* (Health Canada, 2022) will require treatment for commercial purposes. Elevated levels of these elements could also lead to potential corrosion issues, staining and deposits in the water system. Elevated manganese at or above 120 µg/L is also a health risk for infants consuming the water if it is used to prepare baby formula as it can have effects on neurological development and behaviour; deficits in memory, attention, and motor skills.

## RECOMMENDATIONS

1. Consideration should be given to equipping the discharge line from the well with a totalizing water flow meter to monitor and record the well use with time and installing a water level sounding tube in the well for taking periodic water level measurements.

2. Further water quality sampling should be undertaken to assist with the design of an appropriate water treatment system that will be effective and economical for the intended use of the water for commercial purposes.
3. Under the *Water Sustainability Act* a water licence would be required to operate the well for commercial purposes. An application for use would need to be submitted to FrontCounter BC in Nanaimo through the website <https://portal.nrs.gov.bc.ca/web/client/home>
5. Investigate and assess the conditions surrounding Bliss Spring and any potential for well interference by pumping of well WID 69081.

## CLOSURE

This report was prepared in accordance with generally accepted engineering, hydrogeological and consulting practices. It is intended for the prime use of Totangi Properties Ltd., in connection with its purpose as outlined under the scope of work for this project. This report is based on data and information available to the author from various sources at the time of its preparation and the findings of this report may therefore be subject to revision. Data and information supplied by others has not been independently confirmed or verified to be correct or accurate in all cases. Any errors, omissions or issues requiring clarification should be brought to the attention of the author. The author retains full copyright of the material contained in the report. The author and Hy-Geo Consulting accepts no responsibility for damages suffered by any third party as a result of any unauthorized use of this report.

Respectfully submitted,



Alan P. Kohut PEng.  
Principal and Senior Hydrogeologist

HY-GEO CONSULTING  
Permit to Practice Number: 1001034

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**APPENDIX A**

**Well Records**

**WID 69081 (WTN 128906)**

**WID 18153 (WTN 95648)**





Ministry of  
Environment

- ☒ Well Construction Report  
☐ Well Closure Report  
☐ Well Alteration Report

**DRILLWELL ENTERPRISES LTD.**  
4994 Polkey Road  
Duncan, B.C. V9L 6W3  
Phone: 250-746-5268  
Stamp phone/fax/e-mail here, if desired.

Ministry Well ID Plate Number: 69081  
Ministry Well Tag Number:  
☐ Confirmation/alternative specs. attached  
☐ Original well construction report attached

Red lettering indicates minimum mandatory information.

See reverse for notes & definitions of abbreviations.

Owner name: Totangi Properties Ltd.  
Mailing address: Victoria main PO Box 904 Town Victoria Prov. BC Postal Code V8W2R9  
Well Location: Address: Street no. 12036 Street name West Coast Road Town Tordan River  
or Legal description: Lot Plan D.L. Block Sec. Twp. Rg. Land District  
or PID: 009-573-356 and Description of well location (attach sketch, if nec.):

NAD 83: Zone: 10 UTM Easting: 0421647 m Latitude (see note 3):  
(see note 2) UTM Northing: 5364372 m Longitude:  
Method of drilling: ☒ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify): Dual Rotary  
Orientation of well: ☒ vertical ☐ horizontal Ground elevation: 185 ft (asl) Method (see note 4): GPS  
Class of well (see note 5): Water Supply Sub-class of well: Domestic  
Water supply wells: indicate intended water use: ☒ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify):

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)					Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)		
0	26'	Hard	Brown	Gravel + Cobbles		
26'	71'	Med	Grey	Till + Very silty gravel		
71'	111'	Loose	Grey	Gravel, Sandy, grey color	WB	
111'	111'	Hard	Grey	till		

Casing details		Dia		Wall		Drive Shoe
From ft (bgl)	To ft (bgl)	in	Casing Material / Open Hole	Thickness in	in	
0	17'	10"	Steel / Removed	—	—	
0	111'	6"	Steel	.219	DR	

Screen details					
From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size	
104'6"	106'6"	5"	KPacker + Risr	—	
108'6"	111'	5"	SS Screen	.050"	

Surface seal: Type: Bentonic Depth: 17' ft  
Method of installation: ☒ Poured ☐ Pumped Thickness: 2" in  
Backfill: Type: Depth: ft  
Liner: ☐ PVC ☐ Other (specify):  
Diameter: in Thickness: in  
From: ft (bgl) To: ft (bgl) Perforated: From: ft (bgl) To: ft (bgl)

Intake: ☒ Screen ☐ Open bottom ☐ Uncased hole  
Screen type: ☒ Telescope ☐ Pipe size  
Screen material: ☒ Stainless steel ☐ Plastic ☐ Other (specify):  
Screen opening: ☒ Continuous slot ☐ Slotted ☐ Perforated pipe  
Screen bottom: ☐ Bail ☒ Plug ☐ Plate ☐ Other (specify):  
Filter pack: From: ft To: ft Thickness: in  
Type and size of material:

Developed by:  
☒ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☒ Bailing  
☐ Other (specify): Total duration: 3 hrs  
Notes:

Well yield estimated by:  
☐ Pumping ☒ Air lifting ☐ Bailing ☐ Other (specify):  
Rate: 30 USgpm Duration: 3 hrs  
SWL before test: ft (bloc) Pumping water level: ft (bloc)

Obvious water quality characteristics:  
☒ Fresh ☐ Salty ☐ Clear ☒ Cloudy ☐ Sediment ☐ Gas

Colour/odour: Water sample collected: ☐

Well driller (print clearly):  
Name (first, last) (see note 19): Scott Burrows  
Registration no. (see note 20): WD04121407  
Consultant (if applicable; name and company): ALAN KOHUT CHY-GEO  
DECLARATION: Well construction, well alteration or well closure, as the case may be,  
has been done in accordance with the requirements in the Water Act and the Ground  
Water Protection Regulation.  
Signature of Driller Responsible

Final well completion data:  
Total depth drilled: 111' ft Finished well depth: 111' ft (bgl)  
Final stick up: 22" in Depth to bedrock: NA ft (bgl)  
SWL: 71' ft (bloc) Estimated well yield: 30 USgpm  
Artesian flow: USgpm, or Artesian pressure: ft  
Type of well cap: welded lid Well disinfected: ☒ Yes ☐ No  
Where well ID plate is attached: on well casing  
Well closure information:  
Reason for closure:  
Method of closure: ☐ Poured ☐ Pumped  
Sealant material: Backfill material:  
Details of closure (see note 17):

Date of work (YYYY/MM/DD):  
Started: 2023/09/29 Completed: 2023/10/02  
Comments:



**ZONE 10 N: 5364407 E 421804**

**BRITISH COLUMBIA**  
Ministry of Environment

**Well Construction Report DRILLWELL ENTERPRISES LTD.**  
**DRILLWELL ENTERPRISES LTD.**  
4994 Polkay Road  
Duncan, B.C. V9L 6W3  
Phone: 250-746-5268

Ministry Well ID Plate Number: **18153**  
Ministry Well Tag Number: **93648**  
☐ Confirmation/alternative specs. attached  
☐ Original well construction report attached

Red lettering indicates minimum mandatory information. See reverse for notes & definitions of abbreviations.

**Owner name:** Totongi Forestry Ltd.  
**Mailing address:** PO Box 904 Town Victoria Prov BC Postal Code V8W 2K4  
**Well Location: Address:** Street no. Street name Town Jordan River  
☒ Legal description: Lot Plan 427R D.L. Block Sec. 4 Twp. Rg. Land District Kelowna  
☒ PID: and Description of well location (attach sketch, if nec.): except those parts in plans: 427R, 33875, well near pit.  
**NAD 83: Zone:** 10 UTM Northing: 5364407 m Latitude (see note 3):  
(see note 2) and UTM Easting: 100421804 m Longitude:  
**Method of drilling:** ☒ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify): Dual Rotary  
**Orientation of well:** ☒ vertical ☐ horizontal Ground elevation: 194' ft (asl) Method (see note 4):  
**Class of well (see note 5):** Water Supply Sub-class of well: Domestic  
Water supply wells: indicate intended water use: ☒ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify):

Lithologic description (see notes 7-14)				or closure description (see notes 15 and 16)		Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)			
0	56'		Brown	Gravel, coarse			
56'	59'		Gray	Sand		w.B.	
59'	114'		Brown	Gravel, sand cobbles		w.B.	
				Did Not Bottom gravel			

**Casing details**

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0	15'	10"	Steel Puddledant		
0	114'	6"	Steel	.219 DR	

**Screen details**

From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size
			No Screen	
			Intake gravel Pack	

**Surface seal:** Type: Bentonite Depth: 15' ft  
Method of installation: ☐ Poured ☐ Pumped Thickness: 0-15' in  
Backfill: Type: Depth: ft  
Liner: ☐ PVC ☐ Other (specify):  
Diameter: in Thickness: in  
From: ft (bgl) To: ft (bgl) Perforated: From: ft (bgl) To: ft (bgl)

**Developed by:**  
☒ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☐ Bailing  
☐ Other (specify): Total duration: 1.5 hrs  
Notes:

**Well yield estimated by:**  
☐ Pumping ☒ Air lifting ☐ Bailing ☐ Other (specify):  
Rate: 20 USgpm Duration: 1.5 hrs  
SWL before test: ft (btoc) Pumping water level: ft (btoc)

**Obvious water quality characteristics:**  
☒ Fresh ☐ Salty ☐ Clear ☒ Cloudy ☐ Sediment ☐ Gas  
Colour/odour: Brown colour Water sample collected: ☐

**Well driller (print clearly):**  
**Name (first, last) (see note 19):** Scott Burrows  
**Registration no. (see note 20):** WJDO4121407  
Consultant (if applicable; name and company):  
**Signature of Driller Responsible:** [Signature]  
**PLEASE NOTE:** The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

**Final well completion data:**  
Total depth drilled: 114' ft Finished well depth: 114' ft (bgl)  
Final stick up: 18' in Depth to bedrock: ft (bgl)  
SWL: 71' ft (btoc) Estimated well yield: 10 USgpm  
Artesian flow: USgpm, or Artesian pressure: ft  
Type of well cap: welded lid Well disinfected: ☒ Yes ☐ No  
Where well ID plate is attached: on well

**Well closure information:**  
Reason for closure:  
Method of closure: ☐ Poured ☐ Pumped  
Sealant material: Backfill material:  
Details of closure (see note 17):

**Date of work (YYYY/MM/DD):**  
**Started:** July 18, 2006 **Completed:** July 19, 2006  
Comments:

White: Customer copy  
Canary: Driller copy  
Pink: Ministry copy Sheet \_\_\_\_ of \_\_\_\_

09AC 050. 232



**APPENDIX B**  
**PUMPING TEST DATA**

**B1: Pumped Well WID 69081(WTN 128906)**  
**B2: Observation Well WID 18153 (WTN 95648)**

# APPENDIX B1

## Pumping Test Data for Subject Well

Project: Well WID 69081 (WTN 128906)

Client: [REDACTED]

Location: 12036 West Coast Rd., Jordan River

Date of Test: Wednesday February 14, 2024

Test Conducted by: Independent Pump & Mechanical Ltd.

Reference: all readings from top of sounding tube

at top of casing

Stick up: 0.56 m (22")

Observation Wells: WID 18153 (WTN 95648)

Pumped Well: 33.83 m deep (111 feet)

Pumping Rate: 45.07 L/min (11.91 USgpm)

Static Water Level: 19.12 m

Pump Start Time: 8:00 AM Feb. 14, 2024

Pump End Time: 8:15 AM Feb. 15, 2024

Analysis by: A. Kohut, P.Eng.

### Drawdown Data:

### Recovery Data:

Time (minutes)	Water Level (m)	Drawdown (m)	Time t (minutes)	Time t' (minutes)	Water Level (m)	t/t'	Residual Drawdown (m)
1	19.300	0.180	1456	1	19.430	1456.0	0.310
2	19.360	0.240	1457	2	19.430	728.5	0.310
3	19.385	0.265	1458	3	19.310	486.0	0.190
4	19.405	0.285	1459	4	19.300	364.8	0.180
5	19.420	0.300	1460	5	19.280	292.0	0.160
6	19.435	0.315	1461	6	19.270	243.5	0.150
7	19.450	0.330	1462	7	19.260	208.9	0.140
8	19.455	0.335	1464	9	19.260	162.7	0.140
9	19.460	0.340	1465	10	19.250	146.5	0.130
10	19.465	0.345	1467	12	19.240	122.3	0.120
12	19.465	0.345	1469	14	19.230	104.9	0.110
14	19.470	0.350	1471	16	19.225	91.9	0.105
16	19.470	0.350	1473	18	19.220	81.8	0.100
18	19.475	0.355	1475	20	19.220	73.8	0.100
20	19.475	0.355	1480	25	19.210	59.2	0.090
25	19.480	0.360	1485	30	19.200	49.5	0.080
30	19.480	0.360	1490	35	19.200	42.6	0.080
35	19.482	0.362	1495	40	19.200	37.4	0.080
40	19.485	0.365	1500	45	19.200	33.3	0.080
45	19.485	0.365	1505	50	19.200	30.1	0.080
50	19.490	0.370	1515	60	19.200	25.3	0.080
60	19.495	0.375	1525	70	19.200	21.8	0.080
70	19.500	0.380	1535	80	19.200	19.2	0.080
80	19.550	0.430	1545	90	19.200	17.2	0.080
90	19.510	0.390	1555	100	19.195	15.6	0.075
100	19.510	0.390	1575	120	19.195	13.1	0.075
120	19.510	0.390	1595	140	19.195	11.4	0.075
140	19.510	0.390	1615	160	19.195	10.1	0.075
160	19.510	0.390	1635	180	19.195	9.1	0.075
180	19.510	0.390	1655	200	19.195	8.3	0.075
200	19.510	0.390	1675	220	19.195	7.6	0.075
220	19.510	0.390	1695	240	19.195	7.1	0.075
240	19.510	0.390	1725	270	19.195	6.4	0.075
270	19.510	0.390	1755	300	19.195	5.9	0.075
300	19.510	0.390	1785	330	19.195	5.4	0.075
330	19.510	0.390	1815	360	19.195	5.0	0.075
360	19.510	0.390					
390	19.510	0.390					
420	19.510	0.390					
450	19.510	0.390					
480	19.510	0.390					
510	19.510	0.390					
540	19.510	0.390					
570	19.510	0.390					
600	19.510	0.390					
630	19.510	0.390					
660	19.510	0.390					

Drawdown Data:

Recovery Data:

Time (minutes)	Water Level (m)	Drawdown (m)	Time t (minutes)	Time t' (minutes)	Water Level (m)	t/t'	Residual Drawdown (m)
690	19.510	0.390					
720	19.510	0.390					
750	19.510	0.390					
780	19.510	0.390					
810	19.510	0.390					
840	19.510	0.390					
870	19.515	0.395					
900	19.515	0.395					
930	19.520	0.400					
960	19.520	0.400					
990	19.520	0.400					
1020	19.525	0.405					
1050	19.525	0.405					
1080	19.525	0.405					
1110	19.525	0.405					
1140	19.530	0.410					
1170	19.530	0.410					
1200	19.530	0.410					
1230	19.540	0.420					
1260	19.540	0.420					
1290	19.550	0.430					
1320	19.550	0.430					
1350	19.550	0.430					
1380	19.560	0.440					
1410	19.565	0.445					
1440	19.570	0.450					
1455	19.570	0.450					

APPENDIX B2

Pumping Test Data for Observation Well WID 18153

Project: Well WID 69081 (WTN 128906)  
Client: [REDACTED]  
Location: 12036 West Coast Rd., Jordan River  
Date of Test: Wednesday February 14, 2024  
Test Conducted by: Independent Pump & Mechanical Ltd.

Reference: all readings from top of sounding tube  
at top of casing  
Obs Well Stick up: 0.30 m (12")  
Pumped Well: WID 69081 (WTN 128906)

Observation Well: 34.75 m deep (114 feet)  
Pumping Rate: 45.07 L/min (11.91 USgpm)  
Static Water Level: 23.400

Pump Start Time: 8:00 AM Feb. 14, 2024  
Pump End Time: 8:15 AM Feb. 15, 2024  
Analysis by: A. Kohut, P.Eng.

Drawdown Data:

Recovery Data:

Time (minutes)	Water Level (m)	Drawdown (m)	Time t (minutes)	Time t' (minutes)	Water Level (m)	t/t'	Residual Drawdown (m)
10	23.406	0.006					
20	23.411	0.011					
30	23.686	0.286					
40	23.683	0.283					
50	23.687	0.287					
60	23.687	0.287					
70	23.692	0.292					
80	23.690	0.290					
90	23.696	0.296					
100	23.710	0.310					
120	23.714	0.314					
140	23.716	0.316					
160	23.717	0.317					
180	23.714	0.314					
200	23.710	0.310					
220	23.709	0.309					
240	23.705	0.305					
260	23.703	0.303					
280	23.701	0.301					
300	23.702	0.302					
330	23.694	0.294					
360	23.686	0.286					
390	23.687	0.287					
420	23.690	0.290					
450	23.688	0.288					
480	23.689	0.289					
510	23.685	0.285					
540	23.689	0.289					
570	23.688	0.288					
600	23.678	0.278					
630	23.684	0.284					
680	23.680	0.280					
730	23.682	0.282					
780	23.684	0.284					
830	23.687	0.287					
880	23.689	0.289					
930	23.693	0.293					
980	23.692	0.292					
1030	23.694	0.294					
1080	23.697	0.297					
1130	23.703	0.303					
1180	23.705	0.305					
1230	23.715	0.315					
1280	23.719	0.319					
1330	23.731	0.331					
1380	23.738	0.338	Note: All readings during pumping extracted from datalogger.				
1440	23.757	0.357					
1450	23.760	0.360					

**APPENDIX C**  
**LABORATORY WATER QUALITY ANALYSES**  
**FOR WID 69081 (WTN 128906)**  
**February 15, 2024**





Your Project #: TOTANGI  
Your C.O.C. #: WI034487

**Attention: AL KOHUT**  
HY-GEO CONSULTING  
4470 Arsens Place  
VICTORIA, BC  
Canada V8Z 2M9

**Report Date: 2024/02/26**  
Report #: R3467520  
Version: 1 - Final

### CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C410716**  
**Received: 2024/02/15, 11:29**

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO <sub>3</sub> ,HCO <sub>3</sub> ,OH	1	N/A	2024/02/16	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2024/02/21	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	1	N/A	2024/02/16	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	1	N/A	2024/02/16	BBY6SOP-00026	SM 24 2510 B m
Fluoride	1	N/A	2024/02/21	BBY6SOP-00037	SM 24 4500-F C m
Sulphide (as H <sub>2</sub> S) (1)	1	N/A	2024/02/21		Auto Calc
Hardness Total (calculated as CaCO <sub>3</sub> ) (3)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO <sub>3</sub> )	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Mercury (Total) by CV	1	2024/02/16	2024/02/16	AB SOP-00084	BCMOE BCLM Oct2013 m
Heterotrophic Plate Count (MF) in Water	1	N/A	2024/02/16	BBY4SOP-00003	SM 24 9215D
Iron Related Bacteria (4)	1	N/A	2024/02/16	BBY4SOP-00004	BI BART User Manual
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (dissolved) (5)	1	N/A	2024/02/21	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	1	N/A	2024/02/21	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrogen (Total)	1	N/A	2024/02/22	BBY6SOP-00016	SM 24 4500-N C m
Ammonia-N (Total)	1	N/A	2024/02/21	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate + Nitrite (N)	1	N/A	2024/02/16	BBY6SOP-00010	SM 24 4500-NO3- H m
Nitrite (N) Regular Level Water	1	N/A	2024/02/16	BBY6SOP-00010	SM 24 4500-NO2- m
Nitrogen - Nitrate (as N)	1	N/A	2024/02/17	BBY WI-00033	Auto Calc
Nitrogen (Tot. Organic) Calculation	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
pH @25°C (6)	1	N/A	2024/02/16	BBY6SOP-00026	SM 24 4500-H+ B m
Sat. pH and Langelier Index (@ 4.4C)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Total Sulphide (1)	1	N/A	2024/02/21	AB SOP-00080	SM 24 4500 S2-A D Fm
Sulphate Reducing Bacteria (4)	1	N/A	2024/02/16	BBY4SOP-00004	BI BART User Manual
Total Dissolved Solids (Filt. Residue)	1	2024/02/21	2024/02/22	BBY6SOP-00033	SM 24 2540 C m
Total Coliform & E.Coli by MF-Chromocult	1	N/A	2024/02/16	BBY4SOP-00143	Merck KGaA Version 1
Carbon (Total Organic) (7)	1	N/A	2024/02/16	BBY6SOP-00053	SM 24 5310 B m
Turbidity	1	N/A	2024/02/16	BBY6SOP-00027	SM 24 2130 B m



Your Project #: TOTANGI  
Your C.O.C. #: W1034487

**Attention: AL KOHUT**  
HY-GEO CONSULTING  
4470 Arsens Place  
VICTORIA, BC  
Canada V8Z 2M9

**Report Date: 2024/02/26**  
Report #: R3467520  
Version: 1 - Final

### **CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C410716**  
**Received: 2024/02/15, 11:29**

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
UV Transmittance (2)	1	2024/02/23	2024/02/23	CAM SOP-00459	SM 24 5910 m

#### **Remarks:**

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St., Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Campobello, 6740 Campobello Road, Mississauga, ON, L5N 2L8

(3) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(4) Presence/Absence Method. Number is an estimate.

(5) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(7) TOC present in the sample should be considered as non-purgeable TOC.



Your Project #: TOTANGI  
Your C.O.C. #: WI034487

**Attention: AL KOHUT**  
HY-GEO CONSULTING  
4470 Arsens Place  
VICTORIA, BC  
Canada V8Z 2M9

**Report Date: 2024/02/26**  
Report #: R3467520  
Version: 1 - Final

### CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C410716**  
**Received: 2024/02/15, 11:29**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:  
Michelle Rivest (Hospedales), B.Sc., Customer Solutions Representative  
Email: michelle.rivest@bureauveritas.com  
Phone# (604) 734 7276

=====

This report has been generated and distributed using a secure automated process.  
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.  
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Total Cover Pages : 3  
Page 3 of 13

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**VIHA PKG, WELLS/SPRINGS - BURNABY (WATER)**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		W1034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
<b>ANIONS</b>				
Nitrite (N)	mg/L	<0.0050	0.0050	8287596
<b>Calculated Parameters</b>				
Total Hardness (CaCO <sub>3</sub> )	mg/L	30.9	0.50	8285428
Nitrate (N)	mg/L	<0.020	0.020	8285468
Total Organic Nitrogen (N)	mg/L	0.589	0.020	8286395
Sulphide (as H <sub>2</sub> S)	mg/L	0.0062	0.0020	8285763
<b>Misc. Inorganics</b>				
Conductivity	uS/cm	110	2.0	8287440
pH	pH	6.47	N/A	8287434
Total Organic Carbon (C)	mg/L	1.5	0.50	8287657
Total Dissolved Solids	mg/L	90	10	8290422
<b>Anions</b>				
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<1.0	1.0	8287437
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	41	1.0	8287437
Bicarbonate (HCO <sub>3</sub> )	mg/L	50	1.0	8287437
Carbonate (CO <sub>3</sub> )	mg/L	<1.0	1.0	8287437
Dissolved Fluoride (F)	mg/L	<0.050	0.050	8290280
Hydroxide (OH)	mg/L	<1.0	1.0	8287437
Total Sulphide	mg/L	0.0058	0.0018	8289796
Chloride (Cl)	mg/L	4.4	1.0	8290536
Sulphate (SO <sub>4</sub> )	mg/L	<1.0	1.0	8290536
<b>MISCELLANEOUS</b>				
True Colour	Col. Unit	128	10	8287165
Transmittance at 254nm	%T/cm	18	N/A	8293309
<b>Nutrients</b>				
Total Ammonia (N)	mg/L	0.29	0.015	8290458
Nitrate plus Nitrite (N)	mg/L	<0.020	0.020	8287592
Total Nitrogen (N)	mg/L	0.877	0.020	8290418
<b>Physical Properties</b>				
Turbidity	NTU	9.9	0.10	8287002
RDL = Reportable Detection Limit N/A = Not Applicable				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**VIHA PKG, WELLS/SPRINGS - BURNABY (WATER)**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		W1034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Elements</b>				
Total Mercury (Hg)	ug/L	<0.0019	0.0019	8287581
<b>Total Metals by ICPMS</b>				
Total Aluminum (Al)	ug/L	13.3	3.0	8290301
Total Antimony (Sb)	ug/L	<0.50	0.50	8290301
Total Arsenic (As)	ug/L	8.03	0.10	8290301
Total Barium (Ba)	ug/L	7.0	1.0	8290301
Total Beryllium (Be)	ug/L	<0.10	0.10	8290301
Total Bismuth (Bi)	ug/L	<1.0	1.0	8290301
Total Boron (B)	ug/L	<50	50	8290301
Total Cadmium (Cd)	ug/L	0.031	0.010	8290301
Total Chromium (Cr)	ug/L	<1.0	1.0	8290301
Total Cobalt (Co)	ug/L	<0.20	0.20	8290301
Total Copper (Cu)	ug/L	2.30	0.20	8290301
Total Iron (Fe)	ug/L	9220	5.0	8290301
Total Lead (Pb)	ug/L	0.20	0.20	8290301
Total Manganese (Mn)	ug/L	202	1.0	8290301
Total Molybdenum (Mo)	ug/L	<1.0	1.0	8290301
Total Nickel (Ni)	ug/L	<1.0	1.0	8290301
Total Selenium (Se)	ug/L	<0.10	0.10	8290301
Total Silicon (Si)	ug/L	17200	100	8290301
Total Silver (Ag)	ug/L	<0.020	0.020	8290301
Total Strontium (Sr)	ug/L	25.5	1.0	8290301
Total Thallium (Tl)	ug/L	<0.010	0.010	8290301
Total Tin (Sn)	ug/L	<5.0	5.0	8290301
Total Titanium (Ti)	ug/L	<5.0	5.0	8290301
Total Uranium (U)	ug/L	<0.10	0.10	8290301
Total Vanadium (V)	ug/L	<5.0	5.0	8290301
Total Zinc (Zn)	ug/L	41.9	5.0	8290301
Total Zirconium (Zr)	ug/L	<0.10	0.10	8290301
Total Calcium (Ca)	mg/L	7.86	0.050	8285820
Total Magnesium (Mg)	mg/L	2.74	0.050	8285820
Total Potassium (K)	mg/L	0.786	0.050	8285820
Total Sodium (Na)	mg/L	6.47	0.050	8285820
RDL = Reportable Detection Limit				





Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**VIHA PKG, WELLS/SPRINGS - BURNABY (WATER)**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		W1034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
Total Sulphur (S)	mg/L	<3.0	3.0	8285820
<b>Microbiological Param.</b>				
Heterotrophic Plate Count	CFU/mL	<1	1	8287355
Iron Bacteria	CFU/mL	25	25	8287353
Sulphate reducing bacteria	CFU/mL	<75	75	8287354
Total Coliforms	CFU/100mL	0	N/A	8287351
E. coli	CFU/100mL	0	N/A	8287351
<b>Calculated Parameters</b>				
Langelier Index (@ 4.4C)	N/A	-2.60	N/A	8286396
Langelier Index (@ 60C)	N/A	-1.82	N/A	8286397
Saturation pH (@ 4.4C)	N/A	9.06	N/A	8286396
Saturation pH (@ 60C)	N/A	8.29	N/A	8286397
RDL = Reportable Detection Limit				
N/A = Not Applicable				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**CSR D. METALS (NO CV-HG)-DISS**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		WI034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Calculated Parameters</b>				
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	31.8	0.50	B285810
<b>Dissolved Metals by ICPMS</b>				
Dissolved Aluminum (Al)	ug/L	5.1	3.0	B287484
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	B287484
Dissolved Arsenic (As)	ug/L	7.78	0.10	B287484
Dissolved Barium (Ba)	ug/L	6.7	1.0	B287484
Dissolved Beryllium (Be)	ug/L	<0.10	0.10	B287484
Dissolved Bismuth (Bi)	ug/L	<1.0	1.0	B287484
Dissolved Boron (B)	ug/L	<50	50	B287484
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	B287484
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	B287484
Dissolved Cobalt (Co)	ug/L	<0.20	0.20	B287484
Dissolved Copper (Cu)	ug/L	0.81	0.20	B287484
Dissolved Iron (Fe)	ug/L	9560	5.0	B287484
Dissolved Lead (Pb)	ug/L	<0.20	0.20	B287484
Dissolved Lithium (Li)	ug/L	<2.0	2.0	B287484
Dissolved Manganese (Mn)	ug/L	198	1.0	B287484
Dissolved Molybdenum (Mo)	ug/L	<1.0	1.0	B287484
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	B287484
Dissolved Selenium (Se)	ug/L	<0.10	0.10	B287484
Dissolved Silicon (Si)	ug/L	16000	100	B287484
Dissolved Silver (Ag)	ug/L	<0.020	0.020	B287484
Dissolved Strontium (Sr)	ug/L	26.6	1.0	B287484
Dissolved Thallium (Tl)	ug/L	<0.010	0.010	B287484
Dissolved Tin (Sn)	ug/L	<5.0	5.0	B287484
Dissolved Titanium (Ti)	ug/L	<5.0	5.0	B287484
Dissolved Uranium (U)	ug/L	<0.10	0.10	B287484
Dissolved Vanadium (V)	ug/L	<5.0	5.0	B287484
Dissolved Zinc (Zn)	ug/L	26.9	5.0	B287484
Dissolved Zirconium (Zr)	ug/L	<0.10	0.10	B287484
Dissolved Calcium (Ca)	mg/L	8.07	0.050	B285811
Dissolved Magnesium (Mg)	mg/L	2.84	0.050	B285811
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**CSR D. METALS (NO CV-HG)-DISS**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		W1034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
Dissolved Potassium (K)	mg/L	0.786	0.050	B285811
Dissolved Sodium (Na)	mg/L	6.32	0.050	B285811
Dissolved Sulphur (S)	mg/L	<3.0	3.0	B285811
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

#### GENERAL COMMENTS

Sample: CJG147 [JORDAN R. WELL] : Sample was analyzed past recommended hold time for Heterotrophic Plate Count (MF) in Water. Sample was analyzed past recommended hold time for Iron Related Bacteria. Sample was analyzed past recommended hold time for Sulphate Reducing Bacteria. UVT Analysis: Sample received at the analyzing laboratory past the recommended holding time. Analysis performed with client's consent.

Results relate only to the items tested.



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

QUALITY ASSURANCE REPORT

HY-GEO CONSULTING  
Client Project #: TOTANGI

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B287002	Turbidity	2024/02/16			101	80 - 120	<0.10	NTU	NC	20
B287165	True Colour	2024/02/16			103	80 - 120	<2.0	Col. Unit	NC	20
B287434	pH	2024/02/16			100	97 - 103			0.33	N/A
B287437	Alkalinity (PP as CaCO <sub>3</sub> )	2024/02/16					<1.0	mg/L	NC	20
B287437	Alkalinity (Total as CaCO <sub>3</sub> )	2024/02/16			97	80 - 120	<1.0	mg/L	0.43	20
B287437	Bicarbonate (HCO <sub>3</sub> )	2024/02/16					<1.0	mg/L	0.43	20
B287437	Carbonate (CO <sub>3</sub> )	2024/02/16					<1.0	mg/L	NC	20
B287437	Hydroxide (OH)	2024/02/16					<1.0	mg/L	NC	20
B287440	Conductivity	2024/02/16			100	90 - 110	<2.0	uS/cm		
B287484	Dissolved Aluminum (Al)	2024/02/21	104	80 - 120	106	80 - 120	<3.0	ug/L	15	20
B287484	Dissolved Antimony (Sb)	2024/02/21	103	80 - 120	104	80 - 120	<0.50	ug/L	1.4	20
B287484	Dissolved Arsenic (As)	2024/02/21	108	80 - 120	108	80 - 120	<0.10	ug/L	0.96	20
B287484	Dissolved Barium (Ba)	2024/02/21	100	80 - 120	103	80 - 120	<1.0	ug/L	0.39	20
B287484	Dissolved Beryllium (Be)	2024/02/21	105	80 - 120	105	80 - 120	<0.10	ug/L	NC	20
B287484	Dissolved Bismuth (Bi)	2024/02/21	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B287484	Dissolved Boron (B)	2024/02/21	105	80 - 120	106	80 - 120	<50	ug/L	NC	20
B287484	Dissolved Cadmium (Cd)	2024/02/21	104	80 - 120	104	80 - 120	<0.010	ug/L	NC	20
B287484	Dissolved Chromium (Cr)	2024/02/21	101	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
B287484	Dissolved Cobalt (Co)	2024/02/21	99	80 - 120	102	80 - 120	<0.20	ug/L	NC	20
B287484	Dissolved Copper (Cu)	2024/02/21	96	80 - 120	101	80 - 120	<0.20	ug/L	0.46	20
B287484	Dissolved Iron (Fe)	2024/02/21	105	80 - 120	105	80 - 120	<5.0	ug/L	15	20
B287484	Dissolved Lead (Pb)	2024/02/21	99	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
B287484	Dissolved Lithium (Li)	2024/02/21	101	80 - 120	103	80 - 120	<2.0	ug/L	NC	20
B287484	Dissolved Manganese (Mn)	2024/02/21	99	80 - 120	102	80 - 120	<1.0	ug/L	0.60	20
B287484	Dissolved Molybdenum (Mo)	2024/02/21	NC	80 - 120	108	80 - 120	<1.0	ug/L	1.5	20
B287484	Dissolved Nickel (Ni)	2024/02/21	98	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
B287484	Dissolved Selenium (Se)	2024/02/21	102	80 - 120	105	80 - 120	<0.10	ug/L	9.3	20
B287484	Dissolved Silicon (Si)	2024/02/21	NC	80 - 120	111	80 - 120	<100	ug/L	0.14	20
B287484	Dissolved Silver (Ag)	2024/02/21	103	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
B287484	Dissolved Strontium (Sr)	2024/02/21	NC	80 - 120	103	80 - 120	<1.0	ug/L	2.6	20
B287484	Dissolved Thallium (Tl)	2024/02/21	100	80 - 120	102	80 - 120	<0.010	ug/L	NC	20
B287484	Dissolved Tin (Sn)	2024/02/21	102	80 - 120	104	80 - 120	<5.0	ug/L	NC	20
B287484	Dissolved Titanium (Ti)	2024/02/21	98	80 - 120	103	80 - 120	<5.0	ug/L	NC	20

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Bureau Veritas Burnaby, 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386





Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

QUALITY ASSURANCE REPORT(CONT'D)

HY-GEO CONSULTING  
Client Project #: TOTANGI

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B287484	Dissolved Uranium (U)	2024/02/21	103	80 - 120	102	80 - 120	<0.10	ug/L	0.33	20
B287484	Dissolved Vanadium (V)	2024/02/21	102	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
B287484	Dissolved Zinc (Zn)	2024/02/21	99	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
B287484	Dissolved Zirconium (Zr)	2024/02/21	101	80 - 120	97	80 - 120	<0.10	ug/L	NC	20
B287581	Total Mercury (Hg)	2024/02/16	87	80 - 120	91	80 - 120	<0.0019	ug/L	NC	20
B287592	Nitrate plus Nitrite (N)	2024/02/16	113	80 - 120	106	80 - 120	<0.020	mg/L	NC	25
B287596	Nitrite (N)	2024/02/16	106	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
B287657	Total Organic Carbon (C)	2024/02/16			105	80 - 120	<0.50	mg/L		
B289796	Total Sulphide	2024/02/21	97	80 - 120	94	80 - 120	<0.0018	mg/L	NC	20
B290280	Dissolved Fluoride (F)	2024/02/21	105	80 - 120	102	80 - 120	<0.050	mg/L	NC	20
B290301	Total Aluminum (Al)	2024/02/21	99	80 - 120	103	80 - 120	<3.0	ug/L	4.2	20
B290301	Total Antimony (Sb)	2024/02/21	103	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
B290301	Total Arsenic (As)	2024/02/21	106	80 - 120	109	80 - 120	<0.10	ug/L	0.24	20
B290301	Total Barium (Ba)	2024/02/21	100	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
B290301	Total Beryllium (Be)	2024/02/21	97	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
B290301	Total Bismuth (Bi)	2024/02/21	95	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
B290301	Total Boron (B)	2024/02/21	110	80 - 120	112	80 - 120	<50	ug/L	3.5	20
B290301	Total Cadmium (Cd)	2024/02/21	100	80 - 120	103	80 - 120	<0.010	ug/L	7.6	20
B290301	Total Chromium (Cr)	2024/02/21	96	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B290301	Total Cobalt (Co)	2024/02/21	97	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
B290301	Total Copper (Cu)	2024/02/21	93	80 - 120	100	80 - 120	<0.20	ug/L	1.6	20
B290301	Total Iron (Fe)	2024/02/21	100	80 - 120	104	80 - 120	<5.0	ug/L	0.66	20
B290301	Total Lead (Pb)	2024/02/21	97	80 - 120	102	80 - 120	<0.20	ug/L	0.90	20
B290301	Total Manganese (Mn)	2024/02/21	94	80 - 120	98	80 - 120	<1.0	ug/L	0.28	20
B290301	Total Molybdenum (Mo)	2024/02/21	108	80 - 120	105	80 - 120	<1.0	ug/L	0.031	20
B290301	Total Nickel (Ni)	2024/02/21	95	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B290301	Total Selenium (Se)	2024/02/21	100	80 - 120	104	80 - 120	<0.10	ug/L	NC	20
B290301	Total Silicon (Si)	2024/02/21	NC	80 - 120	116	80 - 120	<100	ug/L	0.48	20
B290301	Total Silver (Ag)	2024/02/21	99	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
B290301	Total Strontium (Sr)	2024/02/21	NC	80 - 120	98	80 - 120	<1.0	ug/L	1.3	20
B290301	Total Thallium (Tl)	2024/02/21	99	80 - 120	104	80 - 120	<0.010	ug/L	NC	20
B290301	Total Tin (Sn)	2024/02/21	102	80 - 120	105	80 - 120	<5.0	ug/L	NC	20
B290301	Total Titanium (Ti)	2024/02/21	100	80 - 120	102	80 - 120	<5.0	ug/L	NC	20

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Bureau Veritas Burnaby, 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

QUALITY ASSURANCE REPORT(CONT'D)

HY-GEO CONSULTING  
Client Project #: TOTANGI

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B290301	Total Uranium (U)	2024/02/21	103	80 - 120	105	80 - 120	<0.10	ug/L	3.5	20
B290301	Total Vanadium (V)	2024/02/21	98	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
B290301	Total Zinc (Zn)	2024/02/21	95	80 - 120	102	80 - 120	<5.0	ug/L	0.40	20
B290301	Total Zirconium (Zr)	2024/02/21	106	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
B290418	Total Nitrogen (N)	2024/02/22			103	80 - 120	<0.020	mg/L	NC	20
B290422	Total Dissolved Solids	2024/02/22	103	80 - 120	101	80 - 120	<10	mg/L	3.0	20
B290458	Total Ammonia (N)	2024/02/21	105	80 - 120	100	80 - 120	<0.015	mg/L	1.7	20
B290536	Chloride (Cl)	2024/02/21	107	80 - 120	100	80 - 120	<1.0	mg/L	3.4	20
B290536	Sulphate (SO4)	2024/02/21	92	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
B293309	Transmittance at 254nm	2024/02/23			99	97 - 103			1.5	25
N/A = Not Applicable										
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.										
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.										
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.										
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.										
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)										
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).										



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

#### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Anastassia Hamanov, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



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Ministry of  
Environment

- ☒ Well Construction Report  
☐ Well Closure Report  
☐ Well Alteration Report

**DRILLWELL ENTERPRISES LTD.**  
4994 Polkey Road  
Duncan, B.C. V9L 6W3  
Phone: 250-746-5288  
Stamp phone/fax/e-mail here, if desired.

Ministry Well ID Plate Number: 69081  
Ministry Well Tag Number:  
☐ Confirmation/alternative specs. attached  
☐ Original well construction report attached

Red lettering indicates minimum mandatory information.

See reverse for notes & definitions of abbreviations.

Owner name: Totangi Properties Ltd.  
Mailing address: Victoria Main PO Box 904 Town Victoria Prov. BC Postal Code V8W 2R9  
Well Location: Address: Street no. 12036 Street name West Coast Road Town Tordan River  
or Legal description: Lot Plan D.L. Block Sec. Twp. Rg. Land District  
or PID: 009-573-356 and Description of well location (attach sketch, if nec.):

NAD 83: Zone: 10 (and) UTM Easting: 0421647 m (or) Latitude (see note 3):  
(see note 2) UTM Northing: 5364372 m (or) Longitude:  
Method of drilling: ☒ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify): Dual Rotary  
Orientation of well: ☒ vertical ☐ horizontal Ground elevation: 185 ft (asl) Method (see note 4): GPS  
Class of well (see note 5): Water Supply Sub-class of well: Domestic  
Water supply wells: indicate intended water use: ☒ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify):

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)				Water-bearing		Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)	Estimated Flow (USgpm)	
0	26'	Hard	Brown	Gravel + Cobbles		
26'	71'	Med	Grey	Till + Very silty gravel		
71'	111'	Hard	Grey	Gravel, Sandy, grey color	WB	
111'	111'	Hard	Grey	till		

Casing details				Well	
From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Thickness in	Drive Shoe
0	17'	10"	Steel / Removed	—	—
0	111'	6"	Steel	.219	DR

Screen details				Type (see note 18)		Slot Size
From ft (bgl)	To ft (bgl)	Dia in				
104'6"	106'6"	5"	KPacker + Risr			
106'6"	111'	5"	SS Screen			.050"

Surface seal: Type: Bentonite Depth: 17' ft  
Method of installation: ☒ Poured ☐ Pumped Thickness: 2" in  
Backfill: Type: Depth: ft  
Liner: ☐ PVC ☐ Other (specify):  
Diameter: in Thickness: in  
From: ft (bgl) To: ft (bgl) Perforated: From: ft (bgl) To: ft (bgl)

Intake: ☒ Screen ☐ Open bottom ☐ Uncased hole  
Screen type: ☒ Telescope ☐ Pipe size  
Screen material: ☒ Stainless steel ☐ Plastic ☐ Other (specify):  
Screen opening: ☒ Continuous slot ☐ Slotted ☐ Perforated pipe  
Screen bottom: ☐ Bail ☒ Plug ☐ Plate ☐ Other (specify):  
Filter pack: From: ft To: ft Thickness: in  
Type and size of material:

Developed by:  
☒ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☒ Bailing  
☐ Other (specify): Total duration: 3 hrs  
Notes:

Well yield estimated by:  
☐ Pumping ☒ Air lifting ☐ Bailing ☐ Other (specify):  
Rate: 30 USgpm Duration: 3 hrs  
SWL before test: ft (btoc) Pumping water level: ft (btoc)

Obvious water quality characteristics:  
☒ Fresh ☐ Salty ☐ Clear ☒ Cloudy ☐ Sediment ☐ Gas

Colour/odour: Water sample collected: ☐

Well driller (print clearly):  
Name (first, last) (see note 19): Scott Burrows  
Registration no. (see note 20): WD04121407  
Consultant (if applicable; name and company): ALAN KOHUT CHY-Geo  
DECLARATION: Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the Water Act and the Ground Water Protection Regulation.  
Signature of Driller Responsible: [Signature]

Final well completion data:  
Total depth drilled: 111' ft Finished well depth: 111' ft (bgl)  
Final stick up: 22" in Depth to bedrock: NA ft (bgl)  
SWL: 71' ft (btoc) Estimated well yield: 30 USgpm  
Artesian flow: USgpm, or Artesian pressure: ft  
Type of well cap: welded lid Well disinfected: ☒ Yes ☐ No  
Where well ID plate is attached: on well casing  
Well closure information:  
Reason for closure:  
Method of closure: ☐ Poured ☐ Pumped  
Sealant material: Backfill material:  
Details of closure (see note 17):

Date of work (YYYY/MM/DD):  
Started: 2023/09/29 Completed: 2023/10/02  
Comments:



ZONE 10 N: 5364407 E 421804

**BRITISH COLUMBIA**  
Ministry of Environment

☒ Well Construction Report **DRILLWELL ENTERPRISES LTD.**  
☐ Well Closure Report  
☐ Well Alteration Report

Stamp completed by: **DRILLWELL ENTERPRISES LTD.**  
4694 Pollock Road  
Duncan, B.C. V9L 6W3  
Phone: 250-746-5268

Ministry Well ID Plate Number: **18153**  
Ministry Well Tag Number: **95648**  
☐ Confirmation/alternative specs. attached  
☐ Original well construction report attached

Red lettering indicates minimum mandatory information. See reverse for notes & definitions of abbreviations.

**Owner name:** Totang Forestry Ltd.  
**Mailing address:** PO Box 904  
**Town:** Victoria **Prov:** BC **Postal Code:** V8W 2K4

**Well Location: Address:** Street no. **437R** **Town:** Jordan River  
**or Legal description:** Lot **437R** D.L. **4** Block **4** Twp. **4** Rg. **4** Land District **4**  
**or PID:** **437R** **and Description of well location (attach sketch, if nec.):** except those parts in plans: 437R, 23875, 437R, 23875, 437R, 23875

**NAD 83: Zone:** **10** **UTM Northing:** **5364407** m **Latitude (see note 3):**  
**(see note 2)** **UTM Easting:** **100421804** m **Longitude:**

**Method of drilling:** ☒ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify): **Dual Rotary**  
**Orientation of well:** ☒ vertical ☐ horizontal **Ground elevation:** **194'** ft (asl) **Method (see note 4):**

**Class of well (see note 5):** **Water Supply** **Sub-class of well:** **Domestic**  
Water supply wells: indicate intended water use: ☒ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify):

**Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)**

From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)	Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
0	56'		Brown	Gravel, coarse		
56'	59'		Gray	Sand	WB	
59'	114'		Brown	Gravel, sand cobbles	WB	
Did Not Bottom gravel						

**Casing details**

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0	15'	10"	Steel Piledent		
0	114'	6"	Steel	.219 DR	

**Screen details**

From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size
No Screen				
Natural gravel Pack				

**Surface seal:** Type: **Bentonite** **Depth:** **15'** ft  
**Method of installation:** ☐ Poured ☐ Pumped **Thickness:** **0-15'** in  
**Backfill:** Type: **Bentonite** **Depth:** **15'** ft

**Liner:** ☐ PVC ☐ Other (specify): **None**  
**Diameter:** **10"** in **Thickness:** **0.219"** in  
**From:** **0** ft (bgl) **To:** **114'** ft (bgl) **Perforated:** **From:** **0** ft (bgl) **To:** **114'** ft (bgl)

**Intake:** ☐ Screen ☒ Open bottom ☐ Uncased hole  
**Screen type:** ☐ Telescope ☐ Pipe size  
**Screen material:** ☐ Stainless steel ☐ Plastic ☐ Other (specify): **Natural gravel**  
**Screen opening:** ☐ Continuous slot ☐ Slotted ☐ Perforated pipe  
**Screen bottom:** ☐ Bail ☐ Plug ☐ Plate ☐ Other (specify): **None**  
**Filter pack:** **From:** **0** ft **To:** **114'** ft **Thickness:** **114'** in  
**Type and size of material:** **Natural gravel**

**Developed by:**  
☒ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☐ Bailing  
☐ Other (specify): **None** **Total duration:** **1.5** hrs  
**Notes:**

**Well yield estimated by:**  
☐ Pumping ☒ Air lifting ☐ Bailing ☐ Other (specify): **None**  
**Rate:** **20** USgpm **Duration:** **1.5** hrs  
**SWL before test:** **71'** ft (btoc) **Pumping water level:** **10'** ft (btoc)

**Obvious water quality characteristics:**  
☒ Fresh ☐ Salty ☐ Clear ☒ Cloudy ☐ Sediment ☐ Gas  
**Colour/odour:** **Brown colour** **Water sample collected:** ☐

**Well driller (print clearly):**  
**Name (first, last) (see note 19):** **Scott Burrows**  
**Registration no. (see note 20):** **WJ004121407**  
**Consultant (if applicable; name and company):**  
**DECLARATION:** Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the Water Act and the Ground Water Protection Regulation.  
**Signature of Driller Responsible:** **Scott Burrows**

**PLEASE NOTE:** The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

**Final well completion data:**  
**Total depth drilled:** **114'** ft **Finished well depth:** **114'** ft (bgl)  
**Final stick up:** **18** in **Depth to bedrock:** **10** ft (bgl)  
**SWL:** **71'** ft (btoc) **Estimated well yield:** **10** USgpm  
**Artesian flow:** **None** USgpm, or Artesian pressure: **None** ft  
**Type of well cap:** **wellhead lid** **Well disinfected:** ☐ Yes ☐ No  
**Where well ID plate is attached:** **on well**

**Well closure information:**  
**Reason for closure:**  
**Method of closure:** ☐ Poured ☐ Pumped  
**Sealant material:** **None** **Backfill material:**  
**Details of closure (see note 17):**

**Date of work (YYYY/MM/DD):**  
**Started:** **July 18, 2006** **Completed:** **July 19, 2006**  
**Comments:**

white: Customer copy  
canary: Driller copy  
pink: Ministry copy

PPSS-3

092C 050. 232



**APPENDIX B**  
**PUMPING TEST DATA**

**B1: Pumped Well WID 69081(WTN 128906)**  
**B2: Observation Well WID 18153 (WTN 95648)**

# APPENDIX B1

## Pumping Test Data for Subject Well

**Project:** Well WID 69081 (WTN 128906)

**Client:** Blair Robertson

**Location:** 12036 West Coast Rd., Jordan River

**Date of Test:** Wednesday February 14, 2024

**Test Conducted by:** Independent Pump & Mechanical Ltd.

**Reference:** all readings from top of sounding tube  
at top of casing

**Stick up:** 0.56 m (22")

**Observation Wells:** WID 18153 (WTN 95648)

**Pumped Well:** 33.83 m deep (111 feet)

**Pumping Rate:** 45.07 L/min (11.91 USgpm)

**Static Water Level:** 19.12 m

**Pump Start Time:** 8:00 AM Feb. 14, 2024

**Pump End Time:** 8:15 AM Feb. 15, 2024

**Analysis by:** A. Kohut, P.Eng.

### Drawdown Data:

### Recovery Data:

Time (minutes)	Water Level (m)	Drawdown (m)	Time t (minutes)	Time t' (minutes)	Water Level (m)	t/t'	Residual Drawdown (m)
1	19.300	0.180	1456	1	19.430	1456.0	0.310
2	19.360	0.240	1457	2	19.430	728.5	0.310
3	19.385	0.265	1458	3	19.310	486.0	0.190
4	19.405	0.285	1459	4	19.300	364.8	0.180
5	19.420	0.300	1460	5	19.280	292.0	0.160
6	19.435	0.315	1461	6	19.270	243.5	0.150
7	19.450	0.330	1462	7	19.260	208.9	0.140
8	19.455	0.335	1464	9	19.260	162.7	0.140
9	19.460	0.340	1465	10	19.250	146.5	0.130
10	19.465	0.345	1467	12	19.240	122.3	0.120
12	19.465	0.345	1469	14	19.230	104.9	0.110
14	19.470	0.350	1471	16	19.225	91.9	0.105
16	19.470	0.350	1473	18	19.220	81.8	0.100
18	19.475	0.355	1475	20	19.220	73.8	0.100
20	19.475	0.355	1480	25	19.210	59.2	0.090
25	19.480	0.360	1485	30	19.200	49.5	0.080
30	19.480	0.360	1490	35	19.200	42.6	0.080
35	19.482	0.362	1495	40	19.200	37.4	0.080
40	19.485	0.365	1500	45	19.200	33.3	0.080
45	19.485	0.365	1505	50	19.200	30.1	0.080
50	19.490	0.370	1515	60	19.200	25.3	0.080
60	19.495	0.375	1525	70	19.200	21.8	0.080
70	19.500	0.380	1535	80	19.200	19.2	0.080
80	19.550	0.430	1545	90	19.200	17.2	0.080
90	19.510	0.390	1555	100	19.195	15.6	0.075
100	19.510	0.390	1575	120	19.195	13.1	0.075
120	19.510	0.390	1595	140	19.195	11.4	0.075
140	19.510	0.390	1615	160	19.195	10.1	0.075
160	19.510	0.390	1635	180	19.195	9.1	0.075
180	19.510	0.390	1655	200	19.195	8.3	0.075
200	19.510	0.390	1675	220	19.195	7.6	0.075
220	19.510	0.390	1695	240	19.195	7.1	0.075
240	19.510	0.390	1725	270	19.195	6.4	0.075
270	19.510	0.390	1755	300	19.195	5.9	0.075
300	19.510	0.390	1785	330	19.195	5.4	0.075
330	19.510	0.390	1815	360	19.195	5.0	0.075
360	19.510	0.390					
390	19.510	0.390					
420	19.510	0.390					
450	19.510	0.390					
480	19.510	0.390					
510	19.510	0.390					
540	19.510	0.390					
570	19.510	0.390					
600	19.510	0.390					
630	19.510	0.390					
660	19.510	0.390					

Drawdown Data:

Recovery Data:

Time (minutes)	Water Level (m)	Drawdown (m)	Time t (minutes)	Time t' (minutes)	Water Level (m)	t/t'	Residual Drawdown (m)
690	19.510	0.390					
720	19.510	0.390					
750	19.510	0.390					
780	19.510	0.390					
810	19.510	0.390					
840	19.510	0.390					
870	19.515	0.395					
900	19.515	0.395					
930	19.520	0.400					
960	19.520	0.400					
990	19.520	0.400					
1020	19.525	0.405					
1050	19.525	0.405					
1080	19.525	0.405					
1110	19.525	0.405					
1140	19.530	0.410					
1170	19.530	0.410					
1200	19.530	0.410					
1230	19.540	0.420					
1260	19.540	0.420					
1290	19.550	0.430					
1320	19.550	0.430					
1350	19.550	0.430					
1380	19.560	0.440					
1410	19.565	0.445					
1440	19.570	0.450					
1455	19.570	0.450					

APPENDIX B2

Pumping Test Data for Observation Well WID 18153

**Project:** Well WID 69081 (WTN 128906)  
**Client:** Blair Robertson  
**Location:** 12036 West Coast Rd., Jordan River  
**Date of Test:** Wednesday February 14, 2024  
**Test Conducted by:** Independent Pump & Mechanical Ltd.

**Reference:** all readings from top of sounding tube  
at top of casing

**Obs Well Stick up:** 0.30 m (12")  
**Pumped Well:** WID 69081 (WTN 128906)

**Observation Well:** 34.75 m deep (114 feet)  
**Pumping Rate:** 45.07 L/min (11.91 USgpm)  
**Static Water Level:** 23.400

**Pump Start Time:** 8:00 AM Feb. 14, 2024  
**Pump End Time:** 8:15 AM Feb. 15, 2024  
**Analysis by:** A. Kohut, P.Eng.

Drawdown Data:

Recovery Data:

Time (minutes)	Water Level (m)	Drawdown (m)	Time t (minutes)	Time t' (minutes)	Water Level (m)	t/t'	Residual Drawdown (m)
10	23.406	0.006					
20	23.411	0.011					
30	23.686	0.286					
40	23.683	0.283					
50	23.687	0.287					
60	23.687	0.287					
70	23.692	0.292					
80	23.690	0.290					
90	23.696	0.296					
100	23.710	0.310					
120	23.714	0.314					
140	23.716	0.316					
160	23.717	0.317					
180	23.714	0.314					
200	23.710	0.310					
220	23.709	0.309					
240	23.705	0.305					
260	23.703	0.303					
280	23.701	0.301					
300	23.702	0.302					
330	23.694	0.294					
360	23.686	0.286					
390	23.687	0.287					
420	23.690	0.290					
450	23.688	0.288					
480	23.689	0.289					
510	23.685	0.285					
540	23.689	0.289					
570	23.688	0.288					
600	23.678	0.278					
630	23.684	0.284					
680	23.680	0.280					
730	23.682	0.282					
780	23.684	0.284					
830	23.687	0.287					
880	23.689	0.289					
930	23.693	0.293					
980	23.692	0.292					
1030	23.694	0.294					
1080	23.697	0.297					
1130	23.703	0.303					
1180	23.705	0.305					
1230	23.715	0.315					
1280	23.719	0.319					
1330	23.731	0.331					
1380	23.738	0.338					
1440	23.757	0.357					
1450	23.760	0.360					

Note: All readings during pumping extracted from datalogger.

**APPENDIX C**  
**LABORATORY WATER QUALITY ANALYSES**  
**FOR WID 69081 (WTN 128906)**  
**February 15, 2024**





Your Project #: TOTANGI  
Your C.O.C. #: WI034487

**Attention: AL KOHUT**  
HY-GEO CONSULTING  
4470 Arsens Place  
VICTORIA, BC  
Canada V8Z 2M9

**Report Date: 2024/02/26**  
Report #: R3467520  
Version: 1 - Final

### CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C410716**  
**Received: 2024/02/15, 11:29**

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO <sub>3</sub> ,HCO <sub>3</sub> ,OH	1	N/A	2024/02/16	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2024/02/21	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	1	N/A	2024/02/16	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	1	N/A	2024/02/16	BBY6SOP-00026	SM 24 2510 B m
Fluoride	1	N/A	2024/02/21	BBY6SOP-00037	SM 24 4500-F C m
Sulphide (as H <sub>2</sub> S) (1)	1	N/A	2024/02/21		Auto Calc
Hardness Total (calculated as CaCO <sub>3</sub> ) (3)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO <sub>3</sub> )	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Mercury (Total) by CV	1	2024/02/16	2024/02/16	AB SOP-00084	BCMEOE BCLM Oct2013 m
Heterotrophic Plate Count (MF) in Water	1	N/A	2024/02/16	BBY4SOP-00003	SM 24 9215D
Iron Related Bacteria (4)	1	N/A	2024/02/16	BBY4SOP-00004	BI BART User Manual
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (dissolved) (5)	1	N/A	2024/02/21	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	1	N/A	2024/02/21	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrogen (Total)	1	N/A	2024/02/22	BBY6SOP-00016	SM 24 4500-N C m
Ammonia-N (Total)	1	N/A	2024/02/21	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate + Nitrite (N)	1	N/A	2024/02/16	BBY6SOP-00010	SM 24 4500-NO3- H m
Nitrite (N) Regular Level Water	1	N/A	2024/02/16	BBY6SOP-00010	SM 24 4500-NO2- m
Nitrogen - Nitrate (as N)	1	N/A	2024/02/17	BBY WI-00033	Auto Calc
Nitrogen (Tot. Organic) Calculation	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
pH @25°C (6)	1	N/A	2024/02/16	BBY6SOP-00026	SM 24 4500-H+ B m
Sat. pH and Langelier Index (@ 4.4C)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C)	1	N/A	2024/02/22	BBY WI-00033	Auto Calc
Total Sulphide (1)	1	N/A	2024/02/21	AB SOP-00080	SM 24 4500 S2-A D Fm
Sulphate Reducing Bacteria (4)	1	N/A	2024/02/16	BBY4SOP-00004	BI BART User Manual
Total Dissolved Solids (Filt. Residue)	1	2024/02/21	2024/02/22	BBY6SOP-00033	SM 24 2540 C m
Total Coliform & E.Coli by MF-Chromocult	1	N/A	2024/02/16	BBY4SOP-00143	Merck KGaA Version 1
Carbon (Total Organic) (7)	1	N/A	2024/02/16	BBY6SOP-00053	SM 24 5310 B m
Turbidity	1	N/A	2024/02/16	BBY6SOP-00027	SM 24 2130 B m



Your Project #: TOTANGI  
Your C.O.C. #: WI034487

**Attention: AL KOHUT**  
HY-GEO CONSULTING  
4470 Arsens Place  
VICTORIA, BC  
Canada V8Z 2M9

**Report Date: 2024/02/26**  
Report #: R3467520  
Version: 1 - Final

### CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C410716**  
**Received: 2024/02/15, 11:29**

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
UV Transmittance (2)	1	2024/02/23	2024/02/23	CAM SOP-00459	SM 24 5910 m

#### Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St., Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Campobello, 6740 Campobello Road, Mississauga, ON, L5N 2L8

(3) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(4) Presence/Absence Method. Number is an estimate.

(5) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(7) TOC present in the sample should be considered as non-purgeable TOC.



Your Project #: TOTANGI  
Your C.O.C. #: WI034487

**Attention: AL KOHUT**  
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4470 Arsens Place  
VICTORIA, BC  
Canada V8Z 2M9

**Report Date: 2024/02/26**  
Report #: R3467520  
Version: 1 - Final

### CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C410716**  
**Received: 2024/02/15, 11:29**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:  
Michelle Rivest (Hospedales), B.Sc., Customer Solutions Representative  
Email: michelle.rivest@bureauveritas.com  
Phone# (604) 734 7276

=====

This report has been generated and distributed using a secure automated process.  
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For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Total Cover Pages : 3  
Page 3 of 13

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**VIHA PKG, WELLS/SPRINGS - BURNABY (WATER)**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		WI034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
<b>ANIONS</b>				
Nitrite (N)	mg/L	<0.0050	0.0050	8287596
<b>Calculated Parameters</b>				
Total Hardness (CaCO <sub>3</sub> )	mg/L	30.9	0.50	8285428
Nitrate (N)	mg/L	<0.020	0.020	8285468
Total Organic Nitrogen (N)	mg/L	0.589	0.020	8286395
Sulphide (as H <sub>2</sub> S)	mg/L	0.0062	0.0020	8285763
<b>Misc. Inorganics</b>				
Conductivity	uS/cm	110	2.0	8287440
pH	pH	6.47	N/A	8287434
Total Organic Carbon (C)	mg/L	1.5	0.50	8287657
Total Dissolved Solids	mg/L	90	10	8290422
<b>Anions</b>				
Alkalinity (PP as CaCO <sub>3</sub> )	mg/L	<1.0	1.0	8287437
Alkalinity (Total as CaCO <sub>3</sub> )	mg/L	41	1.0	8287437
Bicarbonate (HCO <sub>3</sub> )	mg/L	50	1.0	8287437
Carbonate (CO <sub>3</sub> )	mg/L	<1.0	1.0	8287437
Dissolved Fluoride (F)	mg/L	<0.050	0.050	8290280
Hydroxide (OH)	mg/L	<1.0	1.0	8287437
Total Sulphide	mg/L	0.0058	0.0018	8289796
Chloride (Cl)	mg/L	4.4	1.0	8290536
Sulphate (SO <sub>4</sub> )	mg/L	<1.0	1.0	8290536
<b>MISCELLANEOUS</b>				
True Colour	Col. Unit	128	10	8287165
Transmittance at 254nm	%T/cm	18	N/A	8293309
<b>Nutrients</b>				
Total Ammonia (N)	mg/L	0.29	0.015	8290458
Nitrate plus Nitrite (N)	mg/L	<0.020	0.020	8287592
Total Nitrogen (N)	mg/L	0.877	0.020	8290418
<b>Physical Properties</b>				
Turbidity	NTU	9.9	0.10	8287002
RDL = Reportable Detection Limit N/A = Not Applicable				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**VIHA PKG, WELLS/SPRINGS - BURNABY (WATER)**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		WI034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Elements</b>				
Total Mercury (Hg)	ug/L	<0.0019	0.0019	8287581
<b>Total Metals by ICPMS</b>				
Total Aluminum (Al)	ug/L	13.3	3.0	8290301
Total Antimony (Sb)	ug/L	<0.50	0.50	8290301
Total Arsenic (As)	ug/L	8.03	0.10	8290301
Total Barium (Ba)	ug/L	7.0	1.0	8290301
Total Beryllium (Be)	ug/L	<0.10	0.10	8290301
Total Bismuth (Bi)	ug/L	<1.0	1.0	8290301
Total Boron (B)	ug/L	<50	50	8290301
Total Cadmium (Cd)	ug/L	0.031	0.010	8290301
Total Chromium (Cr)	ug/L	<1.0	1.0	8290301
Total Cobalt (Co)	ug/L	<0.20	0.20	8290301
Total Copper (Cu)	ug/L	2.30	0.20	8290301
Total Iron (Fe)	ug/L	9220	5.0	8290301
Total Lead (Pb)	ug/L	0.20	0.20	8290301
Total Manganese (Mn)	ug/L	202	1.0	8290301
Total Molybdenum (Mo)	ug/L	<1.0	1.0	8290301
Total Nickel (Ni)	ug/L	<1.0	1.0	8290301
Total Selenium (Se)	ug/L	<0.10	0.10	8290301
Total Silicon (Si)	ug/L	17200	100	8290301
Total Silver (Ag)	ug/L	<0.020	0.020	8290301
Total Strontium (Sr)	ug/L	25.5	1.0	8290301
Total Thallium (Tl)	ug/L	<0.010	0.010	8290301
Total Tin (Sn)	ug/L	<5.0	5.0	8290301
Total Titanium (Ti)	ug/L	<5.0	5.0	8290301
Total Uranium (U)	ug/L	<0.10	0.10	8290301
Total Vanadium (V)	ug/L	<5.0	5.0	8290301
Total Zinc (Zn)	ug/L	41.9	5.0	8290301
Total Zirconium (Zr)	ug/L	<0.10	0.10	8290301
Total Calcium (Ca)	mg/L	7.86	0.050	8285820
Total Magnesium (Mg)	mg/L	2.74	0.050	8285820
Total Potassium (K)	mg/L	0.786	0.050	8285820
Total Sodium (Na)	mg/L	6.47	0.050	8285820
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**VIHA PKG, WELLS/SPRINGS - BURNABY (WATER)**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		WI034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
Total Sulphur (S)	mg/L	<3.0	3.0	B285820
<b>Microbiological Param.</b>				
Heterotrophic Plate Count	CFU/mL	<1	1	B287355
Iron Bacteria	CFU/mL	25	25	B287353
Sulphate reducing bacteria	CFU/mL	<75	75	B287354
Total Coliforms	CFU/100mL	0	N/A	B287351
E. coli	CFU/100mL	0	N/A	B287351
<b>Calculated Parameters</b>				
Langelier Index (@ 4.4C)	N/A	-2.60	N/A	B286396
Langelier Index (@ 60C)	N/A	-1.82	N/A	B286397
Saturation pH (@ 4.4C)	N/A	9.06	N/A	B286396
Saturation pH (@ 60C)	N/A	8.29	N/A	B286397
RDL = Reportable Detection Limit				
N/A = Not Applicable				





Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

**CSR D. METALS (NO CV-HG)-DISS**

<b>Bureau Veritas ID</b>		CJG147		
<b>Sampling Date</b>		2024/02/15 08:20		
<b>COC Number</b>		W1034487		
	<b>UNITS</b>	<b>JORDAN R. WELL</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Calculated Parameters</b>				
Dissolved Hardness (CaCO <sub>3</sub> )	mg/L	31.8	0.50	B285810
<b>Dissolved Metals by ICPMS</b>				
Dissolved Aluminum (Al)	ug/L	5.1	3.0	B287484
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	B287484
Dissolved Arsenic (As)	ug/L	7.78	0.10	B287484
Dissolved Barium (Ba)	ug/L	6.7	1.0	B287484
Dissolved Beryllium (Be)	ug/L	<0.10	0.10	B287484
Dissolved Bismuth (Bi)	ug/L	<1.0	1.0	B287484
Dissolved Boron (B)	ug/L	<50	50	B287484
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	B287484
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	B287484
Dissolved Cobalt (Co)	ug/L	<0.20	0.20	B287484
Dissolved Copper (Cu)	ug/L	0.81	0.20	B287484
Dissolved Iron (Fe)	ug/L	9560	5.0	B287484
Dissolved Lead (Pb)	ug/L	<0.20	0.20	B287484
Dissolved Lithium (Li)	ug/L	<2.0	2.0	B287484
Dissolved Manganese (Mn)	ug/L	198	1.0	B287484
Dissolved Molybdenum (Mo)	ug/L	<1.0	1.0	B287484
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	B287484
Dissolved Selenium (Se)	ug/L	<0.10	0.10	B287484
Dissolved Silicon (Si)	ug/L	16000	100	B287484
Dissolved Silver (Ag)	ug/L	<0.020	0.020	B287484
Dissolved Strontium (Sr)	ug/L	26.6	1.0	B287484
Dissolved Thallium (Tl)	ug/L	<0.010	0.010	B287484
Dissolved Tin (Sn)	ug/L	<5.0	5.0	B287484
Dissolved Titanium (Ti)	ug/L	<5.0	5.0	B287484
Dissolved Uranium (U)	ug/L	<0.10	0.10	B287484
Dissolved Vanadium (V)	ug/L	<5.0	5.0	B287484
Dissolved Zinc (Zn)	ug/L	26.9	5.0	B287484
Dissolved Zirconium (Zr)	ug/L	<0.10	0.10	B287484
Dissolved Calcium (Ca)	mg/L	8.07	0.050	B285811
Dissolved Magnesium (Mg)	mg/L	2.84	0.050	B285811
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C410716  
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HY-GEO CONSULTING  
Client Project #: TOTANGI

**CSR D. METALS (NO CV-HG)-DISS**

Bureau Veritas ID		CJG147		
Sampling Date		2024/02/15 08:20		
COC Number		WI034487		
	UNITS	JORDAN R. WELL	RDL	QC Batch
Dissolved Potassium (K)	mg/L	0.786	0.050	B285811
Dissolved Sodium (Na)	mg/L	6.32	0.050	B285811
Dissolved Sulphur (S)	mg/L	<3.0	3.0	B285811
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C410716  
Report Date: 2024/02/26

HY-GEO CONSULTING  
Client Project #: TOTANGI

#### GENERAL COMMENTS

Sample CJG147 [JORDAN R. WELL] : Sample was analyzed past recommended hold time for Heterotrophic Plate Count (MF) in Water. Sample was analyzed past recommended hold time for Iron Related Bacteria. Sample was analyzed past recommended hold time for Sulphate Reducing Bacteria. UVT Analysis: Sample received at the analyzing laboratory past the recommended holding time. Analysis performed with client's consent.

Results relate only to the items tested.



Bureau Veritas Job #: C410716  
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QUALITY ASSURANCE REPORT

HY-GEO CONSULTING  
Client Project #: TOTANGI

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B287002	Turbidity	2024/02/16			101	80 - 120	<0.10	NTU	NC	20
B287165	True Colour	2024/02/16			103	80 - 120	<2.0	Col. Unit	NC	20
B287434	pH	2024/02/16			100	97 - 103			0.33	N/A
B287437	Alkalinity (PP as CaCO <sub>3</sub> )	2024/02/16					<1.0	mg/L	NC	20
B287437	Alkalinity (Total as CaCO <sub>3</sub> )	2024/02/16			97	80 - 120	<1.0	mg/L	0.43	20
B287437	Bicarbonate (HCO <sub>3</sub> )	2024/02/16					<1.0	mg/L	0.43	20
B287437	Carbonate (CO <sub>3</sub> )	2024/02/16					<1.0	mg/L	NC	20
B287437	Hydroxide (OH)	2024/02/16					<1.0	mg/L	NC	20
B287440	Conductivity	2024/02/16			100	90 - 110	<2.0	uS/cm		
B287484	Dissolved Aluminum (Al)	2024/02/21	104	80 - 120	106	80 - 120	<3.0	ug/L	15	20
B287484	Dissolved Antimony (Sb)	2024/02/21	103	80 - 120	104	80 - 120	<0.50	ug/L	1.4	20
B287484	Dissolved Arsenic (As)	2024/02/21	108	80 - 120	108	80 - 120	<0.10	ug/L	0.96	20
B287484	Dissolved Barium (Ba)	2024/02/21	100	80 - 120	103	80 - 120	<1.0	ug/L	0.39	20
B287484	Dissolved Beryllium (Be)	2024/02/21	105	80 - 120	105	80 - 120	<0.10	ug/L	NC	20
B287484	Dissolved Bismuth (Bi)	2024/02/21	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B287484	Dissolved Boron (B)	2024/02/21	105	80 - 120	106	80 - 120	<50	ug/L	NC	20
B287484	Dissolved Cadmium (Cd)	2024/02/21	104	80 - 120	104	80 - 120	<0.010	ug/L	NC	20
B287484	Dissolved Chromium (Cr)	2024/02/21	101	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
B287484	Dissolved Cobalt (Co)	2024/02/21	99	80 - 120	102	80 - 120	<0.20	ug/L	NC	20
B287484	Dissolved Copper (Cu)	2024/02/21	96	80 - 120	101	80 - 120	<0.20	ug/L	0.46	20
B287484	Dissolved Iron (Fe)	2024/02/21	105	80 - 120	105	80 - 120	<5.0	ug/L	15	20
B287484	Dissolved Lead (Pb)	2024/02/21	99	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
B287484	Dissolved Lithium (Li)	2024/02/21	101	80 - 120	103	80 - 120	<2.0	ug/L	NC	20
B287484	Dissolved Manganese (Mn)	2024/02/21	99	80 - 120	102	80 - 120	<1.0	ug/L	0.60	20
B287484	Dissolved Molybdenum (Mo)	2024/02/21	NC	80 - 120	108	80 - 120	<1.0	ug/L	1.5	20
B287484	Dissolved Nickel (Ni)	2024/02/21	98	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
B287484	Dissolved Selenium (Se)	2024/02/21	102	80 - 120	105	80 - 120	<0.10	ug/L	9.3	20
B287484	Dissolved Silicon (Si)	2024/02/21	NC	80 - 120	111	80 - 120	<100	ug/L	0.14	20
B287484	Dissolved Silver (Ag)	2024/02/21	103	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
B287484	Dissolved Strontium (Sr)	2024/02/21	NC	80 - 120	103	80 - 120	<1.0	ug/L	2.6	20
B287484	Dissolved Thallium (Tl)	2024/02/21	100	80 - 120	102	80 - 120	<0.010	ug/L	NC	20
B287484	Dissolved Tin (Sn)	2024/02/21	102	80 - 120	104	80 - 120	<5.0	ug/L	NC	20
B287484	Dissolved Titanium (Ti)	2024/02/21	98	80 - 120	103	80 - 120	<5.0	ug/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

HY-GEO CONSULTING  
Client Project #: TOTANGI

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B287484	Dissolved Uranium (U)	2024/02/21	103	80 - 120	102	80 - 120	<0.10	ug/L	0.33	20
B287484	Dissolved Vanadium (V)	2024/02/21	102	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
B287484	Dissolved Zinc (Zn)	2024/02/21	99	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
B287484	Dissolved Zirconium (Zr)	2024/02/21	101	80 - 120	97	80 - 120	<0.10	ug/L	NC	20
B287581	Total Mercury (Hg)	2024/02/16	87	80 - 120	91	80 - 120	<0.0019	ug/L	NC	20
B287592	Nitrate plus Nitrite (N)	2024/02/16	113	80 - 120	106	80 - 120	<0.020	mg/L	NC	25
B287596	Nitrite (N)	2024/02/16	106	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
B287657	Total Organic Carbon (C)	2024/02/16			105	80 - 120	<0.50	mg/L		
B289796	Total Sulphide	2024/02/21	97	80 - 120	94	80 - 120	<0.0018	mg/L	NC	20
B290280	Dissolved Fluoride (F)	2024/02/21	105	80 - 120	102	80 - 120	<0.050	mg/L	NC	20
B290301	Total Aluminum (Al)	2024/02/21	99	80 - 120	103	80 - 120	<3.0	ug/L	4.2	20
B290301	Total Antimony (Sb)	2024/02/21	103	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
B290301	Total Arsenic (As)	2024/02/21	106	80 - 120	109	80 - 120	<0.10	ug/L	0.24	20
B290301	Total Barium (Ba)	2024/02/21	100	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
B290301	Total Beryllium (Be)	2024/02/21	97	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
B290301	Total Bismuth (Bi)	2024/02/21	95	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
B290301	Total Boron (B)	2024/02/21	110	80 - 120	112	80 - 120	<50	ug/L	3.5	20
B290301	Total Cadmium (Cd)	2024/02/21	100	80 - 120	103	80 - 120	<0.010	ug/L	7.6	20
B290301	Total Chromium (Cr)	2024/02/21	96	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B290301	Total Cobalt (Co)	2024/02/21	97	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
B290301	Total Copper (Cu)	2024/02/21	93	80 - 120	100	80 - 120	<0.20	ug/L	1.6	20
B290301	Total Iron (Fe)	2024/02/21	100	80 - 120	104	80 - 120	<5.0	ug/L	0.66	20
B290301	Total Lead (Pb)	2024/02/21	97	80 - 120	102	80 - 120	<0.20	ug/L	0.90	20
B290301	Total Manganese (Mn)	2024/02/21	94	80 - 120	98	80 - 120	<1.0	ug/L	0.28	20
B290301	Total Molybdenum (Mo)	2024/02/21	108	80 - 120	105	80 - 120	<1.0	ug/L	0.031	20
B290301	Total Nickel (Ni)	2024/02/21	95	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B290301	Total Selenium (Se)	2024/02/21	100	80 - 120	104	80 - 120	<0.10	ug/L	NC	20
B290301	Total Silicon (Si)	2024/02/21	NC	80 - 120	116	80 - 120	<100	ug/L	0.48	20
B290301	Total Silver (Ag)	2024/02/21	99	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
B290301	Total Strontium (Sr)	2024/02/21	NC	80 - 120	98	80 - 120	<1.0	ug/L	1.3	20
B290301	Total Thallium (Tl)	2024/02/21	99	80 - 120	104	80 - 120	<0.010	ug/L	NC	20
B290301	Total Tin (Sn)	2024/02/21	102	80 - 120	105	80 - 120	<5.0	ug/L	NC	20
B290301	Total Titanium (Ti)	2024/02/21	100	80 - 120	102	80 - 120	<5.0	ug/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

HY-GEO CONSULTING  
Client Project #: TOTANGI

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B290301	Total Uranium (U)	2024/02/21	103	80 - 120	105	80 - 120	<0.10	ug/L	3.5	20
B290301	Total Vanadium (V)	2024/02/21	98	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
B290301	Total Zinc (Zn)	2024/02/21	95	80 - 120	102	80 - 120	<5.0	ug/L	0.40	20
B290301	Total Zirconium (Zr)	2024/02/21	106	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
B290418	Total Nitrogen (N)	2024/02/22			103	80 - 120	<0.020	mg/L	NC	20
B290422	Total Dissolved Solids	2024/02/22	103	80 - 120	101	80 - 120	<10	mg/L	3.0	20
B290458	Total Ammonia (N)	2024/02/21	105	80 - 120	100	80 - 120	<0.015	mg/L	1.7	20
B290536	Chloride (Cl)	2024/02/21	107	80 - 120	100	80 - 120	<1.0	mg/L	3.4	20
B290536	Sulphate (SO4)	2024/02/21	92	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
B293309	Transmittance at 254nm	2024/02/23			99	97 - 103			1.5	25
N/A = Not Applicable										
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.										
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.										
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.										
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.										
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)										
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).										





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HY-GEO CONSULTING  
Client Project #: TOTANGI

#### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Anastassia Hamanov, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



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File: 2205191

March 15, 2023

Totangi Properties Ltd  
Jordan River BC

Attention: [REDACTED]

**Re: Preliminary Groundwater Assessment for Wildwood Terrace Neighbourhood  
Commercial Zone, C-1A at Jordan River**

As requested, Hy-Geo Consulting has completed a desktop assessment of the feasibility of obtaining a sufficient supply of potable groundwater involving up to 10 individual water supply wells for the proposed subject property development at Jordan River (Figure 1). Potential impacts of the proposed groundwater use on neighbouring properties and existing water sources including wells and nearby streams has also been assessed. My understanding is that drilling and testing of an initial production well for a proposed brewery on one of the proposed parcels is currently being planned.

**Site Location**

The subject property is situated along the north side of the West Coast Road at Jordan River (Figure 1) and currently zoned as Wildwood Terrace Neighbourhood Commercial Zone, C-1A under Bylaw No. 2040, "Juan de Fuca Land Use Bylaw, 1992" (CRD, 2023a). In 2021 an amendment to Bylaw No. 2040 under Bylaw No. 4381 included added potential water uses for food and beverage processing and country market (CRD, 2021). The current proposal for the property includes 10 commercial use parcels ranging in size from 0.20 to 0.46 hectares in size (Figure 2). There are numerous existing wells in the general region directly south and west of the property (Figure 3). First Creek lies approximately 175 m (574 feet) west of the western boundary of the property. The site is situated at an elevation of about 55 m (180.4 feet) on a glacial-fluvial terrace that slopes gently southwesterly towards the ocean. Towards the southeast, elevations drop abruptly from the site towards the mouth of the Jordan River.

**Climate**

The region is situated in the *Coastal Western Hemlock Biogeoclimatic Zone* with long, mild, and wet winters, and relatively sunny and dry summers. While a long-term climate station for Jordan River is not available, monthly normal precipitation for the Sooke Lake North climate weather station for the 1981-2010 period has been reported by the Government of Canada (2023) for climate station 1017563 as shown in Figure 4. The region receives about 1497 mm of precipitation on an annual basis (Government of Canada, 2023). Precipitation normally follows a seasonal cycle, with highest rainfall during the fall, winter and early spring months while the summer months are subject to drought conditions.



Figure 1. Location of subject property at Jordan River. Basemap from Province of British Columbia (2022a).

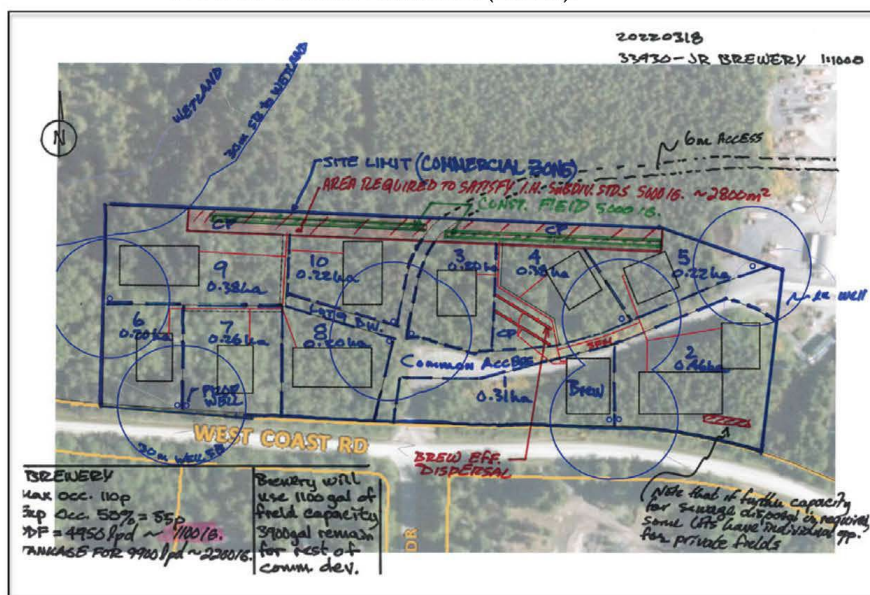


Figure 2. Draft proposed parcel plan for property. Figure from Totangi Properties Ltd., July 14, 2022.



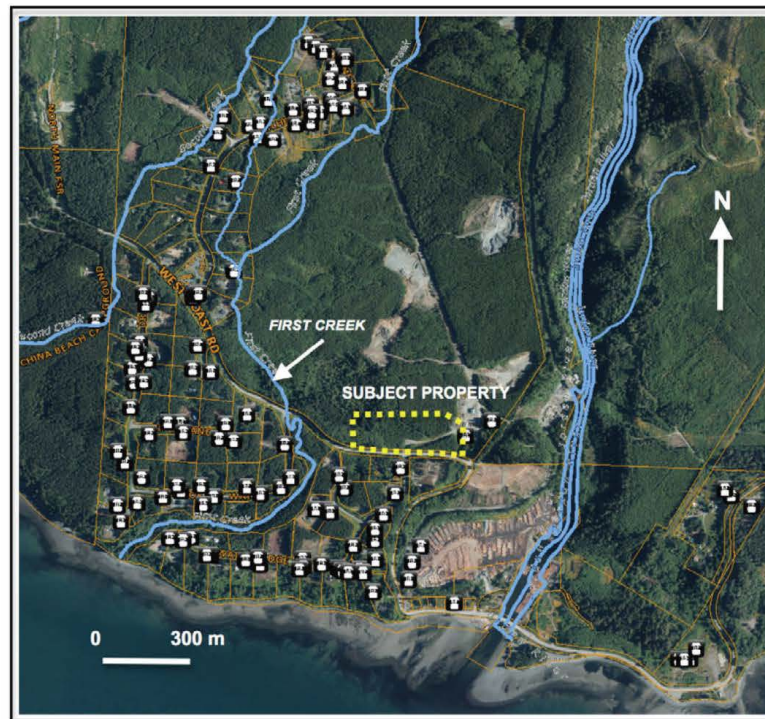


Figure 3. Location of neighbouring water wells and streams. Basemap from CRD (2022b).

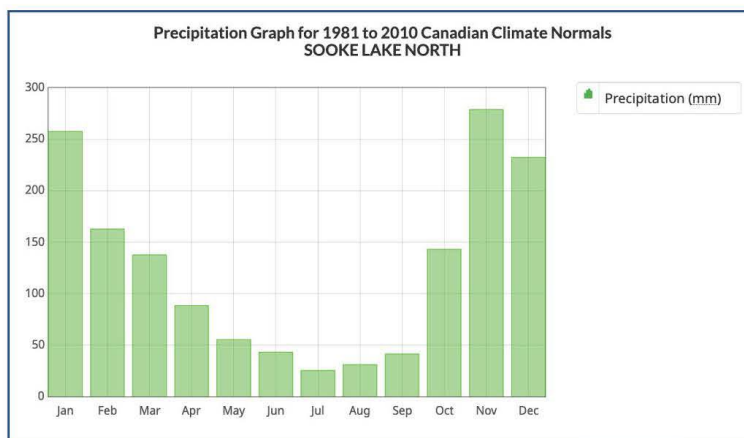


Figure 4. Graph of monthly normal precipitation for Sooke Lake North station (Climate ID. 1017563). Graph from Government of Canada (2023).

### Geology and Hydrogeological Setting

The subject property is underlain by a confined glacio-fluvial sand and gravel aquifer system, designated Aquifer 944 under the *BC Aquifer Classification System* (Bernardinucci and Ronneseth, 2002). The aquifer is also classified as a moderately productive and moderately vulnerable IIB aquifer. More detailed descriptions of the aquifer can be found at the *British Columbia Water Resources Atlas* (Province of British Columbia, 2022a).

The *British Columbia Water Resources Atlas* also shows a fractured crystalline aquifer, (Aquifer 943) comprised of igneous intrusive or metamorphic, meta-sedimentary, and meta-volcanic rocks underlying the unconsolidated deposits of Aquifer 944.

Examination of drilling records in the region carried out under this assessment also indicated descriptions of sedimentary sandstone, conglomerate and siltstone underlying the unconsolidated deposits locally. These latter bedrock units may belong to the Sooke Formation that has been reported to be comprised of cross-bedded sandstone, interbedded with lesser amounts of siltstone, and conglomerate containing cemented pebble to boulder sized clasts (Massey, 1994; Yorath and Nasmith, 1995).

Groundwater occurs within the pore spaces of the unconsolidated deposits and in open fractures in the underlying bedrock as they are encountered during drilling of water wells. Groundwater is likely recharged by infiltration of precipitation and runoff from the upland area north of the aquifer with groundwater moving southerly towards lower elevations and ultimately discharging to the ocean.

### Reported Wells

Figure 5 shows the location of reported wells in the vicinity of the subject property. The majority of these are situated south and west of the property. A summary of the wells shown in Figure 5 is provided in Table 1. Wells are identified with a unique, computer generated WTN (well tag number) in the provincial WELLS database (Province of British Columbia, 2022a and 2022b). The wells shown do not necessarily comprise all existing wells in the area and all well locations have not been necessarily verified in the field.

Well records for the region shown in Figure 5 indicate that the unconsolidated deposits comprise a heterogeneous array of materials ranging from glacial till, cobbles and boulders, fine sand and silt to coarse-grained gravels. The unconsolidated deposits range from 33 to 418 feet (10.06 to 127.41 m) in thickness. Most wells are completed in sand and gravel units with or without well screens. Reported well yields range from 2 to 80 USgpm (7.57 to 302.83 L/min) with a median of 10 USgpm (37.85 L/min). About 20 percent of the wells shown in Figure 5 are completed in bedrock at depths ranging from 280 to 598 feet (85.34 to 182.27 m) with well yields in the range 1 to 7 USgpm (3.78 to 26.50 l/min) with a median of 5 USgpm (18.93 L/min).

### Groundwater Prospects on the Subject Property

Based on the records of wells situated closest to the subject property (Figure 6), the geologic conditions appear very favourable for constructing relatively shallow wells within the unconsolidated aquifer unit. Figure 7 shows that there may be up to 10 m (32.81 feet) of saturated sand and gravel underlying the site with individual wells potentially yielding 5 to 10 USgpm (18.93 to 37.85 L/min) each.

### Potential Water Demands for Future Commercial Uses

CRD Bylaws No. 2040 and Bylaw No. 4381 permit the following principle land uses in the commercial zoned property namely:

- (a) Convenience Store;
- (b) Retail Store, excluding gas bars, gas stations or bulk fuel sales, auto repair or car wash, or any use for which a permit is required under the *Environmental Management Act or Regulation*;
- (c) Civic Uses;
- (d) Food and beverage processing;
- (e) Country Market.

It is estimated that the proposed brewery for the subject property would initially need 350,000 L/year (959 L/day) of potable water potentially growing to 2,000,00 L/year (5480 L/day) after 5 years (Totangi Properties, 2023). This would be equivalent to an initial well production rate of 0.18 USgpm growing to 1.01 USgpm, from a well on the property. Other parcels at the site would unlikely require as much water for their needs compared to the brewery requirements. While the specific individual business water needs are not currently known, the maximum total potential water use from 10 wells on the site would not likely be more than 3 to 5 USgpm (11.36 to 18.93 L/min). Geological and groundwater conditions based on neighbouring wells indicates this quantity of water could be readily obtained from properly designed and constructed wells on the subject property.

### Potential Impacts on Neighbouring Wells and Surface Water Sources

Based on a relatively low, continuous water demand of 3 to 5 USgpm (11.36 to 18.93 L/min) from the commercial site, it is unlikely that groundwater use at this rate would have any significant effect on neighbouring wells or the flows of First Creek. Potential wells used for commercial purposes would also need to be adequately tested to support an application for a water licence under the *Water Sustainability Act* and meet provincial guidelines for testing and monitoring (Todd *et al.*, 2016 and 2020) to assess any potential impacts on neighbouring wells or nearby surface water sources.



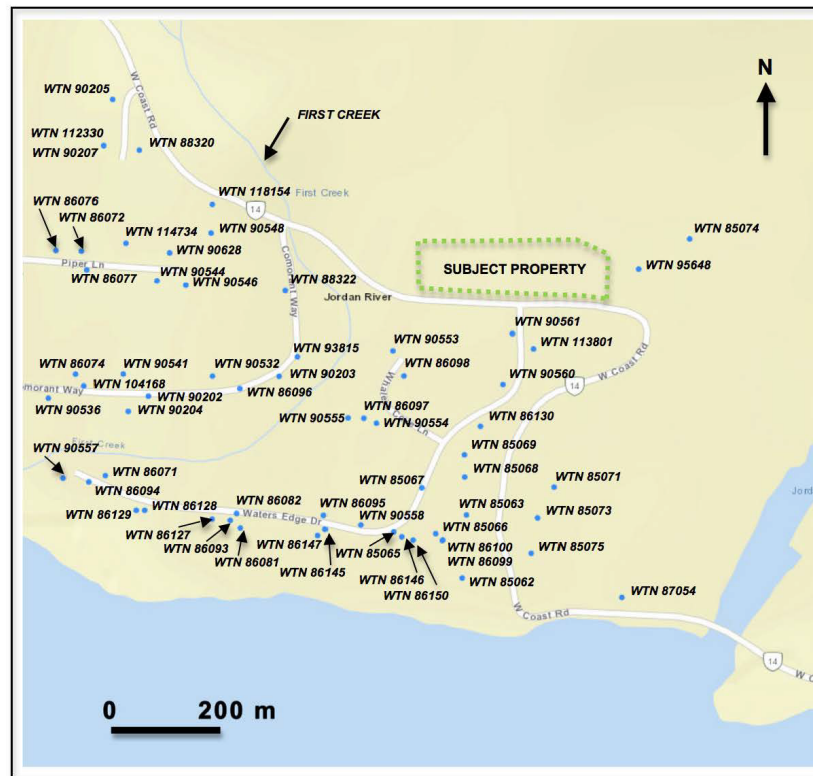


Figure 5. Reported wells in the vicinity of the subject property. Well locations and basemap from Province of British Columbia (2022a).

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Table 1. Summary of water wells at and in vicinity of subject property.

Well Tag No. (WTN)	Well Identification Plate No. (WID)	Depth Drilled or Dug (feet)	Depth Well Drilled (m)	Diameter (inches)	Diameter (cm)	Driller's Estimated Yield (gpm)	Water Depth (feet)	Water Depth (m)	Depth to Bedrock (feet)	Depth to Bedrock (m)	Construction Completion Date	General Remarks	Legal District Lot	Legal Plan	Lot No.	Section	Owner When Constructed	Well Purpose
85062		39	11.89	6	15.24	3	14	4.27	39	11.89	03/29/2005	5.5 inch screen set 34.3 to 39 ft, 18 slot, sand and gravel			1	4		Private Domestic
85063		280	85.34	6	15.24	5	165	50.29	40	12.19	04/13/2005	sandstone 40-70 ft, conglomerate 70 to 280 ft, 1 gpm at 240, 3 gpm at 260 and 5 gpm at 280 ft			2			Private Domestic
85065		280	85.34	6	15.24	6	174	53.04	40	12.19	04/04/2005	sandstone 40-73 ft, conglomerate 73 to 280 ft, 0.5 gpm at 220, 2 gpm at 240 and 4 gpm at 260 ft, 5 gpm at 280 ft			3	4		Private Domestic
85066		50.5	15.39	6	15.24	5	28	8.53			04/01/2005	5.5 inch screen set 43 10" to 50.5 ft, 10 slot, sand and gravel			4	4		Private Domestic
85067		280	85.34	6	15.24	5	150	45.72	35	10.67	03/30/2005	sandstone 35-55 ft, conglomerate 55 to 280 ft, 0.5 gpm at 220, 2 gpm at 240 and 4 gpm at 260 ft, 5 gpm at 280 ft			5			Private Domestic
85068		280	85.34	6	15.24	5	187	57.00	33	10.06	04/12/2005	sandstone 33-55 ft, conglomerate 55 to 280 ft, 0.5 gpm at 220, 1.5 gpm at 240 and 4 gpm at 260 ft, 5 gpm at 280 ft			1	4		Private Domestic
85069		285	86.87	6	15.24	3	213	64.92	54	16.46	04/09/2005	sandstone 54-72 ft, conglomerate 72 to 285 ft			7	4		Private Domestic
85071		280	85.34	6	15.24	7	200	60.96	42	12.80	04/07/2005	sandstone 54-75 ft, conglomerate 75 to 280 ft, 0.5 gpm at 240, 3 gpm at 260 and 7 gpm at 280 ft			9	4		Private Domestic
85073		300	91.44	6	15.24	6	160	48.77	33	10.06	03/23/2005	sandstone 33-70 ft, shale 70-98, mudstone? 98-130, conglomerate 130 to 240 ft, sandstone 240-275, conglomerate 275-300, 1.5 gpm at 240, 2 gpm at 260, 5 at 280, and 6 at 300 feet			11	4		Private Domestic
85074		280	85.34	6	15.24	6	150	45.72	34	10.36	03/29/2005	sandstone 34-50 ft, conglomerate 50 to 95 ft, sandstone 95-120, conglomerate 120-280, 1.5 gpm at 240, 4 gpm at 260, 6 at 280			12	4		Private Domestic
85075		44	13.41	6	15.24	10	19	5.79			03/22/2005	drilled to 52 feet, sand and gravel with boulders, open bottom			14	4		Private Domestic
86071	18003	130	39.62	6	15.24	2	70	21.34			10/17/2006	drilled to 137 ft, sand with little gravel, screen set 123.5 to 130 ft, 18 slot	68644		21	4		Private Domestic
86072	18064	120	36.58	6	15.24	15	88	26.82			12/07/2006	gravel and sand, screen set 113.5 to 120 ft, 25 slot	68644		45	4		Private Domestic
86074	18069	120	36.58	6	15.24	10	88	26.82			12/20/2006	gravel with boulders, open hole	68644		36	4		Unknown Well Use
86076	18161	100	30.48	6	15.24	10	69	21.03			12/11/2006	gravel with boulders, open hole	68644		46	4		Private Domestic
86077	18070	134.5	41.00	6	15.24	15	91	27.74			12/06/2006	gravel and sand, screen set 128 to 134.5 ft, 18 slot	68644		41	4		Unknown Well Use
86081	18002	154.9	47.21	6	15.24	3	125	38.10			10/21/2006	sand and gravel, screen set 149 to 154.9 ft, 25 slot	68644		62	4		Private Domestic
86082	18007	151	46.02	6	15.24	2	115	35.05			10/19/2006	sand and gravel, screen set 144.25 to 151, 15 slot	68644		20	4		Private Domestic
86093	18157	518	157.89	6	15.24	2			418	127.41	08/23/2006	completed in sandstone, overlain by silty sand, 81 and clay	68644		5	4		Private Domestic
86094	18006	132	40.23	6	15.24	5	70	21.34			10/11/2006	gravel with sand, screen set 125.25 to 13 ft, 12 slot	68644		10	4		Private Domestic
86095	18196	153	46.63	6	15.24	2	134	40.84			10/24/2006	sand with gravel, open hole	68644		18	4		Private Domestic
86096	18067	129	39.32	6	15.24	10	77	23.47			11/16/2006	sand with gravel, open hole	68644		33	4		Private Domestic
86097	18158	147	44.81	6	15.24	2	108	32.92			11/09/2006	gravel with sand, screen set 140.3 to 147 ft, 12 slot	68644		26	4		Private Domestic
86098	18180	149	45.42	6	15.24	7	108	32.92			11/14/2006	gravel with sand, open hole	68644		23	4		Private Domestic
86099	18159	298.5	90.98	6	15.24	2.5	160	48.77	314	95.71	11/07/2006	sand, screen set 291 to 298.5 ft, 18 slot	68644		16	4		Private Domestic

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Well Tag No. (WTN)	Well Identification Plate No. (WID)	Depth Drilled or Dug (feet)	Depth Well Drilled (feet)	Diameter (inches)	Diameter (cm)	Driller's Estimated Yield Value (Usqpm)	Water Depth (feet)	Water Depth (m)	Depth to Bedrock (feet)	Depth to Bedrock (m)	Construction Completion Date	General Remarks	Legal District Lot	Legal Plan	Lot No.	Section	Owner When Constructed	Well Purpose
86100	18001	305	92.96	6	15.24	8	160	48.77			11/01/2006	sand, screen set 298.5 to 305 ft, 18 slot	68644	1	4			Private Domestic
86127	18162	149	45.42	6	15.24	8	111	33.83			10/06/2006	sand and gravel, screen set 142.25 to 149 ft, 20 slot	68644	7	4			Private Domestic
86138	18199	598	182.27	6	15.24	1	150	45.72	408	124.36	10/04/2006	hardstone bedrock, 0.75 gpm at 520 ft, 1 gpm at 598 ft	68644	8	4			Private Domestic
86139	18198	427	139.15	6	15.24	10	150	45.72			09/27/2006	sand and gravel, open hole	68644	8	4			Private Domestic
86130	18004	219	66.75	6	15.24	20	154	46.94			09/04/2006	gravel and sand, open hole	68644	15	4			Private Domestic
86145	18195	150	45.72	6	15.24	10	121	36.88			09/14/2006	gravel, open hole	68644	4	4			Private Domestic
86146	18109	157	47.85	6	15.24	8	100	30.48			09/12/2006	gravel and sand, silty, screen set 150.3 to 157 ft, 25 slot	68644	3	4			Private Domestic
86147	18187	167	57.00	6	15.24	10	144	43.89			09/19/2006	sandy gravel, open hole	68644	5	4			Private Domestic
86150	18200	310	94.49	6	15.24	25+	150	45.72			09/11/2006	sand and gravel, screen set 303.3 to 310 ft, 20 slot	68644	2	4			Private Domestic
87054		60	18.29	6	15.24	80 to 100					02/09/2005	sand with gravel, screen set 56 to 80 ft, 12 slot	4194	6	2			Unknown Well Use
88330	18055	56	17.07	6	15.24	10	20	6.10			01/16/2007	boulders and gravel, open hole	68644	47	4			Private Domestic
88332	18049	121	36.88	6	15.24	12	55	16.76			01/05/2007	gravel and sand, open hole	68644	38	4			Private Domestic
90202	18081	96	29.26	6	15.24	10	45	13.72			01/03/2007	sand and gravel, open hole	68644	29	4			Unknown Well Use
90203	18082	127	38.71	6	15.24	10	68	20.73			01/04/2007	gravel, open hole	68644	28	4			Unknown Well Use
90204	18084	118	35.97	6	15.24	8	77	23.47			01/11/2007	sand, little gravel, screen set 111.5 to 118, 12 slot	68644	30	4			Unknown Well Use
90205	18086	59	17.98	6	15.24	10	16	4.88			01/15/2007	gravel, open hole	68644	50	4			Unknown Well Use
90207	18087	59	17.98	6	15.24	10	18	5.49			01/16/2007	coarse gravel, open hole	68644	48	4			Unknown Well Use
90532	18572	138	42.06	6.625	16.83	12					12/21/2006	coarse gravel, open hole	VID83339	34	2			Private Domestic
90536	18570	110	33.53	6.625	16.83	12	55	16.76			12/20/2006	coarse gravel, open hole	VID83339	33	2			Private Domestic
90541	18592	238	72.54	6.625	16.83	30	35	10.67			12/16/2006	gravel, open hole	VID83339	35	2			Private Domestic
90544	18561	146	44.50	6.625	16.83	6	112	34.14			12/09/2006	gravel and sand, open hole	VID83339	40	2			Private Domestic
90546	18580	155	47.24	6.625	16.83	20	110	33.53			12/06/2006	coarse gravel, open hole	VID83339	39	2			Private Domestic
90548	18562	154	46.94	6.625	16.83	19	109	33.22			12/09/2006	gravel and sand, open hole	VID83339	43	2			Private Domestic
90553	18581	150	45.72	6.625	16.83	6	87	26.52			11/14/2006	coarse sand and gravel, screen set 148 to 150, 10 slot	VID83339	22	2			Private Domestic
90554	18598	149	45.42	6.625	16.83	18	78	23.77			11/10/2006	coarse sand and gravel, open hole	VID83339	24	2			Private Domestic
90555	18598	134	40.84	6.625	16.83	8	86	26.21			11/09/2006	coarse sand and gravel, open hole	VID83339	25	2			Private Domestic
90557	18597	142	43.28	6.625	16.83	18	87	26.52			11/02/2006	gravel, coarse sand, open hole	VID83339	11	2			Private Domestic
90558	18596	157	47.85	6.625	16.83	6	117	35.66			10/31/2006	gravel and sand, open hole	VID83339	17	2			Private Domestic
90560	18599	119	36.27	6.625	16.83	4	92	28.04			10/26/2006	gravel and sand, screen set 115 to 119, 20 slot	VID83339	14	2			Private Domestic
90561	18590	70	21.34	6.625	16.83	20					10/25/2006	gravel and sand, screen set 66 to 70, 18 slot	VID83339	13	2			Private Domestic
90628	18579	154	46.94	6.625	16.83	5	112	34.14			12/09/2006	gravel and sand, open hole	VID83339	44	2			Private Domestic
93815	18595	113	34.44	6.625	16.83	6					11/15/2006	gravel and sand	VID83339	27	2			Private Domestic
95648	18153	114	34.75	6	15.24	10	71	21.64			07/19/2006	gravel, open hole	427R, 2387S	4				Private Domestic
104188	19818	120	36.58	6.125	15.56	15	98	29.87			04/16/2010	gravel and sand, open hole		36				Private Domestic
112330	34474	300	91.44	6.125	15.56	3			170	51.82	10/29/2014	alluvium, open hole 178.5 to 300 ft	VIP86844	48				Private Domestic
113801	52111	96	29.26	6	15.24	4	77	23.47			10/20/2017	coarse sand with boulders, water-bearing 78 to 94 feet	427 R					Private Domestic
114734	52189	280	85.34	4	10.16	2.5	166	50.60	35	10.67	03/01/2018	gray rock, fracture at 262 feet, perforated liner from 180 to 280 feet	VIP79213	7	4			Private Domestic
118154	53598	114	34.75	6	15.24	10	85	25.91			08/22/2019	gravel, screen set 108 to 114 ft, 40 slot	VIP83884	43	4			Private Domestic

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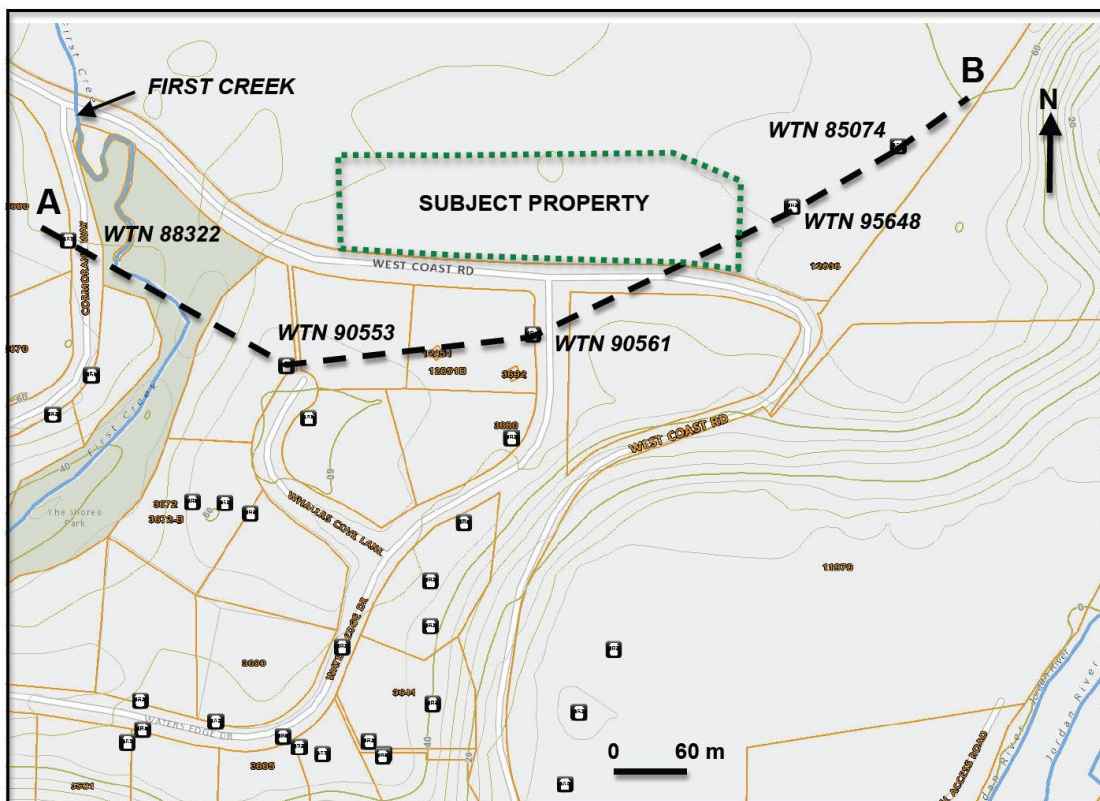
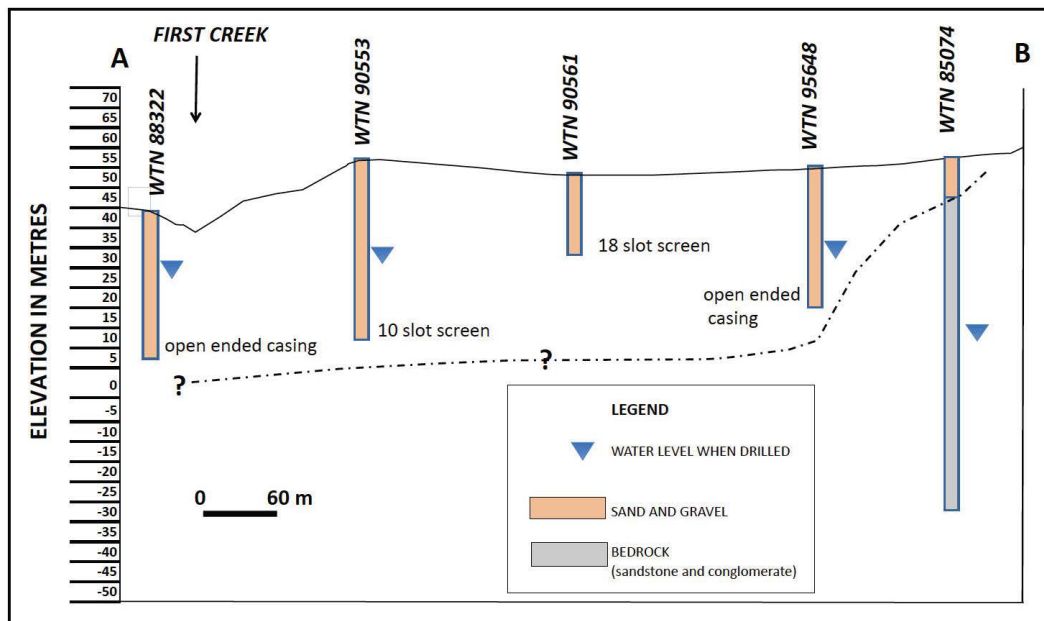


Figure 6. Location of geologic cross section A-B in relation to subject property. Basemap from CRD, 2022a.

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On-site waste water disposal may pose some minor risk to the aquifer and would require properly designed and constructed waste water treatment systems to minimize any potential impacts on the groundwater resource and neighbouring wells. Wells would need to be constructed in compliance with the *Groundwater Protection Regulation* under the *Water Sustainability Act*. The presence of glacial till near the surface in some wells and relatively deep water levels ranging from 55 to 87 feet (16.76 to 26.52 m) as shown in Figure 7 would minimize any potential risks of aquifer contamination.

### Conclusions

Based on examination of available geological and groundwater information in the vicinity of the Wildwood Terrace Neighbourhood Commercial Zone, the prospects for constructing individual wells on each of the ten proposed land parcels are very encouraging. There may be up to 10 m (32.81 feet) of saturated sand and gravel underlying the site with individual wells potentially yielding 5 to 10 USgpm (18.93 to 37.85 L/min) each.

The maximum total water demand for ten parcels is estimated to not likely exceed 3 to 5 USgpm (11.36 to 18.94 L/min) on a continuous basis. The proposed brewery on the property would likely be the largest user of water initially at 350,000 L/year (959 L/day) increasing to 2,000,00 L/year (5480 L/day) after 5 years. It is unlikely that groundwater use at a continuous rate up to 3 to 5 USgpm (11.36 to 18.94 L/min) would have any significant effect on neighbouring wells or the flows of First Creek.

On-site waste water disposal may pose some minor risk to the aquifer and would require properly designed and constructed waste water treatment systems to minimize any potential impacts on the groundwater resource and neighbouring wells. The presence of glacial till near the surface and relatively deep water levels ranging from 55 to 87 feet (16.76 to 26.52 m) would also minimize potential risks of aquifer contamination.

### Recommendations

The following recommendations are provided for consideration:

1. Proceed with the design and construction of a water supply well for the proposed brewery and pump test the well to evaluate the aquifer parameters and to support a water licence application.
2. Monitor water levels in a neighbouring well during the pump testing of the proposed brewery well and sample the brewery well for laboratory water quality analysis.
3. Develop a *Well Protection Plan* for the brewery well to minimize any potential risks to water quantity depletion or water quality degradation.



### Closure

This report was prepared in accordance with generally accepted engineering, hydrogeological and consulting practices. It is intended for the prime use by Totangi Properties in connection with its purpose as outlined under the scope of work for this project. This report is based on data and information available to the author from various sources at the time of its preparation and the findings of this report may therefore be subject to revision. Data and information supplied by others has not been independently confirmed or verified to be correct or accurate in all cases. The author retains full copyright of the material contained in this report. The author and Hy-Geo Consulting accepts no responsibility for damages suffered by any third party as a result of any unauthorized use of this report. Any errors, omissions or issues requiring clarification should be brought to the attention of the author.

Respectfully submitted,



Alan P. Kohut PEng  
Principal and Senior Hydrogeologist

HY-GEO CONSULTING  
Permit to Practice Number: 1001034

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Appendix G: Bylaw No. 4598 – Proposed Amendments to the OCP

**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4598**

\*\*\*\*\*  
**A BYLAW TO AMEND BYLAW NO. 4001, THE "SHIRLEY-JORDAN RIVER OFFICIAL COMMUNITY  
PLAN, BYLAW NO. 5, 2018"**  
\*\*\*\*\*

The Capital Regional District Board, in open meeting assembled, enacts as follows:

1. Bylaw No. 4598 being the "Shirley- Jordan River Official Community Plan, Bylaw No. 5, 2018" is hereby amended:

**A. SCHEDULE A – SECTION 208 REGIONAL GROWTH STRATEGY CONSISTENCY**

- (a) By deleting the following text in Schedule A, Section 208 B:

"A Commercial Land Use Designation has been applied to lands in Jordan River that are deemed not safe for residential habitation."

- (b) By deleting the following text in Schedule A, Section 385:

"The hamlet of Jordan River currently has one small restaurant business serving local and tourist needs. The Commercial Land Use Designation applies to lands adjacent to the Jordan River."

- (c) By deleting the following text in Schedule A, Section 386:

"The Commercial Land Use Designation applies to lands in Jordan River where residential and overnight habitation uses are not permitted due to the risk of flooding. The prescribed minimum lot size (120 ha) would prevent further subdivision of these lands."

And replacing with the following:

"The Commercial Land Use Designation applies to lands that provide potential for local services in support of development of the local economy. Except where lands may be restricted with respect to residential and overnight habitation uses due to the risk of flooding, an average density of one *parcel* per 0.4 ha within a plan of subdivision is supported."

- (d) By deleting the following text in Schedule A, Section 404:

"The intent of the Commercial Land Use Designation is to support small-scale neighbourhood commercial and light industrial uses in the Jordan River inundation area. Civic, institutional, tourism, recreation, silviculture and community park uses are also supported."

And replacing with the following:

"The intent of the Commercial Land Use Designation is to support small-scale neighbourhood commercial and light industrial uses. Civic, institutional, tourism, recreation, silviculture and community park uses are also supported"

- (e) By deleting the text in Schedule A, Section 484 N, and replacing with the following:

"For lands designated as Commercial on Schedule B, an average density of one *parcel* per 0.4 hectares with one caretaker dwelling is supported"

- (f) By deleting the text in Schedule A, Section 484 R, and replacing with the following:

"For lands designated Renewable Resource and Restricted Development on Schedule B, a density of one parcel per 120 hectares is supported. One dwelling per parcel is supported for those lands designated Renewable Resource."

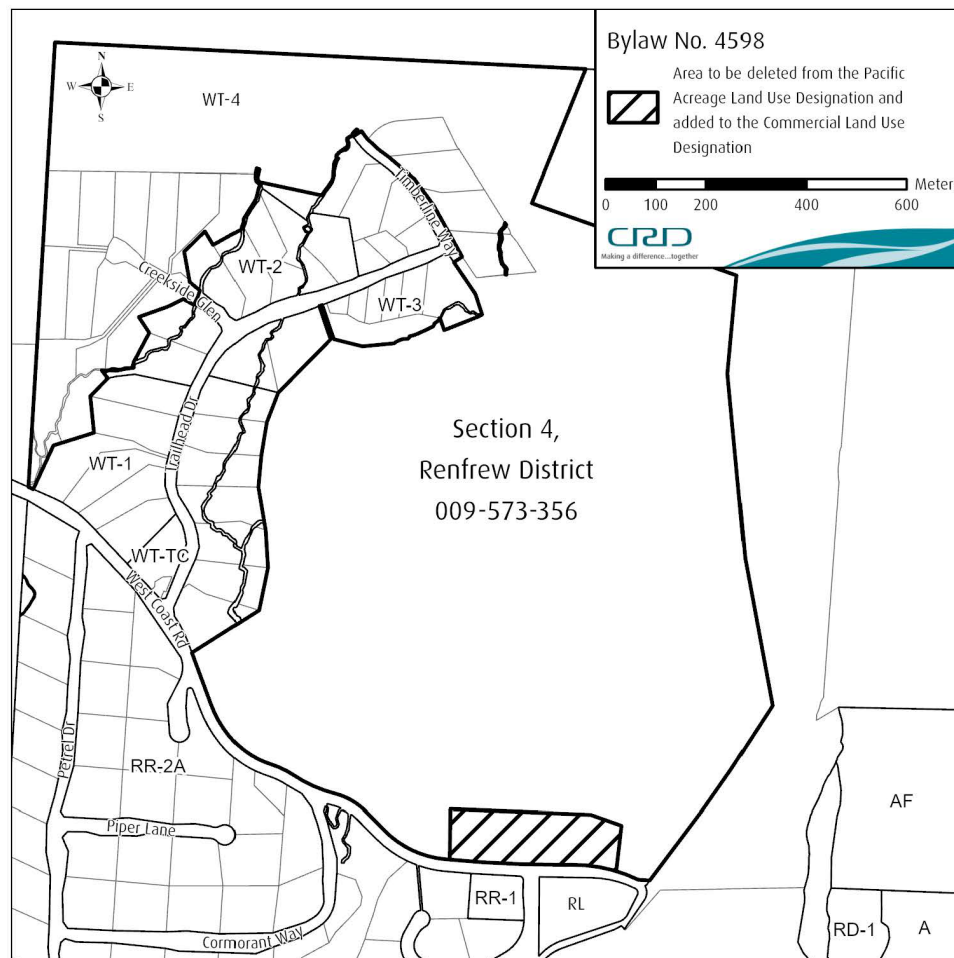
CRD Bylaw No. 4598

2

**B. SCHEDULE B – LAND USE DESIGNATIONS**

- (a) By deleting that part of Section 4, Renfrew District Except Those Parts In Plans 427R, 23879, VIP68644, VIP79213, VIP80549, VIP82411 And EPP69011, from the Pacific Acreage land use designation and adding to the Commercial land use designation, as shown on Plan No. 1.

**Plan No. 1 of Bylaw 4598, an amendment to Bylaw No. 4001**



CRD Bylaw No. 4598

3

2. This bylaw may be cited as "Shirley – Jordan River Official Community Plan, Bylaw No. 5 2018, Amendment Bylaw No. 2, 2024".

READ A FIRST TIME THIS                      day of                      , 2024.

READ A SECOND TIME THIS                      day of                      , 2024.

READ A THIRD TIME THIS                      day of                      , 2024.

ADOPTED THIS                      day of                      , 2024.

\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CORPORATE OFFICER

Appendix H: Bylaw No. 4599 – Proposed Amendments to the C-1A

**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4599**

\*\*\*\*\*

**A BYLAW TO AMEND BYLAW NO. 2040, THE "JUAN DE FUCA LAND USE BYLAW, 1992"**

\*\*\*\*\*

The Capital Regional District Board, in open meeting assembled, enacts as follows:

1. Bylaw No. 2040 being the "Juan de Fuca Land Use Bylaw, 1992" is hereby amended as follows:

**A. SCHEDULE A, PART 2, SECTION 6G.0 WILDWOOD TERRACE NEIGHBOURHOOD  
COMMERCIAL ZONE - C-1A**

- (a) By amending section 6G.01 Permitted Uses by adding new subsections under Principal Uses as follows:

- (f) Restaurant;
- (g) Personal Services;
- (h) Offices;
- (i) Health Services;

- (b) By amending section 6G.01 by deleting the following text from Section 6G.01:

**Accessory Uses:**

- (f) Residential;
- (g) Screened storage yard;
- (h) Buildings or structures accessory to the above uses pursuant to Part 1, Subsection 4.01.
- (i) Onsite store, picnic area, lounge and special event area accessory to a manufacturer liquor licence subject to the Liquor Control and Licensing Act.

- (c) By adding a new section 6.02G with the following and renumbering the subsequent sections in the C-1A zone:

**6G.02 Permitted Accessory Uses:**

In addition to the uses permitted by Section 6G.01 of Part 2 of this Bylaw, the following Accessory Uses in conjunction with a permitted Principal Use and no others shall be permitted in the C-1A Zone:

- (a) Residential;
- (b) Screened storage yard;
- (c) Buildings or structures accessory to the above uses.
- (d) Onsite store, picnic area, lounge and special event area accessory to a manufacturer liquor licence subject to the Liquor Control and Licensing Act.

- (d) By deleting section 6G.02 Minimum Parcel Size for Subdivision Purposes and replacing with the following:

**6G.03 Minimum Parcel Size for Subdivision Purposes:**

- (a) The minimum parcel size for subdivision purposes is 0.4 ha;
- (b) Notwithstanding Section 6G.03(a) of Part 2 of this Bylaw, lot averaging is permitted with an average lot size of 0.4 ha and a minimum lot size of 0.2 ha.

- (e) By amending section 6G.04 Height by deleting the text "9 m" and replacing with "12.0m".

CRD Bylaw No. 4599

2

- (f) By deleting section 6G.07 Maximum Size of Principal Buildings and replacing with the following:

**6G.08 Maximum Size of All Buildings and Structures:**

The Total Floor Area and sum of all principal and accessory buildings and structures on a parcel shall not exceed a Floor Area Ratio of 0.4.

- (g) By replacing section 6G.08 Yard Requirements with the following:

**6G.09 Setback Requirements:**

All principal and accessory buildings and structures must meet the following yard requirements:

- (a) Principal buildings and structures are required to be:

- (i) A minimum of 7.5m from the lot line of a street and or public highway; and
- (ii) A minimum of 3.0m from the lot line of a parcel; and
- (iii) Notwithstanding Part 2 Section 6G.09 (a) (ii) above; a minimum of 9.0m is required from the lot lines of parcels in Residential, Rural Residential, or Multiple Family Residential zones.

- (b) Accessory buildings and structures are required to be:

- (i) A minimum of 7.5m from the lot line of a street and or public highway; and
- (ii) A minimum of 3.0m from a lot line of a parcel.

- (h) By adding a new section 6G.10 Parking Setbacks as follows:

**6G.10 Parking Setbacks:**

- (a) Bare land strata lots may provide parking spaces in accordance with this bylaw sited on common property registered on title to those strata lots;
- (b) For lot lines that abut a public highway, parking spaces provided in accordance with this bylaw shall be a minimum of 7.5m; and
- (c) For lot lines that do not abut a public highway, parking spaces provided in accordance with this bylaw shall be a minimum of 3.0m from a lot line.

2. This Bylaw may be cited as "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 162, 2024".

READ A FIRST TIME THIS	day of	2024
READ A SECOND TIME THIS	day of	2024
READ A THIRD TIME THIS	day of	2024
ADOPTED THIS	day of	2024

\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CORPORATE OFFICER

Appendix I: Referral Comments

**Darren Lucas**

---

**From:** Kristine Pearson <referrals@pacheedaht.ca>  
**Sent:** Friday, June 07, 2024 9:51 AM  
**To:** Darren Lucas  
**Cc:** Iain Lawrence  
**Subject:** Re: Rezoning Application RZ000284 - PFN Comments.

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Thanks Darren - perfect

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**From:** Darren Lucas <DLucas@crd.bc.ca>  
**Sent:** Thursday, June 6, 2024 4:20:18 PM  
**To:** Kristine Pearson <referrals@pacheedaht.ca>  
**Cc:** Iain Lawrence <ilawrence@crd.bc.ca>  
**Subject:** RE: Rezoning Application RZ000284 - PFN Comments.

Hi Kristine,

As directed by PFN, # 3 has been added to the comments provided by PFN regarding RZ000284

Please review the comments below and in a response to this email confirm and or edit these comments accordingly.

At our Friday, May 10, 2024, meeting on RZ000284, the CRD heard from Pacheedaht that:

1. There are concerns that the proposal will impact the delivery and capacity of emergency services:
  - a. Specifically for Fire Services, it is recommended that a fire service area should be established or extended to include Jordan River, and in particular, lands subject to the proposal.
2. The applicant is directed to be mindful of the water in and on the land subject to this application (the "Land") and the impacts of the proposed development on adjacent lands:
  - a. Pacheedaht First Nation is currently conducting a water assessment to ensure appropriate quantity and quality are available under the water reservation through the treaty negotiations.
  - b. Water (including groundwater) is at a critical capacity, contaminated in some areas, and vulnerable to further contamination from certain types of development.
  - c. Existing wells on adjacent lands already have ongoing issues accessing groundwater.
  - d. There are concerns that the proposed use will impact future development potential in Jordan River as well.
3. While the applicant has provided a preliminary ground water study, the applicant is directed to conduct a water assessment to determine if there are any potential impacts to the bliss spring water resource; and any systems utilizing that resource; as a result of the potential development that the proposed bylaw would permit. If impacts are identified, the assessment is required to provide recommendations to mitigate those impacts.
4. The applicant is directed to respond to pedestrian accessibility of the site and to surrounding lands, such as but not limited future development of the larger remainder lot zoned WT-4.
5. The applicant is directed to respond on how this proposal will impact current and future development activity, such as but not limited to interests related to local economic development.
6. The applicant is directed to respond by working with Pacheedaht First Nation on how recognition would be incorporated into the development.



7. Prior to consideration of adoption, Pacheedaht First Nation directs the applicant to have a qualified professional conduct a cultural assessment of the Land, to determine if there are areas of cultural and or archaeological significance, and to provide and implement a plan to protect anything of cultural and or archaeological value.

**Darren Lucas**, BA, MCP

Planner | Juan de Fuca Local Area Services

Capital Regional District | 3-7450 Butler Road, Sooke, BC V9Z 1N1

T: 250.642.8102 | F: 250.642.5274 | Web: [www.crd.bc.ca/jdf](http://www.crd.bc.ca/jdf)



Making a difference...together

This e-mail and any attachments are for the use of the intended recipient only and must not be distributed, disclosed, used or copied by or to anyone else unless authorized by the sender. Thank you.



PO Box 307, Sooke B.C., V9Z 1G1  
Ph.: 250 642-3957 Fax: 250 642-7808

14 June 2024

RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)

File: RZ000282

Dear Iain Lawrence,

Thank you for providing the opportunity to review the application. T'Sou-ke Nation will need to be apprised of any archaeological finds when construction starts on this property. There should also be opportunity for the guardians to be onsite when excavation, grubbing and digging is undertaken.

What kind of commercial activity is contemplated? Why is a subdivision being contemplated on commercial property? Prior to any development archaeology studies need to be conducted, T'Sou-ke Nation guardians need to be on site for arch work, any recommendations for further studies need to be followed.

There is a possibility that undetermined archaeological resources may be uncovered. When works begin, the prime contractor should provide T'Sou-ke Nation with a copy of its chance find procedure. Please notify T'Sou-ke Nation when construction begins.

Should you have any comments or questions following this review please correspond with the Lands Manager at [landsmanager@tsoukenation.com](mailto:landsmanager@tsoukenation.com) or at 250-642-3957 ext. 227.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bonnie Hill", is placed below the "Sincerely," text.

Bonnie Hill  
Lands Governance Director, T'Sou-ke First Nation  
250-642-3957; [landsmanager@tsoukenation.com](mailto:landsmanager@tsoukenation.com)

**From:** [Towstego, Lucas FOR:EX](#)  
**To:** [Wendy Miller](#)  
**Subject:** RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)  
**Date:** Friday, April 12, 2024 8:04:21 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image005.png](#)

**CRD IT SECURITY WARNING:** This Email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Dear Wendy,

Thank you for your archaeological information request regarding PID 009573356 (Legal: SECTION 4 RENFREW DISTRICT EXCEPT THOSE PARTS IN PLANS 427R, 23879, VIP68644, VIP79213, VIP80549, VIP82411, EPP69011 AND EPP117093). Please review the screenshot of the property below (outlined in yellow) and notify me immediately if it does not represent the property listed in your information request.

#### Results of Provincial Archaeological Inventory Search

According to Provincial records, there are no known archaeological sites recorded on the subject property.

Archaeological potential modelling is not currently available to the Province that describes the potential for previously unidentified archaeological sites to occur in the area.

#### Archaeology Branch Advice

The Archaeology Branch does not identify a need for archaeological study or Provincial heritage permit(s) at the time of this information request.

Please notify all individuals (e.g., owners, developers, equipment operators) involved in land-altering activities (e.g., home renovations, property redevelopment, landscaping, service installation) that if archaeological material is encountered during development, they **must stop all activities immediately** and contact the Archaeology Branch for direction at 250-953-3334.

#### Rationale and Supplemental Information

- Archaeological study and Provincial heritage permit(s) are not required in the absence of an archaeological site.
- There is always a possibility for previously unidentified archaeological sites to exist on the property.

Archaeological sites are protected under the *Heritage Conservation Act* and must not be damaged or altered without a Provincial heritage permit issued by the Archaeology Branch. This protection applies even when archaeological sites are previously unidentified or disturbed.

#### Questions?

For questions about the archaeological permitting and assessment process, please contact the Archaeology Branch at 250-953-3334 or [archaeology@gov.bc.ca](mailto:archaeology@gov.bc.ca).

For more general information, visit the Archaeology Branch website at [www.gov.bc.ca/archaeology](http://www.gov.bc.ca/archaeology).



Please note that subject lot boundaries (yellow), archaeological site boundaries (red), and areas of archaeological potential indicated on the enclosed screenshot are based on information obtained by the Archaeology Branch on the date of this communication and may be subject to error or change. Archaeological site boundaries may not be identical to actual site extent.

**From:** [Pinches, Ryan MOTI:EX](#)  
**To:** [Wendy Miller](#)  
**Subject:** RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)  
**Date:** Friday, April 05, 2024 8:51:18 AM

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**CRD IT SECURITY WARNING:** This Email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Good morning Wendy,

The proposal falls within Section 52 of the Transportation Act and will require formal Ministry approval and signature.

The Ministry has no objections to the proposed rezoning.

Thank you,

**Ryan Pinches**  
*Senior Development Services Officer*  
Highways & Regional Services Division  
Ministry of Transportation & Infrastructure  
240 - 4460 Chatterton Way  
Victoria, BC V8X 5J2  
[Ryan.Pinches@gov.bc.ca](mailto:Ryan.Pinches@gov.bc.ca) | 250-419-8992



**From:** [Willcocks, Greg \(RCMP/GRC\)](#)  
**To:** [Wendy Miller](#)  
**Subject:** RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)  
**Date:** Friday, April 12, 2024 11:08:23 AM

**CRD IT SECURITY WARNING:** This Email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Hi Wendy,

Nothing to add on my end.  
Tha KS

Greg

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: Wendy Miller <[wmiller@crd.bc.ca](mailto:wmiller@crd.bc.ca)>  
Date: 2024-04-11 10:38 a.m. (GMT-08:00)  
To: "Willcocks, Greg (RCMP/GRC)" <[greg.willcocks@rcmp-grc.gc.ca](mailto:greg.willcocks@rcmp-grc.gc.ca)>  
Subject: RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)

Good morning,

I follow up to the below email.

Should you wish to make comment, comment is requested by April 19.

Thank you,

**Wendy Miller**

Administrative Clerk | JdF Local Area Services

T: 250.642.8100 | F: 250.642.5274

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Capital Regional District  
3 – 7450 Butler Road  
Sooke, BC V9Z 1N1



**From:** [Shauna Huculak](#)  
**To:** [Wendy Miller](#)  
**Cc:** [Sandra Allen](#); [Caitlyn Vernon](#)  
**Subject:** RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)  
**Date:** Monday, April 15, 2024 3:29:09 PM  
**Attachments:** [image001.png](#)

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Hi Wendy,

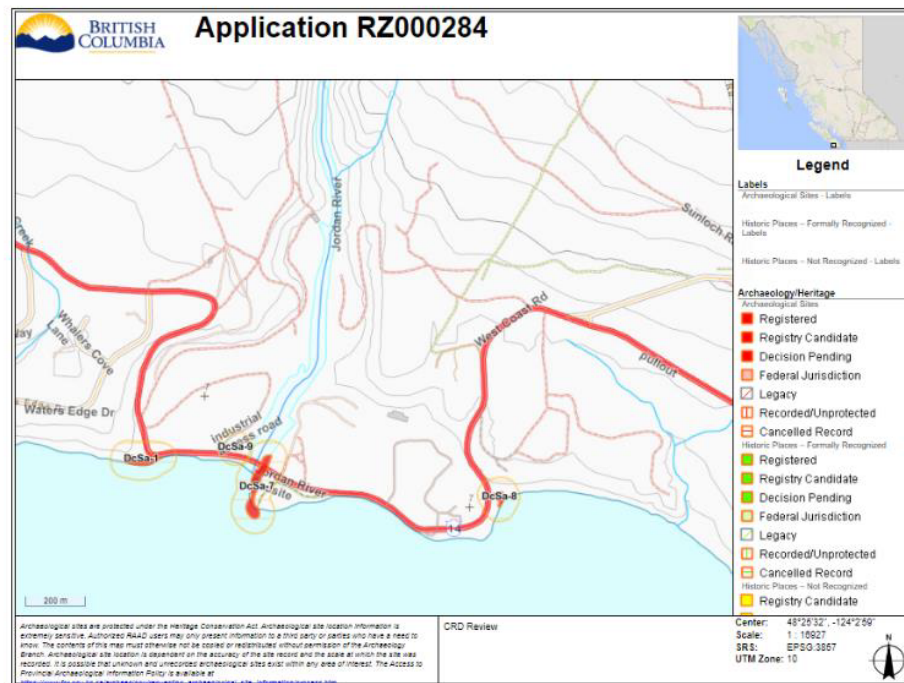
Pls see below for the archaeology recommendation.

A search of the Remote Access to Archaeological Data base(RAAD) manage by the BC Archaeology Branch (Ministry of Forests) was undertaken by the CRD on 15-April-2024 as related to Referral: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River). The search indicated that the closest registered archaeological site is located ~570m south of the application area (see below). Two additional archaeological sites are located within 700m of the application area, with a third located ~1.3km to the southeast (see below). Given that there is no registered archaeological site on the property, a Provincial Heritage Conservation Act permit is not required to undertake the work. However, a Provincial Heritage Conservation Act permit will be required if archaeological deposits, features or materials are exposed and/or encountered during land-altering activities. Unpermitted damage or alteration of a protected archaeological site is a contravention of the Heritage Conservation Act and requires that land-altering activities be halted until the contravention has been investigated and permit requirements have been established. This can result in significant project delays.

The search also indicated that there is no provincial archaeological overview assessment modelling for the area. This is this true for much of the JdF EA. However, the absence of modelling does not mean the area is void of archaeological potential. The application area is located on relatively level terrain, on a south facing aspect, within close proximity (~175m) to potable water (First Creek). These characteristics increase the likelihood that an archaeological site may be present in the application area. Further to this, it is understood that the area has been logged, thus limiting the potential for HCA-regulated culturally modified trees to be present. Pls note that archaeological sites can persist in disturbed settings, such as cultural shell deposits (shell midden) and stone or bone items, etc. Engaging a professional archaeologist to further determine the archaeological potential of the property where land-altering activities are planned is recommended. Engagement with involved First Nations would

form a component of the archaeological potential assessment.

All archaeological sites, whether on Provincial Crown or private land (including land under water) that are known or suspected to predate AD 1846, are automatically protected under the HCA (S.13) this includes culturally modified trees. Certain sites, including human burials and rock art sites with heritage value, are automatically protected regardless of their age. Shipwrecks and plane wrecks greater than two years of age are also protected under the HCA. The Heritage Conservation Act does not distinguish between those archaeological sites which are "intact," (i.e., those sites which are in a pristine, or undisturbed state) and those which are "disturbed" (i.e., those sites which have been subject to alteration, permitted or otherwise). All archaeological sites, regardless of condition, are protected by the HCA, as described above. Heritage Conservation Act -protected archaeological sites or objects cannot be disturbed or altered without a permit issued by the Archaeology Branch (Ministry of Forests).



From: Wendy Miller <wmiller@crd.bc.ca>  
Sent: Wednesday, March 20, 2024 4:12 PM

**From:** [Chris J Vrabel](#)  
**To:** [Wendy Miller](#)  
**Subject:** RE: OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)  
**Date:** Friday, March 22, 2024 10:57:44 AM

---

Hi Wendy,

As this falls outside of an established fire service area I will not provide comment. I see there is a covenant requiring all buildings be sprinklered for purposes of fire protection.

Sincerely,

Chris

---

**From:** Wendy Miller <wmiller@crd.bc.ca>  
**Sent:** Wednesday, March 20, 2024 4:09 PM  
**To:** Chris J Vrabel <CVrabel@crd.bc.ca>  
**Subject:** OCP Amendment and Rezoning Application RZ000284 - CRD Referral (Redesignate LUD & Amend C-1A Zone - Jordan River)

Good afternoon,

At its meeting of March 19, 2024, the Juan de Fuca Land Use Committee (LUC) directed referral of proposed Bylaw Nos. 4598 and 4599.

Proposed Bylaw No. 4598 would amend the Shirley-Jordan River Official Community Plan, Bylaw No. 4001, by redesignating a 3.3 ha portion of the subject property from Pacific Acreage (PA) to Commercial (CO) with amendments.

Proposed Bylaw No. 4599 would amend the Wildwood Terrace Neighbourhood Commercial (C-1A) zone of the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, by permitting additional commercial uses and a smaller average and minimum parcel size to facilitate subdivision.

I attach the staff report considered by the LUC on March 19, 2024.

Referral comments are summarized in the staff report to the LUC; the actual comments received are inserted verbatim into the staff report as an appendix.



**Minutes of a Meeting of the Shirley-Jordan River Advisory Planning Commission  
Held April 23, 2024, at the Shirley Community Hall, 2795 Sheringham Point Road,  
Shirley, BC**

---

**PRESENT:** Fiona McDannold (Chair), Emily Anderson, Vivi Curutchet  
**Staff:** Iain Lawrence, Senior Manager, JdF Local Area Services;  
Darren Lucas, Planner; Wendy Miller, Recorder  
**ABSENT:** Melody Kimmel  
**PUBLIC:** Approximately 14

The meeting was called to order at 7:00 pm.

Iain Lawrence provided a Territorial Acknowledgement.

**1. Elections**

Iain Lawrence called for nominations for the position of Chair of the Shirley-Jordan River Advisory Planning Commission (APC) for 2024 and Fiona McDannold's name was put forward. Iain Lawrence called two further times for nominations and, as there were none, Fiona McDannold was acclaimed Chair.

The Chair called for nominations for the position of Vice Chair of the Shirley-Jordan River APC for 2024 and Emily Anderson and Vivi Curutchet's names were put forward. Emily Anderson declined nomination; Vivi Curutchet accepted nomination. Vivi Curutchet was acclaimed Vice Chair.

**2. Approval of the Agenda**

**MOVED** by Emily Anderson, **SECONDED** by Vivi Curutchet that the agenda be approved.  
**CARRIED**

**3. Adoption of the Minutes of February 7, 2023**

**MOVED** by Vivi Curutchet, **SECONDED** by Emily Anderson that the minutes from the meeting of February 7, 2023, be adopted.  
**CARRIED**

**4. Planner's Report**

No report.

**5. Zoning and Official Community Plan Amendment Application**

a) **RZ000284 - Section 4, Renfrew District, Except Those Parts in Plans 427R, 23879, VIP68644, VIP79213, VIP80549, VIP82411, EPP69011 and EPP117093 (12036 West Coast Road)**

Darren Lucas spoke to the staff report for the request to amend the Shirley-Jordan River Official Community Plan (OCP), Bylaw No. 4001, by redesignating a 3.3 ha portion of the subject property from Pacific Acreage (PA) to Commercial (CO) with amendments and to amend Bylaw No. 2040 to amend the Wildwood Terrace Neighbourhood Commercial (C-1A) zone to permit additional commercial uses and a smaller average and minimum parcel size to facilitate subdivision.

**Shirley-Jordan River Advisory Planning Commission Meeting Minutes  
April 23, 2024**

**2**

The Juan de Fuca Land Use Committee (LUC) considered the application at its meeting of March 19, 2024. At that meeting, the LUC recommended that the application be referred to the Shirley-Jordan River APC for comment.

Correspondence received in response to the notice of meeting was circulated to the APC in advance of the meeting.

The Chair confirmed that the applicant was present.

Applicant comments included:

- Jordan River Brewing Company would be located in the commercial bare land strata subdivision and would be the focus of initial development
- the commercial development would include improvements to support vehicle access and parking
- a groundwater report was commissioned and is included in the staff report
- the lots would be subject to the requirements of Commercial Development Permit Area (DPA) designation
- the residential component proposed by the rezoning was included to assist with housing, staff accommodation and security
- the strata council/strata bylaw would address site maintenance and servicing including contracted waste removal

Public comments included:

- residential growth has seen an increase in children in the community
- the commercial development is located along Highway 14
- support for improved pedestrian and biking access to the commercial development
- concern for water security and springs in the area
- support for the work/live model proposed by the rezoning

Staff responded to comments from the public and the APC advising that:

- OCP amendments have been made previously in response to development applications to designate land as a Commercial DPA
- the 120 ha lot size stipulated by the Restricted Development Permit Area designation would be retained
- funding has been received to develop an Active Transportation Network Plan for the Juan de Fuca Electoral Area that would focus on public safety and connectivity for lands within proximity to the Highway 14 corridor; this could include the Jordan River area
- as directed by the LUC, the APCs will be invited to a public information meeting regarding a proposed amendment to the subdivision servicing requirements specified by Bylaw No. 2040 in relation to the provision of potable water
- in response to the small-scale, multi-unit housing regulations introduced by the Province, staff will be working with the applicant on the residential component of the rezoning to clarify that residential use is accessory to a principle use

APC discussion ensued regarding the comments received from the applicant and from the public.

**Shirley-Jordan River Advisory Planning Commission Meeting Minutes  
April 23, 2024**

**3**

**MOVED** by Fiona McDannold, **SECONDED** by Vivi Curutchet that the Shirley-Jordan River Advisory Planning Commission recommends to the Juan de Fuca Land Use Committee support for Zoning and Official Community Plan Amendment Application RZ000284. **CARRIED**

**6. Adjournment**

The meeting adjourned at 7:47 pm.

\_\_\_\_\_  
Chair



Juan de Fuca Electoral Area Parks and Recreation Advisory Commission  
April 23, 2024

3

b) **Zoning and Official Community Plan Amendment Application RZ000284 - Section 4, Renfrew District, Except Those Parts in Plans 427R, 23879, VIP68644, VIP79213, VIP80549, VIP82411, EPP69011 and EPP117093 (12036 West Coast Road)**

Darren Lucas spoke to the staff report for the application to amend the Shirley-Jordan River Official Community Plan, Bylaw No. 4001, by redesignating a 3.3 ha portion of the subject property from Pacific Acreage (PA) to Commercial (CO) with amendments and to amend Bylaw No. 2040 to amend the Wildwood Terrace Neighbourhood Commercial (C-1A) zone to permit additional commercial uses and a smaller average and minimum parcel size to facilitate subdivision.

The Juan de Fuca Land Use Committee (LUC) considered the staff report at its meeting of March 19, 2024. At that meeting, the LUC recommended that the application be referred for comment.

The Commission is requested to comment on if its interests are affected by the application. Comments received will be returned to the LUC for consideration.

The subject property was highlighted.

Policies from the Shirley – Jordan River Official Community Plan and the Community Parks and Recreation Strategic Plan which support the establishment of a network of trails for recreation and increased opportunity for safe walking routes and greater community connectivity were outlined.

The Commission acknowledged that the subject property:

- fronts West Coast Road
- is in the vicinity of Juan de Fuca Provincial Park, First Creek Community Park, Jordan River Regional Campground and Jordan River Regional Park

**MOVED** by Commissioner McAndrews, **SECONDED** by Commissioner Sloan that the Juan de Fuca Electoral Area Parks and Recreation Advisory Commission state to the Juan de Fuca Land Use Committee that the Commission's interests are affected by the proposal (RZ000284) and that the Commission supports continued safe trail connectivity and recreation in the community including connecting backcountry trails and active transportation routes.

**CARRIED**



A portion of  
**12036 West Coast Road**  
REZONING AND OCP AMENDMENT  
APPLICATION

December 2023

## PROJECT SUMMARY

This is a comprehensive application package for a Rezoning and Official Community Plan Amendment for a portion of 12036 West Coast Road. This portion of the property consists of approximately 8.15-acres or 3.3ha. The intention is to create smaller parcel sizes via a commercial bareland strata, add some additional neighbourhood commercial land uses, and incorporate some additional planning tools to enable appropriately scaled development within each new parcel. The proposed change in parcel size will necessitate an amendment to the OCP.

## SITE SUMMARY

The portion of property at 12036 West Coast Road under application is approximately 8.15acres (3.3ha) in size. The subject property is designated 'Pacific Acreage' in the Shirley-Jordan River Official Community Plan (OCP), and is zoned Wildwood Terrace Neighbourhood Commercial (C1-A) under the Juan de Fuca Land Use Bylaw No. 2040. This property has been zoned for neighbourhood-scale commercial purposes for some time, with the landowner preparing to create some additional commercial activity on the property.

Recently, the owner amended the zoning on the property to add Country Market and Food and Beverage Processing to support the microbrewery use at the commercial site (Bylaw 4381), received a development permit to construct the new brewery, and the commercial area is actively being subdivided from the main parcel.

## PROPOSAL

The vision for this site is to create a village gathering place for the rural community of Jordan River that will serve locals and support tourism in the region. The position of this property provides an opportunity to build a community gathering place in a location with greater resilience to several known hazards in the area. The intention is to create a number of commercial bareland strata parcels that would enable more diverse ownership and investment of a relatively large commercial site.

The application is to amend the Wildwood Terrace Neighbourhood Commercial Zone (C1-A) to permit additional land uses, reduce the minimum parcel size, introduce the concept of Floor Space Ratio, to consider a reduction to the setback for parking areas, consider reduced setbacks, and increase in building height to support architectural options by way of a site-specific zoning amendment.

The reduced parcel size will necessitate an amendment to the Shirley-Jordan River OCP. Due to the proximity of the Wildwood Neighbourhood commercial area to the Jordan River Village, it is suggested that the property be redesignated 'Commercial' in the OCP. Some

adjustment to policies related to the Commercial designation may need to be contemplated as part of this consideration.

A conceptual subdivision layout and site plan has been attached to this report as a representation of how the site could be developed (Attachment 1). This is not a large departure from what can currently be built, but it does allow much more flexibility surrounding ownership and opportunity.

## REZONING RATIONALE

### Proposed Zoning Amendments

To help achieve the vision, the following modifications are requested to the C1-A Zone by way of this application.

a. Minimum parcel size; the current zone permits a minimum parcel size of 3.3ha making the parcel un-subdividable. This proposal includes incorporating a minimum parcel size of 0.2ha (2000m<sup>2</sup>) within the site to accommodate a commercial bareland strata.

**Rationale:** Commercial properties have unique financing and often need more flexibility to realize the potential of the property. Creating the ability for a property owner to divide the site into individual units provides more certainty for lenders and reduces risk for future commercial owners/operators. From a practical point of view, an 8.15 acre (3.3ha) parcel is a large land area and this amendment would enable potential for new business opportunities for the community.

In addition, other existing commercial properties within the plan area have a minimum parcel size of 9000m<sup>2</sup> and have a zoning of Village Commercial Zone (C-2). In this context, a 2000m<sup>2</sup> minimum parcel size can be viewed as reasonable and less intensive than other existing commercial areas.

b. Incorporate FSR; In order to better scale commercial buildings, its proposed that the maximum size of principal building area be replaced with the use of a Floor Space Ratio (FSR) of 0.4.

**Rationale:** Introducing FSR to the land use bylaw, used in combination with setbacks, height and lot coverage, ensures buildings are proportionate to the size of each parcel. FSR also encourages more open space on a development site, allowing the owner an opportunity to incorporate more landscaping and natural drainage solutions.

Currently, a total floor area of 2000m<sup>2</sup> is permitted for the entire parcel. Floor space ratio is proposed as a solution/tool for total floor area cap, so that future buildings would be constructed in relation to the size of the parcel created.

PAGE 2



c. Add new permitted uses; including restaurant, personal services, offices, and health services.

**Rationale:** The proposed new uses are complimentary and in alignment with typical neighbourhood commercial activities. The proposed land uses continue to exclude automobile oriented uses such as gas station, bulk fuel sales, auto repair and carwash.

The proposed uses give those living in the area an opportunity to access some services to meet their daily needs, and include some tourist serving uses. This is in alignment with aspirations of the Shirley-Jordan River Official Community Plan, and is in alignment with uses in the Commercial designation within the Jordan River Village area.

d. Setback exemption for parking stalls; currently a 7.5m setback is required for parking stalls from the road, and a 3m setback is proposed.

**Rationale:** A 3m setback for proposed parking spaces continues to support a landscaped buffer between the road right of way and the commercial site but is a more typical setback for parking areas. This request is site-specific for this property but could be applied more generally if desired.

e. Building Setbacks; 7.5m front, 3m side yard setback, 5m rear yard setback

**Rationale:** The setbacks proposed are reasonable for the overall concept and allow for a minimum of 6m building separation within the site. These setbacks are similar to setbacks identified in other commercial zones within the plan area.

f. Building Height increase of 3 metres; currently building is limited to 9 meters. An increase of 3 meters to 12 metres is proposed.

**Rationale:** A increase in building height to 12 metres will allow for greater architectural flexibility for roof lines and is consistent with other maximum heights for commercial zoning in the plan area such as C-2 Village Commercial.

## OCP AMENDMENT RATIONALE

### Proposed OCP Amendment

The current land use designation on the property is 'Pacific Acreage'. This land use designation supports primarily rural residential uses, and enables small scale neighbourhood commercial, commercial tourism, parks and civic land uses. The proposal

does not entirely fit within the Pacific Acreage designation due to the residential nature of the designation and the typical residential lot size that is supported.

It is proposed that this property be redesignated 'Commercial' due to its proximity to Jordan River as it will help to achieve the overall OCP vision for the community. However, potential amendments to the Commercial designation may need to be considered, particularly as it relates to lot size.

The applicable OCP policies include:

*404 Commercial Land Use Designation*

*The intent of the Commercial Land Use Designation is to support small-scale neighbourhood commercial and light industrial uses in the Jordan River inundation area. Civic, institutional, tourism, recreation, silviculture and community park uses are also supported.*

**Analysis:** The proposed land use designation of Commercial is appropriate for the land uses proposed. A further text amendment to the policies of the OCP needs consideration regarding the prescribed minimum lot size of 120 ha, which prevents further subdivision of these lands, even for economic development purposes.

*483 Objectives for Development and Local Economy*

*B. Support a range of economic activities at a scale appropriate to the size of the community and its rural nature.*

*E. Recognize that Shirley and Jordan River are predominantly rural areas where resource-based activities such as forest management and timber harvesting occur.*

*484 Policies for Development and Local Economy*

*N. For lands designated as Commercial on Schedule B, a density of one parcel per 120 hectares and no dwelling units is supported.*

*O. On lands designated as Commercial on Schedule B, commercial, retail, restaurant, civic and light industrial and silviculture uses are supported.*

**Analysis:** An amendment to the above-noted parcel size will be required to the 'Commercial' designation in order to establish a smaller and more appropriate parcel size for this property. Smaller commercial property sizes could be beneficial more broadly to other commercially designated properties and could help to develop a local-serving and tourist-based economy as envisioned in the OCP.

There are several local-serving commercial sites within the JdF Planning Area that have set precedent for the reduced parcel sizes for commercial sites. Many of these neighbourhood



commercial properties serve as a hub for community and serve both local and tourist needs within the area. Existing neighbourhood commercial zones have minimum lot size of 900m<sup>2</sup> (0.09ha) within the C-2 Zone of the JdF Land Use bylaw. Further emphasizing that smaller parcel sizes are appropriate in commercial sites elsewhere in the JdF Planning area and its reasonable to be considered in the 'Commercial' designation as well.

It seems that the identified hazard lands in the OCP may be impacting the potential for creating some smaller commercial parcels. In this instance, the commercial designation would apply to a parcel with no identified hazard and located outside of the Restricted Development Land Use area.

### Other Relevant OCP Policies

#### Climate Change Adaptation and GHG reduction

##### 392 Reducing the Number of Vehicle Trips

*One of the key ways the residents of Shirley and Jordan River can contribute towards reducing GHGs is through reducing the number of vehicle trips. Home based businesses reduce the need to commute. The use of transit, carpooling and alternative means of transportation, such as cycling and walking, all reduce dependency on cars. Delivery of medical and community outreach programs at a venue in Shirley or Jordan River would see the service providers making one or two round trips to the Plan area instead of multiple trips outside the community by residents travelling elsewhere to access the services. Increased recreational and social opportunities for youth within the Plan area would reduce the need for parents to take their children to and from activities in Sooke. Support for neighbourhood commercial uses and farm gate sales can reduce the amount of travel necessary to purchase food and other goods. Installation of Electric Vehicle infrastructure is supported.*

**Analysis:** provision of some businesses and services in keeping with rural character and scale can lead to reduction in the number of vehicle trips of residents. Enabling some economic development will help support goals related to creating complete communities.

### REGIONAL GROWTH STRATEGY AND THE RCS

#### Consistency with the Regional Context Statement

There are several applicable policies that identify consistency between this proposal and the Regional Context Statement. The following applicable policies have been identified and consistency with the RCS has been outlined.

##### 208 Regional Growth Strategy Consistency (pg. 21-23 of the OCP)

*D. To manage regional infrastructure services sustainably, the community water servicing policy provisions for Shirley – Jordan River are not to exceed the existing 126 parcels within the Sheringham Water District. No CRD water systems are proposed in the Plan area. No community sewer systems are proposed in the Plan area and the CRD supports the Ministry of Environment and Island Health in their regulation of sewage.*

**Analysis:** Services to the property will be rural. Water will be provided with wells and there is no need for extending services to the area in order to facilitate the proposal. Sewer will be managed using septic systems. All health approvals will be obtained through the appropriate application processes.

*E. To build Shirley and Jordan River as complete communities, a number of policies in this OCP support community safety, such as the Restricted Development Land Use Designation on lands within the flood inundation zone identified by BC Hydro and the designation of DPAs for hazardous conditions. Ways to build a healthy community include community volunteerism and local delivery of health care services, social programs and recreational programs. There is a desire for a community meeting place in Jordan River and improvements to the Shirley Community Hall.*

**Analysis:** This property is located outside of the identified hazard area, and will contribute to making Jordan River a more complete community. This property has the potential to provide a location for residents to gather and/or access services or programs. Amending the designation of this property to Commercial will enable this property, and more broadly other properties, to create a community meeting place/hub within the Village.

*H. To strengthen the regional economy, the reliance on other regional centres is recognized in this Plan. Agriculture, home based businesses, renewable resource activities and low-impact tourism uses are viewed as Shirley – Jordan River's contribution to the regional economy.*

**Analysis:** The additional uses proposed, including an appropriate lot size for commercial purposes will strengthen the regional and local economy by complementing resource-based activities with low-impact tourism uses, and the opportunity to provide local services and programs to meet the needs of residents.

### **Consistency with the Regional Growth Strategy**

Outside Urban Containment Policy (pg 13)

Rural/Rural Residential Policy Area – this application supports and is in alignment with the Regional Growth Strategy. The area is rural, with rural servicing requirements. The commercial uses proposed are local serving that complement the rural character, including office, health services, personal services and restaurants in addition to those that are already permitted. These are typical 'neighbourhood commercial' uses. Any building proposal on this parcel will require the rigor of a development permit evaluation for Commercial

development. The proposed parcel size is larger than other commercial zones within the Plan Area, typically zoned C-2, which permits more intensive commercial uses than those being requested.

Protect the Integrity of Rural Communities (Pg 22-24)

Rural and rural-residential communities offer a choice of rural lifestyles and outdoor recreation opportunities that complement the surrounding working landscapes and preserve ecological diversity. This proposal does not include further residential expansion but strengthens the rural qualities of the community by creating an opportunity for a neighbourhood commercial/gathering place for the residents of Jordan River.

The character of this property will reflect the local outdoor enthusiast and the current and historical resource-based economy of the region. A hydrogeologist report has determined that there is adequate well water available to service the site and overall site drainage will enhance natural systems as the site is developed. Detailed rainwater management will be submitted as part of any future subdivision/building application.

5.1 Realize the Region's Economic Potential

*Finding ways to expand and diversify the economy of formerly resource-dependent communities in Sooke and the Juan de Fuca Electoral Area, such as through low impact recreation and tourism.*

**Analysis:** The proposed amendment is relatively minor as commercial activities are already permitted on the parcel. What this amendment does is more appropriately designates the property as 'commercial' and enables more flexibility in commercial lot size. It gives the opportunity for diversity in ownership of a large commercial site, adding resiliency for business owners while also increasing the potential of realizing commercial services in the area.

NATURAL ENVIRONMENT

The site has been evaluated by a Qualified Environmental Professional (Attachment 2). No wetlands or watercourses are located on or within 50m of its boundaries.

INFRASTRUCTURE

It is proposed that septic will accommodate any future development. The details of this will be considered as part of the bareland strata subdivision application.

Water will be provided with onsite wells. There are no anticipated concerns with provision of water as part of this proposal. The hydrogeologist report ascertains that, based on the well records situated closest to the subject property, the conditions appear very favourable for constructing relatively shallow wells within the aquifer with individual wells potentially yielding 5 to 10 USgpm (18.93 to 37.85 L/min) each (Attachment 3).

#### FIRE AND EMERGENCY SERVICING

No impact on fire and emergency servicing is anticipated as a result of the proposed amendments. Commercial activities are already permitted on the property, with the commercial site resulting in additional owners. The property permits civic use and could be used by the community, if so desired, to meet community or emergency planning requirements.

#### TRAFFIC IMPACTS

No impact is anticipated as a result of the proposed amendments. Commercial activities are already permitted on the property, and access to the site is being sorted out through the subdivision of the land. All Ministry of Transportation and Infrastructure requirements will be addressed through future strata subdivision.

#### PARKLAND DEDICATION

The applicant has already completed parkland dedication as part of a previous subdivision approval process.

#### ATTACHMENTS:

1. Conceptual Site Plan/Vision
2. Environmental Assessment letter – Corvidae Environmental Consulting
3. Hydrogeologist Report
4. Current Certificate of Title





Making a difference...together

## **Development and Planning Advisory Committee (DPAC) – Meeting Notes**

**Held Monday, June 24, 2024 at Victoria City Hall**

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**PRESENT: Staff:** K. Lorette, General Manager, Planning and Protective Services; I. Lawrence, Manager, Juan de Fuca Electoral Area Planning; J. Proctor, Manager, Housing Planning Policy and Programs; J. Douillard, Research Planner, Regional and Strategic Planning; N. Brotman, Research Planner, Regional and Strategic Planning, D. Pagani, Administrative Clerk, Regional and Strategic Planning.

**Also present:** A. Boel, District of Oak Bay; A. Hudson, City of Victoria; C. Scott, District of Saanich; I. Bourhill, City of Colwood; J. Davison, Township of Esquimalt; J. Matanowitsch, District of Central Saanich; K. Hoese, City of Victoria; L. Beckett, District of Highlands; L. Klose, City of Victoria; S. Scory, Town of View Royal.

**Consultant Team:** H. Morgan, Urban Matters; M. Thomson, Urban Matters.

The meeting was called to order at 9:33 am.

### **1. Welcome and Introductions**

N. Brotman welcomed members of the Development and Planning Advisory Committee (DPAC) and gave an agenda overview. A. Hudson provided a Territorial Acknowledgement.

### **2. Update on CRD Housing Agreement Program**

J. Proctor introduced H. Morgan and M. Thomson of Urban Matters, who provided an update on the CRD Housing Agreement Program, which is a program to support the development of new affordable rental and home ownership opportunities through registration of restrictive covenants and bylaws. Topics of the presentation included the engagement process, key findings, potential new program criteria, funding and resource requirements, expansion to include rental and next steps.

Members asked questions related to the proposed criteria, methodology, timeframes for renting versus owning, how this tool might be used and timeline for final report.

**ACTION:** CRD to provide L. Klose with further details regarding the program and internal CRD mechanisms (e.g., Board approvals).

### **3. Summary of Engagement on CRD Transportation Service**

N. Brotman provided an overview of the ongoing work, including engagement with local government staff and the recent Regional Transportation Governance Workshop on May 24, 2024. He also summarized the eight categories considered for inclusion in the bylaw and the feedback received at the workshop, including the six common themes covered in the What We Heard report.

The group discussed the importance of engagement with the Ministry of Transportation and Infrastructure (MoTI) and BC Transit, with particular emphasis on the need for better integrated transportation planning.

The group also discussed the process of drafting and implementing a service establishment bylaw, with questions related to costing, phasing, prioritization and the overall timeline for the next steps.

#### **4. Housing Needs Reports**

N. Brotman summarized the new methodology and guidance of the Housing Needs Reports (HNR), including the HNR Method and HNR Calculator.

The group discussed initial takeaways from the report, including the demand buffer and its associated multiplier, capacity for potential growth, and the questions surrounding density and its influence in the report.

**ACTION:** CRD to check in with members following the release of the Housing Needs Reports Calculator (expected in mid-July) to discuss the benefit of a single consultant hired by the region, if consultants are required to complete this work.

Before the end of the meeting, the group also took time to check in on the status of Official Community Plan (OCP) updates.

#### **5. Adjournment**

Meeting adjourned at 11:24 am.



# LOCAL GOVERNMENT EMERGENCY PROGRAM ADVISORY COMMISSION

Minutes of Meeting: June 6, 2024

Location: 760 Vernon Ave, Saanich & MS Teams

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## PRESENT:

In-Person at 760 Vernon Ave	Virtual: Teams
Shawn Carby, CRD (Chair)	Brigitte Prochaska, SGI
Jane O'Higgins-Wilson, REMP	John Wakefield, SSI
Ruth Fernandes, REMP	Stepanie Dunlop, Metchosin
Erin Stockill, Saanich	Jeri Grant, Juan de Fuca Electoral Area
Tanya Seal-Jones, Victoria	Dean Ford, Highlands
Thomas Hansen, EMCR	Kulpreet Munde, Esquimalt
Susanne Weber, EMCR	Roger Stewart, Oak Bay
Ryland Bennet, Sooke	Geoff Pendrel, Victoria
Shane Irg, CRD (Presenter)	
Alesha Hayes, CRD (Presenter)	

### 1. Welcome and Territorial Acknowledgement

S. Carby began the meeting at 14:02. A territorial Acknowledgement was made. Quorum was met.

### 2. Round Table Introductions

A roundtable of introductions was made.

### 3. Approval of Agenda

The agenda was approved as presented, by consensus.

## CARRIED

### 4. Approval of LGEPAC Minutes 2024/3

The minutes of 04 April 2024 were approved by consensus.

## CARRIED

### 5. Invited Presentations

#### a) Prepare Yourself Website Update – A. Hayes

A. Hayes, Communications Coordinator, Regional and Strategic Planning at the

CRD reported on an update to the Prepare Yourself website, as the CRD is migrating from Sitefinity to Drupal. The changes will be implemented over the summer and fall and go live in March 2025.

#### **b) Emergency Water Supply and Distribution Plan – S. Irg.**

S. Irg, Senior Manager, Water Infrastructure Operations at the CRD reported on CRD emergency water plans and equipment. Those plans include a 30-year Master Plan and short-term, post-disaster water delivery plans. Emergency equipment currently includes:

- 14 Blue reinforced hydrants
- 10 Drop Kits – simple version
- 3 Distribution Trailer/Seacan
- 4 Dump Truck Bladders
- Overland Piping (100m HDPE) jumper or from the reservoir
- 3 Portable Labs

Emergency water equipment is standardized to be easier to manage during an emergency and usable by non-CRD staff.

A discussion followed related to regional emergency water plans outside of the regional district. T. Seal-Jones requested a recommendation for the City of Victoria's disaster water plans and there were further questions related to EMCR's plans for post-disaster water. The potential for an LGEPAC Working Group was suggested by S. Carby.

**ACTION: S. Irg will follow up regarding the recommendation for the City of Victoria.**

**ACTION: S. Carby and S. Weber will follow up on EMCR's emergency water plans.**

**ACTION: Members interested in a Working Group should follow up with S. Carby or J. O'Higgins-Wilson**

#### **6. Action Items arising from the previous meeting:**

<b>Action Item</b>	<b>Reporting</b>	<b>Outcome / Update</b>
PrepareYourself Workbook update	J. O'Higgins-Wilson	The new version has been available on the website since April 15 <sup>th</sup> and a print run has been ordered, but no date for delivery as yet.
Nuclear Exercise	K. Munde	The two-day exercise is scheduled for November, if regional partners would like to participate, contact K. Munde in the next month.
Early Earthquake Warning Project Update	T. Seal-Jones	The EEW equipment has been installed at all planned locations

		and is now operational and can broadcast intrusive messages to the public. The official public information release has not yet been done and so partners are asked not to publicly discuss the system yet.
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**7. Other Agency Minutes – None.**

**8. EMCR Update – S. Weber, EMCR**

- S. Weber is the new Regional Manager for the capital area. She discussed the potential for EMCR staff to activate. Susanne identified that EMCR would be hosting an in-person regional forum in July to discuss the Indigenous Engagement Requirements

**9. REMP Updates – T. Hansen, and J. O’Higgins-Wilson, REMP**

- T. Hansen reported on REMP staff Ruth Fernandes has returned from parental leave and that the REMP Steering Committee met last week. The REMP Policy group is scheduled for July 20<sup>th</sup>.
- J. O’Higgins-Wilson reported technical issues with the REPAC/LGEPAC collaboration SharePoint site. She also reported on the May 2<sup>nd</sup> RECAC meeting, which was well attended and will continue now as a separate commission.

**ACTION:** S. Carby will look at options for admin staff to take responsibility for the collaboration site.

**10. Working/Advisory Group Updates**

**a. IER Funding working group – T. Seal-Jones**

T. Seal-Jones reported on the work so far from the group. LGEPAC established a working group to support regional collaboration and meaningful engagement with First Nations partners. The working group is developing terms of reference and confirming membership but intends to draft a letter to EMCR to indicate who will participate in the joint initiatives and a letter to the Nations to initiate the engagement process. Discussion followed related to the difficulties with IER implementation, specifically the tight timelines.

**b. ESSD Update – K. Munde**

No update.

**c. Regional Exercise Advisory Group – J. O’Higgins-Wilson**

The Regional Exercise Advisory Group is planning the next exercise for June 26<sup>th</sup>. The exercise will involve, Sooke, CRD, SSI, Saanich, and Esquimalt to varying degrees and will test regional communication between EOCs and the public based on a tsunami advisory scenario. There was discussion related to the Regional Tsunami Communication Plan, which may be updated before the exercise, and the Connect Rocket system used within that plan, as partners requested it not be exercised until the contact list is updated.

## **11. New Business**

### **a. Review of REMP Project Process and Business Plan – R. Fernandes**

2025 REMP business planning will start in July. LGEPAC members will be asked to participate and submit any suggestions for new REMP projects via the project proposal guidelines. It was suggested that LGEPAC meet first to identify projects as a group before engaging with REMP.

**ACTION – R. Fernandes to distribute the 2024 Business Plan with notes, the 23-27 Strategic Plan, and the project process template for reference.**

### **b. Tsunami Communications Plan Update – R. Fernandes**

The Tsunami Communications Plan update is on the REMP work plan this year, and R. Fernandes will be starting the project after the June exercise. The Plan is intended to be tested at the REMP June exercise so that any gaps that need to be identified can be. There was concern that the Plan in its correct form might need updating prior, specifically the use of Connect Rocket and its contact list.

**ACTION – Jane/Shawn to identify who operates the Connect Rocket and report back to LGEPAC members on the current membership list.**

## **12. Roundtable Emergency Program Discussions**

- **South Gulf Islands** – The program has been running public wildfire forums which have been well attended. Participating in the CRD ERA Team training.
- **Salt Spring Island** – Emergency Fair will be held on June 8<sup>th</sup>.
- **Esquimalt** – Nothing to report.
- **Juan De Fuca** – Working on public education related to fire extinguishers.
- **Saanich** – EOC renovation is complete OEC training courses are ongoing. The EOC was activated to remotely support evacuees from Fort Nelson. Volunteer appreciation BBQ took place, Saanich welcomed their 100<sup>th</sup> volunteer.
- **Victoria** – Will be holding a fire department open house the weekend of June 21<sup>st</sup>.
- **Highlands** – NRCan will be on site to help resolve matters with an EEW sensor installation.
- **Sooke** – The program is in a building phase working on planning documents, interested in regional HRVA partnership, please get in touch with R. Bennett, also

interest in shared EOC training.

- **CRD** – The drought Working Group is now active, contact S. Carby for membership. The CRD has been running EOC courses, and spaces may be available.

### **13. Adjournment**

**Motion** to adjourn approved by consensus.

**CARRIED**

The meeting was adjourned at 16:01

**Next LGEPAC meeting:** August 1, 2024

# LOCAL GOVERNMENT EMERGENCY PROGRAM ADVISORY COMMISSION

Minutes of Meeting: August 1, 2024

Location: 1025 Johnson St., Saanich & MS Teams

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## PRESENT:

In-Person at 1025 Johnson Street	Virtual: Teams
Shawn Carby, CRD (Chair)	Brigitte Prochaska, SGI
Jane O'Higgins-Wilson, REMP	Thomas Hansen, EMCR
Ruth Fernandes, REMP	John Wakefield, SSI
Tanya Seal-Jones, Victoria	Jeri Grant, JDF
Geoff Pendrel, Victoria	Dean Ford, Highlands
Ryland Bennett, Sooke	Scott Abrahamson, Colwood
Jacob Tilson, Oak Bay	Kulpreet Munde, Esquimalt
Corey Anderson, CRD	Alyse Allen, North Saanich
Jolette Holand, CRD	Lisa Banfield, Central Saanich

### 1. Welcome and Territorial Acknowledgement

S. Carby began the meeting at 14:02. A territorial Acknowledgement was made. Quorum was met.

### 2. Round Table Introductions

A roundtable of introductions was made.

### 3. Approval of Agenda

The agenda was approved as amended, by consensus.

## CARRIED

### 4. Approval of LGEPAC Minutes 2024/3

As amended, the minutes of 06 June 2024 were approved as amended by consensus.

## CARRIED

### 5. Invited Presentations-N/A

### 6. Action Items arising from the previous meeting:



Action Item	Reporting	Outcome / Update
a. Nuclear Exercise	K. Munde	The two-day exercise was scheduled for November 20 and 21, but has now changed to December 4 and 5 <sup>th</sup> . It is still possible for members to participate if interested.
b. Connect Rocket Update	J. O'Higgins-Wilson	Reported on the Connect Rocket tool, which she can access and edit. Requested direction from members for specific direction to move forward.

**MOTION:** The CRD REMP position is to maintain and update the Connect Rocket contact list, which will be tested quarterly before the LGEPAC meetings.

**Moved** by T. Seal-Jones, **Seconded** by J. Tilson  
**CARRIED**

Action Item	Reporting	Outcome / Update
c. REMP Work Plan 2025	R. Fernandes	R. Fernandes reported on the results from REMP's recent community visits.

**MOTION:** That REMP staff revise the 2024 Business Plan to remove the Tsunami Communications work and incorporate into the Communication Framework project.

**Moved** by T. Seal-Jones, **Seconded** by R. Bennett  
**CARRIED**

**ACTION:** REMP Staff to send out a survey to all members to vote on 2025 REMP projects due August 23<sup>rd</sup>.

**7. Other Agency Minutes – None.**

**8. EMCR Update – T. Hansen, EMCR**

- The Disaster Resilience and Innovation Funding Program is open. The funding will have yearly intakes, with the first on September 15<sup>th</sup>, 2024.

**9. REMP Updates – T. Hansen EMCR**

- Reported on the Disaster Mutual Aid Agreement meeting he chaired in June. The item will likely be moving forward, due to support from CAOs.
- Personnel update: Brittany Schina will return in September and Jane O'Higgins-Wilson will be on military leave until next summer.

**10. Working/Advisory Group Updates**

#### **a. Potential Emergency Water Working Group – S. Carby**

S. Carby raised the potential Water Working Group to assess interest in LGEPAC standing up the group. This will be included in one of the projects to vote on for the REMP Business Plan.

#### **b. IER – J. Tilson**

J. Tilson reported on the survey completed by members. Approximately 67% of LGEPAC plan to participate, providing a budget of roughly \$ 272,000 to \$ 297,000. Identified project deliverables including:

- Meaningful engagement activities,
- Templates/guiding documents,
- Engagement report with recommendations,
- Cultural safety training,
- ESS cultural navigation/space planning.

There is CEPF additional funding for this work (\$40,000), with two streams Sept 6<sup>th</sup> and Dec 6<sup>th</sup>.

#### **c. ESSD Update – K. Munde**

K. Munde reported on a tabletop exercise and a September leadership workshop.

#### **d. Regional Exercise Advisory Group – J. O'Higgins-Wilson**

The Regional Exercise was held on June 26<sup>th</sup>. Emergency Programs from Sooke, CRD, SSI, Saanich, Colwood, Victoria, and Esquimalt participated, exercising communication efforts in response to a tsunami advisory. The exercise was overall, very successful, with some disconnection on tsunami risk perception and term confusion. Expanded use of the provincial Broadcast Alerting system is a possibility, but reaching agreement on parameters with a deadline is challenging.

### **11. New Business**

#### **a. Local Government Advisory Committee – S. Carby**

S. Carby will be sitting on a UBCM Committee to provide consultation on Emergency Management and Disaster Act Regulation development. Discussion followed concerning the process of drafting members to this committee.

**ACTION: S. Carby to circulate Terms of Reference.**

### **12. Roundtable Emergency Program Discussions**

- **Colwood** – Nothing to report
- **Central Saanich** – Nothing to report

- **Esquimalt** – Nothing to report.
- **North Saanich** - Nothing to report
- **Salt Spring Island** – Nothing to report
- **South Gulf Islands** – Abridged ESS training throughout the summer and preparing to provide program presence at Saturday markets and fall fairs.
- **Oak Bay** – New HRVA presented to council and working through recommendations from that document.
- **Sooke** – Thanked CRD for assistance with recent fire.

**ACTION** – Request for case study on the Sooke Potholes fire at a future meeting.

- **Victoria** - ESS event last week used the EMCR accommodation allowance, done over the phone. Work was done in short order and subjects received e-transfer that day.
- **CRD** – S. Carby reported on CrowdStrike Event, as the CRD was impacted and had an EOC activation. The task number request was denied.

**ACTION** – Request for AAR on CrowdStrike event at a future meeting.

### **13. Adjournment**

**Motion** to adjourn approved by consensus.

**CARRIED**

The meeting was adjourned at 16:01

**Next LGEPAC meeting:** October 3, 2024

**From:** [Pamela Martin](#)  
**To:** [Kristen Morley](#); [CRDBoard](#)  
**Cc:** [Emilie Gorman](#)  
**Subject:** Letter to CRD re PAAC  
**Date:** Thursday, September 19, 2024 11:48:40 AM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[Ltr to CRD re PAAC - September 19, 2024.pdf](#)

**CRD IT SECURITY WARNING:** This Email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Good morning,

Please find attached a letter for the CRD Board.

Thank you,

**Pamela Martin** (she/her)  
Deputy Corporate Officer  
District of Central Saanich  
250.544.4246 | [CentralSaanich.ca](https://www.centralsaanich.ca)



We gratefully acknowledge that the ancestral land on which we work are within the traditional territories of the W̱SÁNEĆ peoples: W̱JOŁŁP (Tsartlip), BOŖÉĆEN (Pauquachin), S̱ÁUTW̱ (Tsawout), W̱SIŖEM (Tseycum) and MÁLEXEŁ (Malahat) Nations.

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The Corporation of the  
District of Central Saanich

September 19, 2024

0400-60/2024

Capital Regional District Board  
c/o Kristen Morley  
Corporate Officer/General Manager, Corporate Services  
625 Fisgard Street  
Victoria, BC V8W 2S6

Via email: [kmorley@crd.bc.ca](mailto:kmorley@crd.bc.ca), [crdboard@crd.bc.ca](mailto:crdboard@crd.bc.ca)

**Re: Peninsula and Area Agricultural Commission**

---

At the Council meeting of September 9, 2024, the District of Central Saanich requested a notice of motion regarding the Peninsula and Area Agricultural Commission be submitted by myself, Director Windsor, to the Board.

Please consider this letter as filing the following notice of motion for the next Capital Regional District Board agenda for consideration.

*WHEREAS the Peninsula and Area Agricultural Commission is an advisory committee for the municipalities of Central Saanich, Metchosin, North Saanich, and Saanich, for matters involving agriculture;*

*WHEREAS the Capital Regional District (CRD) is working on addressing the decline of productive farmland in the CRD through the establishment of the regional Foodlands Access Service,*

*WHEREAS agriculture is a regional issue, and the Peninsula and Area Agricultural Commission could serve as an advisory Committee to the CRD Planning and Protective Services Committee, which will be the standing committee reporting to the CRD Board for the Foodlands Access Service;*

*THEREFORE BE IT RESOLVED that the Capital Regional District explores looking at assuming responsibility of the Peninsula and Area Agricultural Commission as a regional committee.*

Should you have any questions and or concerns please do not hesitate to contact Emilie Gorman, Director of Corporate Services/Corporate Officer at [emilie.gorman@csaanich.ca](mailto:emilie.gorman@csaanich.ca) or 250.544.4202.

Sincerely,

Director Ryan Windsor