REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

Thursday, June 17, 2021
RDOS Boardroom – 101 Martin Street, Penticton

SCHEDULE OF MEETINGS

9:00 am	-	9:45 am	Planning and Development Services Committee
9:45 am	-	10:45 am	Corporate Services Committee
10:45 am	-	11:15 am	Environment and Infrastructure Committee
11:15 am	-	11:45 am	Break
11:45 am	-	1:00 pm	Protective Services Committee
1:00 pm	-	3:00 pm	RDOS Board

"*Karla Kozakevich*"

Karla Kozakevich
RDOS Board Chair

2021 Notice of Meetings			
July 8	**RDOS Board**		**Committee Meetings**
July 22	**RDOS Board**	**OSRHD Board**	**Committee Meetings**
August 5	**RDOS Board**		**Committee Meetings**
August 19	**RDOS Board**	**OSRHD Board**	**Committee Meetings**
September 2	**RDOS Board**		**Committee Meetings**
September 23	**RDOS Board**	**OSRHD Board**	**Committee Meetings**

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Planning and Development Committee

Thursday, June 17, 2021
9:00 am

AGENDA

A. APPROVAL OF AGENDA

RECOMMENDATION 1

THAT the Agenda for the Planning and Development Committee Meeting of June 17, 2021 be adopted.

B. BC ECONOMIC TRUST of the SOUTHERN INTERIOR – For Information Only

1. Laurel Douglas, CEO
2. Renata King, Consultant

C. DEADLINE FOR SUBMISSION OF PUBLIC REPRESENTATIONS ON PERMIT APPLICATIONS

1. Amendment Bylaw No. 2500.21

RECOMMENDATION 2

THAT the Regional District initiate a process to amend the Development Procedure Bylaw to clarify timelines for receiving public representations on Development Variance applications and Temporary Use applications.

D. ADJOURNMENT

ADMINISTRATIVE REPORT

TO: Planning & Development Committee

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Deadline for Submission of Public Representations on Permit Applications

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Administrative Recommendation:

THAT the Regional District initiate a process to amend the Development Procedure Bylaw to clarify timelines for receiving public representations on Development Variance applications and Temporary Use applications.

Issue:

The Regional District has not formally established timelines for the submission of public representations on development variance permit (DVP) and temporary use permit (TUP) applications and, consequently, citizens are filing comments up to and during Board meetings, expecting members to receive, read and understand their submission even while the meeting is proceeding.

Background:

Under Section 499 (Notice to affected property owners and tenants) of the *Local Government Act*, the Regional District must give notice of an intent by the Board to pass a resolution to issue a development variance permit.

The notice must state the purpose of the variance, the lands affected and the location and times when copies of the proposed permit may be inspected. The notice must also "be mailed or otherwise delivered at least 10 days before adoption of the resolution to issue the permit."

Of note, the Act does not specify that the Regional District must accept representations from property owners or tenants who may oppose, support or otherwise wish to submit comments on a proposed variance application.

Similarly, Section 494 (Public notice and hearing requirements) of the Act states that the Regional District must give notice of an intent by the Board to pass a resolution to issue a temporary use permit. The required contents of this notice are almost identical to those for a DVP application and, again, the Act does not specify that the Regional District must accept representations from property owners or tenants.

Under the Regional District's Development Procedures Bylaw No. 2500, 2011, DVP & TUP applications are to be notified to affected property owners and tenants not less than 10 calendar days prior to the Board's consideration of such an application, as required by the Act.

All representations received in relation to a DVP or TUP are forwarded by Administration to Board members for their consideration, either within the published Agenda for a Board meeting, or as late

items, accepted up to and including the day of the Board meeting at which the permit will be considered.

Analysis:

The current practice of accepting representations up to and including the day of the Board meeting at which a permit will be considered is misleading to the public and unfair to Board Members. It sets no parameters as to when submissions must be received to leave sufficient time for the Board to review the contents of a representation.

The logistical challenges of ensuring that representations submitted in close proximity to, or during, a Board meeting get identified, properly processed (i.e. any necessary redacting occurs) and forwarded to Board members in a timely fashion is prone to error and hardly meets our principles around "informed decision-making".

Given the latitude afforded by the *Local Government Act* regarding the acceptance of representations on DVP and TUP applications, there appears to be merit in establishing a deadline for representations to be submitted to the Board.

It is being proposed that this date be set seven (7) calendar days prior to a Board meeting as this will allow for the inclusion of all representations in the board agenda package when it is formally published on the Friday before a scheduled meeting.

This proposed change will, however, increase the processing times for DVP and TUP applications. This is due to postal delivery times for notifications, and the need to ensure that property owners and tenants receive letters well in advance of the proposed deadline.

At present, the mailing of notifications occurs 10 working days (2 weeks) prior to a Board meeting. Consideration should be given to expand this timeline to 20 working days (4 weeks).

If the proposed amendment is enacted, late representations would be placed on file and not brought forward for review.

Alternatives:

1. Status Quo

Respectfully submitted:

C. Garrish, Planning Manager

BYLAW NO. 2500.21

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

BYLAW NO. 2500.21, 2021

A Bylaw to amend the Regional District of Okanagan-Similkameen Development Procedures Bylaw 2500, 2011

The REGIONAL BOARD of the Regional District of Okanagan-Similkameen in open meeting assembled, ENACTS as follows:

1. This Bylaw may be cited for all purposes as the "Regional District of Okanagan-Similkameen Permit Representations Deadline Amendment Bylaw No. 2500.21, 2021."

2. The "Regional District of Okanagan-Similkameen Development Procedures Bylaw No. 2500, 2011" is amended by:

   (i) replacing a Section 2.9 (Processing Procedure) under Schedule 4.0 (Application for a Development Variance Permit) in its entirety with the following:

   .9 No less than 20 working days prior to the Board's consideration of an application, property owners and tenants of land within a radius not less than 100 metres of the boundaries of the subject property will be notified by mail advising of the application.

   (ii) adding a new Section 2.10 (Processing Procedure) under Schedule 4.0 (Application for a Development Variance Permit) to read as follows and renumbering all subsequent sections accordingly:

   .10 To be considered by the Board, a representation from a property owner or tenant of land must be received by the Regional District prior to 4:30 p.m. on the Thursday before the Board meeting at which a resolution to issue a development variance permit is to be scheduled.

   (iii) replacing a Section 2.8 (Processing Procedure) under Schedule 5.0 (Application for a Temporary Use Permit) in its entirety with the following:

   .8 No less than 20 working days prior to the Board's consideration of an application, property owners and tenants of land within a radius not less than 100 metres of

Commented [J1]: Proposes to replace current reference to "10 working days"

Commented [J2]: Is the better reference: "seven (7) calendar days priot to …"

Commented [J3]: New section. Proposes to establish a deadline that would allow for all representations to be included in the Board Agenda at its initial release (i.e. no representation(s) would be added as a late item).
Representations received after this date would not be provided to the Board.

Commented [J4]: Proposes to replace current reference to "10 working days"

the boundaries of the subject property will be notified by mail advising of the application. The proposal will also be advertised in an appropriate newspaper.

(iv) adding a new Section 2.9 (Processing Procedure) under Schedule 5.0 (Application for a Temporary Use Permit) to read as follows and renumbering all subsequent sections accordingly:

.10 To be considered by the Board, a representation from a property owner or tenant of land must be received by the Regional District prior to 4:30 p.m. on the Thursday before the Board meeting at which a resolution to issue a temporary use permit is to be scheduled.

READ A FIRST, SECOND AND THIRD TIME on the __ day of ____, 2021.

ADOPTED on the __ day of ____, 2021.

_____ _____

Board Chair Corporate Officer

Commented [J5]: This reads as an add tack-on provision. I am thining it should be given its own section number(?)

Commented [J6]: New section. Proposes to establish a deadline that would allow for all representations to be included in the Board Agenda at its initial release (i.e. no representation(s) would be added as a late item).
Representations received after this date would not be provided to the Board.

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Corporate Services Committee

Thursday, June 17, 2021
9:45 am

AGENDA

A. APPROVAL OF AGENDA

RECOMMENDATION 1
THAT the Agenda for the Corporate Services Meeting of June 17, 2021 be adopted.

B. 2021 UBCM RESOLUTIONS

a. Organ Donor Onus (Approved)
b. Interjurisdictional Cooperation (with proposed changes from June 3 Committee)
c. Changes to the BC Building Code to align with FireSmart.
d. Change to the timing of future Housing Needs Assessments to make use of recent Census Data
e. Request for Housing Needs Assessment Reports to be made optional for Electoral Areas

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C. 2021 UBCM MEETINGS

a. Premier re: Horizontal Management
b. MoTI re: Enforcement in Road Rights-of-Way
c. Environment – Solid Waste Issues
d. Support the Village of Keremeos on Orphan Dikes

D. RDOS COVID-19 RESTART PROGRAM

RECOMMENDATION 2
THAT the following recommendations be adopted and now form part of the RDOS 2021 COVID-19 Restart Plan.

1. **Public Meetings/ Consultations**

   a. That the suspension of S. 5 of Bylaw 2500/11, being the Public Information Meeting section of the Planning Procedure Bylaw, be terminated effective September 7th; and,

   b. That an amendment to the Planning Procedure Bylaw be brought forward to address the changes to S. 465, 466, 494, of the Local Government Act for public hearings proposed in Bill 10/2021; and,

   c. That all non-regulatory public hearings on land use matters continue to be waived; and, that all regulatory public hearings continue to be held electronically until Step 4 of BC Restart commences; and that all meetings be returned to normal following that date; and,

   d. That all Public Information Meetings be conducted electronically out of 101 Martin Street.

2. **Board/Commission Meetings**

a. That an amendment to the Procedure Bylaw be brought forward to address the changes to S. 128 of the Community Charter for electronic regular meetings proposed in bill 10/2021; and,

b. That Select Committees and Board of Director meetings occur on the normal schedule, but that the meetings continue electronically until implementation of Step 4 of the BC Restart Plan; and,

c. That the current practice of electronic Board meetings open to the public be continued, regardless of the format; and,

d. That all delegations scheduled to come before the Board continue to be invited to appear electronically until implementation of Step 4 of the BC Restart Plan.

E. ADJOURNMENT

ADMINISTRATIVE REPORT

TO: Corporate Services Committee

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: 2021 UBCM Resolutions and Convention

UBCM Resolutions:

1. **Administrative Recommendation**
The following Resolution has previously been approved at the May 20, 2021 Corporate Services Committee:

That Committee submit the following recommendation to the Board of Directors later this afternoon for submission to UBCM

Organ Donation - For Information Only

WHEREAS the population of British Columbia is 5.071 million but only 1.555 million British Columbians have registered their organ donor decision;

AND WHEREAS one organ donor can save up to 8 lives:

THEREFORE BE IT RESOLVED that UBCM request that the Province of British Columbia enact Provincial legislation whereby an individual is deemed to consent to the individual's organs and tissues being used for transplantation activities, with the inclusion of an "opt-out" provision, similar to the Presumed Consent Organ Transplant Act passed by the Province of Nova Scotia.

2. **Administrative Recommendation**
The following resolution was discussed at June 3 Corporate Services and returned to this meeting with adjustments.

That Committee submit the following recommendation to the Board of Directors later this afternoon for submission to UBCM

Multi-jurisidictional Cooperation

WHEREAS legislation does not provide regional districts authority to enforce regulatory bylaws on Crown Land and Road Rights-of-Way in Electoral Areas;

AND WHEREAS clarity on responsibility for enforcement in rural areas is required for constituents for issues that may cross federal, provincial, First Nation and/or regional district jurisdiction;

NOW THEREFORE BE IT RESOLVED that the Union of British Columbia Municipalities petition the provincial government to develop a formal multi-jurisdictional process for working in conjunction with lead agencies and governing bodies to resolve outstanding regulatory enforcement issues, by joint cooperation of the various government agencies.

3. Administrative Recommendation

The following resolution was recommended on April 1, 2021 for submission to SILGA; however, was not advanced in time for the deadline so should proceed directly to UBCM.

That Committee submit the following recommendation to the Board of Directors later this afternoon for submission to UBCM

Housing Needs Reports

WHEREAS Bill 18 - 2018 amended the Local Government Act (LGA) to require all local governments to complete Housing Needs Reports by April 2022, and every five years thereafter.

AND WHEREAS rural electoral areas of Regional Districts have access to very limited resources and staffing in which to undertake Housing Needs Report updates;

AND WHEREAS promoting sprawling residential development into rural areas contradicts sustainable planning principles;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities petition British Columbia to amend the Local Government Act, Division 22, Section 585.11 to exempt Regional Districts from undertaking Housing Needs Reports in the future.

4. Administrative Recommendation

The following resolution was recommended on April 1,2021 for submission to SILGA; however, was not advanced in time for the deadline so should proceed directly to UBCM.

That Committee submit the following recommendation to the Board of Directors later this afternoon for submission to UBCM

Wildfire Risk Prevention in BC Building Code

WHEREAS the frequency and intensity of wildfire activity is a rapidly increasing hazard posing a threat to the public across the province;

AND WHEREAS certain changes to the BC Building Code are urgently needed as part of the response to reduce the risk of wildfire threat to the public;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities request the Province of British Columbia to amend the BC Building Code to restrict the use of certain flammable materials such as wood and vinyl siding and wood shake roofing to reduce the risk to life and property due to wildfire activity.

Ministry Meetings:

The 2021 Union of BC Municipalities (UBCM) convention will take place September 14 through 17 in a virtual format, as a result of the COVID-19 pandemic. Exact details of the virtual platform will be released in late June. Cabinet Ministers and provincial staff will still be receiving meeting requests in an abbreviated format.

The typical process involves the Board identifying issues they would like to discuss with the Province, whether that be the Premier, a specific Minister or senior staff representative. Administration will then submit the list along with the issue/purpose, background and expected outcome. Shortly before the convention, confirmation of meeting time and date will be received.

The deadline to request meetings with the Premier, the Minister of Municipal Affairs and other Cabinet Ministers is **June 30, 2021**. The deadline to request meetings with Ministry staff has not been determined as of yet.

5. Administrative Recommendation:

That Committee submit the following recommendations for Meeting Requests for the 2021 UBCM Conference to the Board of Directors for consideration later this afternoon:

- Solid Waste Update – Minister of Environment
  - BioCover Approval
  - Leachate Recovery Update
  - Organics Processing & Treatment Facility Approval and Grants
- Horizontal Management – Premier Horgan

Note: Orphan Dikes **(Request submitted by the Village of Keremeos)**

Respectfully submitted:

"C. Malden"

C. Malden, Manager, Legislative Services

Housing Needs Reports

WHEREAS Bill 18 - 2018 amended the Local Government Act (LGA) to require all local governments to complete Housing Needs Reports by April 2022, and every five years thereafter.

AND WHEREAS rural electoral areas of Regional Districts have access to very limited resources and staffing in which to undertake Housing Needs Report updates;

AND WHEREAS promoting sprawling residential development into rural areas contradicts sustainable planning principles;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities petition British Columbia to amend the Local Government Act, Division 22, Section 585.11 to exempt Regional Districts from undertaking Housing Needs Reports in the future.

Background Memo:

On April 16, 2019, Bill 18 - 2018 came into effect, which amended the Local Government Act (LGA) to require all local governments in B.C. to complete Housing Needs Reports by April 2022, and every five years thereafter. The requirement includes each and every rural electoral area, regardless of population, available services and infrastructure, to undertake the reporting exercise.

Initial grant funding was made available by the province to incent local government to conduct a Housing Needs Report, which was especially warranted for regional districts and small communities with limited resources. Each five years, all local governments are expected to submit updated Housing Needs Reports. It is readily apparent that without commitments from the Province for further assistance, that these reports will require staffing and funding that are above and beyond the means of small local governments, and will place additional stress on their already limited resources.

Furthermore, the value of the Housing Needs Reports for rural electoral areas and small communities is questionable. In most cases, rural areas and smaller communities do not contain the necessary employment/commercial centers, government services and infrastructure needed to support affordable extensive residential development. In most cases, promoting additional sprawling automobile-oriented development into remote rural areas would contradict the principles of sustainable growth.

Therefore, it is proposed that the Province exempt rural areas and small local governments from the requirement of undertaking Housing Needs Reports in the future. This would provide the necessary flexibility for regional districts and their electoral areas to weigh out the value of the Housing Needs Reporting themselves, and take a more strategic approach for studying housing for select service centers, including partnerships with their neighbouring member municipalities when appropriate.

Wildfire Risk Prevention in BC Building Code

WHEREAS the frequency and intensity of wildfire activity is a rapidly increasing hazard posing a threat to the public across the province;

AND WHEREAS certain changes to the BC Building Code are urgently needed as part of the response to reduce the risk of wildfire threat to the public;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities request the Province of British Columbia to amend the BC Building Code to restrict the use of certain flammable materials such as wood and vinyl siding and wood shake roofing to reduce the risk to life and property due to wildfire activity.

Background Memo:

The BC Building Code is the governing provincial document for minimum safety, health, accessibility, fire and structural building protections. With the increasing intensity and frequency of wildfire each year, it is necessary to investigate changes to the BC Building code to reduce ever increasing risks of wildfire hazards to the public.

While the province has been a champion of the FireSmart program, the BC Building Code does not require the same kinds of standards for basic building materials that found in the BC Forest Service's FireSmart Manual. Arguably, the BC Building Code could be one of the most effective tools for reducing substantive risk to property due to the ongoing use of substandard combustible materials in construction

As identified in the FireSmart Homeowners Manual, there are a number of simple, cost effective and easily available materials available that help to reduce risk from wildfire. For example, the Province's manual states that "the most fire resistant roofing materials are metal, clay tile and asphalt shingles. Untreated wooden shakes and shingles provide no resistance. They are ideal fuels for a roaring wildfire." The BC Building Code should be aligned with this recommendation, through the restriction of untreated wooden roofs.

As the FireSmart Manual's also points out, "Materials such as stucco, metal, brick and concrete offer superior fire resistance to wildfire. Logs and heavy timbers are a little less effective, while wood and vinyl siding offer very little protection." It is imperative that the province review the suitability of siding materials identified by the province as being subpar in terms of safety, and consider the restriction of the most flammable and dangerous siding materials through an update to the BC Building Code.

An amended Building Code would provide clear and consistent direction for Building Officials to ensure that new construction meets provincially mandated fire hazard design requirements that meet the realities of the 21st century, at little or no additional cost to homeowners and developers. The BC Building Code is the most appropriate regulatory tool to address construction material standards, and these kinds of changes would mean positive and widespread changes to increase public safety and reduce the risk of wildfire to life and property.

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: 17 June 2021

RE: COVID-19 RESTART

Recommendations:

1. **Public Meetings/ Consultations**

   a. **That the suspension of S. 5 of Bylaw 2500/11, being the Public Information Meeting section of the Planning Procedure Bylaw, be terminated effective September 7th; and,**

   b. **That an amendment to the Planning Procedure Bylaw be brought forward to address the changes to S. 465, 466, 494, of the Local Government Act for public hearings proposed in Bill 10/2021; and,**

   c. **That all non-regulatory public hearings on land use matters continue to be waived; and, that all regulatory public hearings continue to be held electronically until Step 4 of BC Restart commences; and that all meetings be returned to normal following that date; and,**

   d. **That all Public Information Meetings be conducted electronically out of 101 Martin Street.**

2. **Board/Commission Meetings**

   a. **That an amendment to the Procedure Bylaw be brought forward to address the changes to S. 128 of the Community Charter for electronic regular meetings proposed in bill 10/2021; and,**

   b. **That Select Committees and Board of Director meetings occur on the normal schedule, but that the meetings continue electronically until implementation of Step 4 of the BC Restart Plan; and,**

   c. **That the current practice of electronic Board meetings open to the public be continued, regardless of the format; and,**

   d. **That all delegations scheduled to come before the Board continue to be invited to appear electronically until implementation of Step 4 of the BC Restart Plan.**

Background:

On March 13, 2020, the World Health Organization declared a global pandemic based on what was known of COVID-19 at the time. Our world, and our business practices, have changed radically since that time. The Province of British Columbia declared a Provincial State of Emergency and the Public Health Officer issued Orders and guidance on how we should navigate to help us through

this time, with the purpose of flattening the curve of virus spread to protect against overwhelming our health system.

The COVID-19 response quickly evolved, at several levels, but certainly the local level did their share. A universal set of preventative measures were implemented and have been consistent throughout:

- Wash your hands
- Wear a mask
- Maintain physical distancing
- Essential domestic travel only
- Physical barriers installed and extra cleaning of workplaces
- Electronic meetings where possible
- Work from Home when possible
- Do a daily health check and ensure those displaying symptoms isolated until tested
- Positive employees to quarantine for 14 days.
- Interaction restricted to very small bubbles

The Regional District maintained our level of service, but planned for the worst. We relied on senior levels of government to provide us with current statistics and followed their direction to keep our staff and citizens safe. We worked closely with our member municipalities to provide consistent information to our mutual citizens, but it's stressful. Individuals, businesses, governments; no exception. We fared well over the past 15 months. Organizationally, the Regional District had no positive cases and the numbers in the Interior have been relatively low. Vaccines are now making life safer and "Restart" programs, with relaxed rules, are rolling out over time. Now, as more information becomes available, local governments must determine how they can return to business safely.

With that said, there are some issues/practices that we wanted to discuss with Committee prior to implementation. Those that affect our citizens and constituents should have that political perspective.

Note: This report is contingent on the promulgation of Bill 10, an amendment to the Community Charter, Local Government Act and Hospital District Act.

Issues:

1. Public Meetings/ Consultations/ Public Hearings

At Step 3 of the BC Restart Plan, the Provincial State of Emergency and Public Health Emergency are scheduled to end. By that time, Workplaces must adjust their operations based on sector COVID-19 Safety Plans. UBCM and the Province will provide direction on public hearings, but Public Information Meetings and other Consultations are not regulatory and will be up to the Board. We do know that Bill 10 is currently under consideration, which provides the following:

Bill 10/Section 9: ***[Local Government Act, section 465, Public Hearing Procedures]***

- provides for public hearings to be conducted by means of electronic or other communication facilities;
- requires that electronic or other communication facilities enable the hearing's participants to hear, or watch and hear, each other;
- provides procedural specifics for adjourning a public hearing.

New public health and workplace guidance around PPE, distancing and protocols are expected from the Province in June. By Step 4 in early September, we believe we can return to normal social contact.

During the pandemic, the Regional District has relied solely on electronic **public information meetings**, operated out of the Board Room. When we return to open meetings, we can continue to stream public information meetings, if they are hosted in the Board Room at 101 Martin Street. Should we go off-site to locations without the necessary audio/visual equipment, we lose our ability to do that. Electronic public meetings offer a wider viewing platform and we believe it beneficial to continue to offer all Public Information Meetings, consultations and group meetings electronically from 101 Martin Street until Step 4.

2. Board/Commission Meetings

> **Bill 10/Section 9 - Electronic regular council meetings**
> 128 (1) If authorized by a procedure bylaw and the requirements of subsection (2) are met, regular council meetings may be conducted by means of electronic or other communication facilities.

The Board has established lay commissions to provide advice on certain issues that benefit from a public perspective prior to coming to the Board for decision. Advisory Planning Commissions, Recreation Commissions and Water Commissions are composed of varying numbers throughout the Regional District and typically meet on a monthly basis, supported by staff when required.

With the advent of COVID-19, commission meetings, select committee meetings and Board of Director meetings were initially suspended then, as our electronic capability improved and provincial rules allowed for meetings to be closed to the public, they met electronically. Some that were able met in person while practicing physical distancing and all other safety protocols. If commissions could not meet on a timely basis, they were consulted on essential issues.

Electronic meetings are still practiced for Select Committee and Board of Director meetings due to our limited space in the Board Room and in the interest of streaming/recording meetings for public viewing. It is our intent to continue to allow electronic participation, live stream and record meetings post-pandemic. We fully expect that the current distancing guidelines will be removed in Step 4 and that our typical spacing in the Board Room will once again be feasible.

Due to the uncertainty, audio/visual equipment to date has been borrowed or rented. The type of audio/visual equipment we purchase is dependent on Board Room set-up. The cameras and microphones react differently depending on whether there are physical barriers set up between seats. Sound is muffled when wearing a mask and our room is not good acoustically. We believe then, that it would be safer and more effective to aim for a Step 4 return to in-person meetings in the Board Room, with no additional physical barriers.

At the same time, while we may set up the Board Room with appropriate safety measures earlier, our public spaces such as the lobby, washrooms and coffee room would not be as flexible. Further, we're not sure what the new public health and workplace rules referenced by the Province in Step 3 are going to entail, or what we can expect as we return to meetings open to the public. In the end, even those issue are complicated by uncertainty on numbers and how successful we'll be in changing course within the month of June.

3. Travel – For Information Only

Throughout 2020 and 2021, most large meetings, conferences, workshops, training courses and other professional gatherings have been cancelled or held electronically. While domestic travel restrictions are expected to be removed by July, due to the uncertainty regarding the roll-out and effectiveness of vaccines against COVID variants, it is anticipated that travel through the remainder of 2021 will be limited.

4. Access to Staff – For Information Only

The Regional District Office was closed to the public for April and May 2020, but has remained open since that time.

- All safety protocols were entrenched and followed
- Physical barriers were installed at the front counter
- Working-from-Home protocols were established and implemented
- Staff work spaces were altered to recognize physical distancing requirements
- Attendance at local external meetings was encouraged electronically
- Internal meetings were limited to numbers that met physical distancing guidelines to protect the public and make sure our staff stayed healthy enough to maintain our infrastructure and our essential services.
- Renovation of the HVAC system at 101 Martin St. will be completed in 2021
- Additional work space is being negotiated to reduce crowding and open more general meeting space

At Step 3 of BC Restart, Orders will be lifted, masks in public places revert from mandatory to recommended. Regional District staff will continue to wear masks and socially distance in the work place until Step 4 when the recommendation is rescided.

As restrictions relax, we'll gradually return to normal.

5. Payments – For Information Only

At facilities where interaction is required, like the corporate office, recreation facilities, landfills and satellite offices, at the start of the pandemic we encouraged payment by debit/credit so handling of cash was not required. We have since added electronic payment capability and those practices will continue post-pandemic.

SUMMARY:

Stay the course. Plan for a Step 4 Re-start.

From: Wilkins, Christina MUNI:EX <Christina.Wilkins@gov.bc.ca>
Sent: Tuesday, May 25, 2021 5:27 PM
Subject: BC Restart
Importance: High

This message is being forwarded to you on behalf of Tara Faganello, Assistant Deputy Minister of the Local Government Division, Ministry of Municipal Affairs

Dear Mayors and Chairs,

As you may be aware, today Premier John Horgan announced BC's Restart; a four-step plan to bring British Columbians back together and allow a slow and gradual return to a more normal life. Minister Osborne will be hosting phone calls with Mayors/Chairs/CAOs in early June to answer questions and provide more information on the Restart plan; we will share more details as these calls are finalised.

BC's Restart was designed based on data from the BC Centre for Disease Control and guided by public health advice. Progressing through the steps will be measured by the number of adults vaccinated, COVID-19 case counts and hospitalizations and deaths, taking into account clusters and outbreaks. While there are approximate dates, the plan will be guided by data, not dates, and will not proceed to the next step until it is safe to do so based on guidance from public health and the latest available data.

Here is a summary of key information provided during the announcement, as well as links to more information and resources.

During **Step 1 and Step 2,** provincewide safety and health protocols such as mask wearing, physical distancing measures, and business safety protocols required in indoor public settings stay in place.

Step 1 – Starting on May 25, 2021

- Maximum of five visitors or one household allowed for indoor personal gatherings
- Maximum of 10 people for outdoor personal gatherings
- Maximum of 50 people for seated outdoor organized gatherings with safety protocols; examples include wedding ceremonies and funerals
- Recreational travel only **within** travel region (travel restrictions between regions extended); hotels and other accommodation providers are encouraged to welcome guests from inside their region
- Indoor and outdoor dining for up to six people with safety protocols (see below)
- Resume outdoor sports (games) with **no** spectators, and low-intensity fitness with safety protocols
- Start gradual return to workplace
- Employers must continue to have a COVID-19 Safety Plan and daily health check in place
- Return of indoor in-person faith-based gatherings (reduced capacity) based on consultation with public health.

Note that current enforcement (ticketing; road checks) will stay in place (e.g. to ensure no gatherings larger than permitted; to ensure essential travel only between travel regions).

Step 2 – Earliest start date June 15

- Maximum of 50 people for outdoor social gatherings
- Maximum of 50 people for seated indoor organized gatherings (banquet halls, movie theatres, live theatre) with safety protocols
- No B.C. travel restrictions; check local travel advisories; hotels and other accommodation providers may accept guests from throughout the province
- Indoor sports (games) and high-intensity fitness with safety protocols
- Spectators for outdoor sports (50 maximum)

For **Step 1 and Step 2**, restaurants, bars, and pubs, as well as indoor fitness facilities, return to the safety protocols that were in place prior to the circuit breaker restrictions. For other sectors, existing safety protocols remain in place for Step 1 and Step 2, including existing safety protocols at schools and daycares.

Note that in Step 2 there will be a consultation process to prepare for larger indoor and outdoor gatherings with safety protocols. As well, enforcement (ticketing) will stay in place (e.g. to ensure no gatherings larger than permitted).

Prior to **Step 3 and Step 4**, sector associations will work with public health and WorkSafeBC to update sector guidelines to meet updated public health guidance.

All updated workplace safety plans should be ready **by July 1** prior to shifting into Step 3. These plans will be based on updated sector guidelines. Roundtables led by ministries across government will engage with industry and labour, along with WorkSafeBC and public health, to help develop comprehensive updated industry-specific safety plans. There will also be engagement with First Nations and local governments. **In particular, UBCM continues to represent municipalities and regional districts at the COVID-19 Industry Engagement Table.**

Step 3 – Earliest July 1

- Provincial state of emergency and public health emergency lifted
- Masks are recommended
- Returning to usual for indoor and outdoor personal gatherings
- Increased capacity for indoor and outdoor organized gatherings, with safety plans
- Nightclubs and casinos reopened with capacity limits and safety plans
- **New public health and workplace guidance** around personal protective equipment, physical distancing, and business protocols
- Continued return to the workplace
- Seminars and bigger meetings allowed
- **Workplaces must operate based on a new sector COVID-19 Safety Plan.**

Step 4 – Earliest September 7

- Workplaces fully reopened
- Masks are will be a personal choice in public indoor settings
- Returning to normal social contact
- Increased capacity at larger organized gatherings
- No limits on indoor and outdoor spectators at sports
- Businesses operating with new safety plans

- Employers must continue to have a COVID-19 Safety Plan and daily health check in place
- Engage in careful social contact
- If you or anyone in your family feels sick stay home and get tested immediately

Your actions are making a difference now and your actions will matter through the restart. If we stay the course, we can resume much needed visits with friends and family and support a strong economic recovery for our province. The pandemic has been tough on everyone. It has impacted people, businesses, and communities. But British Columbians are resilient, and we're determined – and we're pulling together to put this pandemic behind us. Thank you for your leadership in your communities. We look forward to further engagement with you on BC's Restart; we appreciate you may have questions with respect to the plan and we will continue to provide more information as it becomes available.

Thank you,

Tara Faganello, CPA CGA BA Ec.
Assistant Deputy Minister
Local Government Division
Ministry of Municipal Affairs
and Inspector of Municipalities

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Environment and Infrastructure Committee

Thursday, June 17, 2021

10:45 am

AGENDA

A. APPROVAL OF AGENDA

RECOMMENDATION 1

THAT the Agenda for the Environment and Infrastructure Committee Meeting of June 17, 2021 be adopted.

B. NATURE CONSERVANCY OF CANADA – For Information Only

Brenda Pryce , Program Director, Southern Interior

a. SOSCF Project Update

C. ADJOURNMENT

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Protective Services Committee

Thursday, June 17, 2021

11:45 am

AGENDA

A. **APPROVAL OF AGENDA**

RECOMMENDATION 1

THAT the Agenda for the Protective Services Meeting of June 17, 2021 be adopted.

B. **SIMILKAMEEN FLOOD RISK ASSESSMENT AND FLOOD MAPPING STUDY–** For Information Only

Delegation: Barret Van Vliet, Ecora Engineering

C. **BC AMBULANCE - For Information Only**

Delegation: Joe Puskaric, District Manager, BC Emergency Health Services

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D. **ADJOURNMENT**

Flood Hazard Mapping for the Similkameen River

Prepared for:

Dated: June 2021

Ecora File No.: GK-19-548-RDO

Prepared For:

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Version Control and Revision History

Version	Date	Prepared By	Reviewed By	Notes/Revisions
A	11/07/2020	SSM, AG	AGC, DBV	Draft report for internal review
B	12/21/2020	SSM, AG	CP	Issued for client review
1	03/22/2021	SSM, AG	AGC, DBV	Issued for use
2	06/09/2021	DBV	SSM, SV	Issued for use with updated recommendations

Executive Summary

The Regional District of Okanagan-Similkameen (RDOS), in partnership with the Town of Princeton (ToP) and the Village of Keremeos (VoK), engaged Ecora Engineering & Resource Group Ltd. (Ecora) to undertake a Flood Risk Assessment (FRA), Flood Mapping (FM) and Flood Mitigation Plan (FMP) for the Similkameen River. This report describes the Flood Mapping (Phase 2) portion of the study.

Flood hazard maps were developed for three distinct areas within the Similkameen River watershed. Flood mapping areas included part of RDOS Electoral Areas B, G, and H, the ToP and the VoK. The areas also included Lower Similkameen Indian Band (LSIB) and Upper Similkameen Indian Band (USIB) reserve lands. The study areas are described as follows.

Keremeos Study Area: The Keremeos study area was centred around the Village of Keremeos, BC. The study area extents span 26 km from the Riverside R.V. Park Resort along Crowsnest Highway 3 in RDOS Electoral Area G, through the VoK to approximately 2 km south of Cawston, BC in RDOS Electoral Area B. The study includes portions of several LSIB Indian Reserves including Ashnola 10, Alexis 9, and Narcisse's Farm 4. The Similkameen River was the subject of the flood mapping in this study area.

Princeton Study Area: The Princeton study area was centred around the Town of Princeton, BC at the confluence of the Similkameen and Tulameen Rivers. The study area for both rivers starts approximately 5 km upstream of the confluence in RDOS Electoral Area H, extends through the Town of Princeton, and finishes again in RDOS Electoral Ares H approximately 6 km downstream of the confluence. The study area also includes the USIB Vermillion Forks 1 reserve lands. The Similkameen River and Tulameen River were both the subjects of the flood mapping in this study area.

Tulameen Study Area: The Tulameen study area was centred around the communities of Tulameen and Coalmont, BC in RDOS Electoral Area H. The study area starts approximately 3.5 km upstream of Tulameen and extends to approximately 2 km downstream of Coalmont. The study area also includes Otter Creek and a portion of Otter Lake. The Tulameen River, Otter Creek and the south shore of Otter Lake were the subjects of the flood mapping in this study area.

A hydrologic assessment of the Similkameen River watershed was completed to establish the design flood flows to be used to create the flood hazard maps. A comprehensive analysis of climate data, snow pillow data and WSC hydrometric data was undertaken. A regional frequency analysis was completed on instantaneous peak and maximum daily streamflows at key WSC streamflow monitoring stations. Through analysis of peak data, it was determined that the largest peak flows typically occur on the Similkameen River during the spring, while the largest peak flows on the Tulameen River tend to occur in the fall/winter. Accordingly, the frequency analysis was completed for the spring and fall/winter for the Similkameen and Tulameen Rivers, respectively. The frequency analysis was used to calculate peak flows for the 20-year, 200-year, 500-year, and 1000-year return period events at key streamflow stations using the HYFRAN v2.2 software. Multiple regional relationships were established to correlate peak flow magnitude with catchment area in order to derive peak flows to be used for model input.

In an attempt to refine design flows and estimate the potential impacts of future climate change, a hydrologic model was developed for the Similkameen River watershed using the U.S. Army Corps if Engineers Hydrologic Engineering Center Hydrologic Modeling System (HEC-HMS) v4.6.1 modelling software. The model was constructed to represent the hydrologic processes associated with flooding events. Calibration of the model focused on replicating the 2018 streamflow hydrograph during the spring freshet at the Similkameen River near Nighthawk WSC streamflow monitoring station, which represents the hydrologic response of the entire Canadian portion of the watershed. The model results did not show any clear trend in peak streamflow as a result of projected changes in precipitation, temperature, and snowpack. Therefore a 10% increase in all design flood events was applied in

accordance with the Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC (EGBC, 2018).

After establishing the design flows and climate change adjustment factor, three 2-dimensional (2D) unsteady flow models were developed using The U.S. Army Corps of Engineers Hydrologic Engineering Center River Analysis System (HEC-RAS) version 5.0.7. The models were developed for the three study areas described above. Each model was calibrated individually through adjustment of the "Manning's n" surface roughness parameters assigned to the river channel and floodplain areas. Results were compared to available datasets including designed dike freeboard, high water marks at bridges, Water Survey of Canada (WSC) streamflow monitoring stations, photographs, and anecdotal observations. The models were all calibrated to an acceptable level and then validated against 2018 spring freshet data. Multiple model scenarios were simulated for each of the design events - each with and without a 10% adjustment factor applied to the flow to quantify the potential future impacts of climate change. The scenarios included:

1. Scenario 1: Flow constrained by existing topography (i.e., unaltered DEM terrain).
2. Scenario 2: Flow not constrained by any dikes
3. Scenario 3: Dike breach (Keremeos and Princeton study areas only)

Flood depth and inundation maps were produced by simulating the scenarios for the 20-year, 200-year, and 500-year design flood events. Ecora then used the flood mapping results for the 200-year and 500-year design flows to assess the hazard levels in the inundated areas of the floodplain. The hazard calculation was based on the UK Flood Hazard Rating Formula described in the Professional Practice Guidelines for Flood Mapping in B.C. (APEGBC, 2017). Depth and hazard rating maps were presented for Scenario 1, 2, and 3 with Scenario 1 being the primary map set to be used for flood-related decision making. Scenario 2 and 3 maps can also be used for decision making; however, their application should be limited to their specific set of circumstances. The development of the Scenario 2 and 3 maps was important for developing the Regulatory Flood Construction Level and Floodplain maps. The Regulatory Flood Construction Level and Floodplain maps were produced for the 20-year and 200-year events with 0.6 m of freeboard and were based on a composite water surface elevation by combining Scenario 1, 2, and 3. These maps utilized all three scenarios to capture a wide array of flooding possibilities to inform future planning decisions.

The intention of this report is to document the technical approach taken to produce the associated flood maps; however, the following general recommendations were made to provide guidance on the application of the produced maps.

- The maps developed in this study should be used as decision-making tools for emergency management.
- The flood mapping should be integrated into the RDOS Emergency Operations Center (EOC) Dashboard.
- The modelling data files produced during the flood mapping should be used by the municipalities to test the efficacy of their temporary flood mitigation strategies.
- The Regulatory Flood Construction Level and Floodplain maps developed in this study should be used for regulatory purposes, replacing the historical flood maps (Hay & Company Consultants Inc (Hay & Co.), 1995) referenced in the existing development bylaws and official community plans.
- The maps should be shared with the Province (MFLNRORD, Emergency Management BC, MoTI) to assist them in their flood response planning and to highlight the significance of the various flood events, especially in locations where orphaned dikes are relied upon.

- The maps should be shared with the Ministry of Transportation and Infrastructure to highlight occurrences where egress routes may be compromised and to develop procedures for maintaining access routes.
- The flood mapping results and the technical report can be used as supporting documents for securing future funding for flood mitigation works.
- The flood maps presented in this report should be used by the ToP and VoK in the Phase 3 Flood Mitigation Planning component of the Similkameen River Flood Risk Assessment, Flood Mapping, and Flood Mitigation Planning project.
- The scope of the Phase 3 Flood Mitigation Planning only explores mitigation works within the ToP and VoK. If future funding can be secured, the flood mapping results should be used for flood mitigation planning within the Electoral Area B, G and H study areas.

It is recommended that prior to using the flood maps produced in his study, all individuals and municipalities should familiarize themselves with the associated limitations, as described in this report and listed on the flood map index pages.

Limitations of Report

This report and its contents are intended for the sole use of the Regional District of Okanagan-Similkameen, the Town of Princeton, the Village of Keremeos, their agents and the applicable regulatory authorities. Ecora Engineering & Resource Group Ltd. (Ecora) does not accept any responsibility for the accuracy of any data, analyses, or recommendations contained or referenced in the report when the report is used or relied upon by any Party other than the Regional District of Okanagan-Similkameen, the Town of Princeton, the Village of Keremeos, their agents, the applicable regulatory authorities or for any project other than that described in this report. Any such unauthorized use of this report is at the sole risk of the user.

Where Ecora submits both electronic file and hard copy versions of reports, drawings and other project-related documents, only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by Ecora shall be deemed to be the original for the project. Both electronic file and hard copy versions of Ecora's deliverables shall not, under any circumstances, no matter who owns or uses them, be altered by any party except Ecora.

Table of Contents (Phase 2)

List of Tables in Text

Figures

Appendix Sections

Appendices

Acronyms and Abbreviations

APEGBC	Association of Professional Engineers and Geoscientists of British Columbia
BC	British Columbia
CEPF	Community Emergency Preparedness Fund
EcoCat	Ecological Reports Catalogue
EGBC	Engineers and Geoscientists of British Columbia
FM	Flood Mapping
FMP	Flood Mitigation Planning
FRA	Flood Risk Assessment
HEC-HMS	Hydrologic Engineering Center - Hydrologic Modeling System
HEC-RAS	Hydrologic Engineering Center – River Analysis System
HWM	High Water Mark
LSIB	Lower Similkameen Indian Band
MFLNRORD	Ministry of Forests, Lands, Natural Resource Operations & Rural Development
MOE	British Columbia Ministry of Environment
MOTI	British Columbia Ministry of Transportation and Infrastructure
MSC	Meteorological Service of Canada
NDMP	National Disaster Mitigation Program
RAIT	Risk Assessment Information Template
RDNO	Regional District of North Okanagan
RDOS	Regional District of Okanagan-Similkameen
ToP	Town of Princeton
UBCM	Union of BC Municipalities
US	United States
USIB	Upper Similkameen Indian Band
VoK	Village of Keremeos
WSC	Water Survey of Canada

1. Introduction

1.1 General

The Regional District of Okanagan-Similkameen (RDOS) in partnership with the Town of Princeton (ToP) and the Village of Keremeos (VoK) engaged Ecora Engineering & Resource Group Ltd. (Ecora) to conduct a Flood Risk Assessment (FRA), Flood Mapping (FM) and Flood Mitigation Planning (FMP) study for the Similkameen River. Each of these municipal governments represents communities that are located within the floodplain reaches of the Similkameen River and its tributaries. Ecora worked closely with these stakeholders, various Provincial agencies and both the Lower Similkameen Indian Band (LSIB) and the Upper Similkameen Indian Band (USIB) to complete the study.

Based on recent flood events in the region, it is evident that aging flood protection infrastructure and climate change are increasing the susceptibility of the municipalities to flooding from rapid snowmelt and intense rainfall events. Land development for these communities within the floodplains has put them at risk of flooding and their vulnerabilities have been highlighted during recent flood events. Acknowledging these risks and vulnerabilities, RDOS, ToP and VoK have decided to undertake a Flood Risk Assessment, Flood Mapping and Flood Mitigation Planning study in order to improve their preparedness for future flooding and to develop flood management strategies. The three phases that form the basis of this study are as follows:

- Phase 1 - Similkameen Regional Flood Risk Assessment
- Phase 2 - Flood Mapping
- Phase 3 - Flood Mitigation Planning

Ecora recently completed the Phase 1 FRA component of the project which identified the hazard, vulnerability and risk of flooding within the RDOS Electoral Areas G, H and B, ToP and VoK. This report summarizes the Phase 2 Flood Mapping portion of the project. Information gathered in this report will be used to support the flood mitigation planning phases of the study. The overall purpose of the project is to help the RDOS, ToP and VoK make informed decisions for future planning, policies and mitigation.

1.2 Project Background

During the 2018 freshet, widespread flooding occurred throughout the southern interior of BC, including the Similkameen River watershed. Historical data from this period indicates that an unseasonably wet March and April resulted in a high groundwater table. The high groundwater levels, combined with an above average snowpack, rapid snowmelt and higher than normal precipitation caused the flood event. The high water levels produced by the flooding highlighted vulnerability in the existing flood protection infrastructure and eventually initiated this study. It is understood that although the 2018 flooding threatened or impacted numerous forms of infrastructure, the runoff was much less than for the 200-year design flood event.

Currently, historical floodplain maps for this region are 24 to 38 years old and identify several populated areas within Tulameen, Princeton, Keremeos and Cawston that are at risk during the design flood for which the maps were prepared. More recent advances in computing, survey data acquisition, and understanding of future climate change have highlighted the need to update the flood maps and flood construction levels for the identified areas.

Understanding this, the RDOS, ToP and VoK acknowledged the need to complete a flood risk assessment, to update existing flood mapping and collaborated to secure Union of BC Municipalities (UBCM) Community Emergency Preparedness Fund (CEPF) grant funding. Although funding was secured as a joint effort, it should be

noted that only Keremeos and Princeton would be involved in the Phase 3 (flood mitigation planning) portion of the project flood.

1.3 Scope of Work

In general, the scope of work for the Phase 2 Flood Hazard Mapping involved the following tasks:

- LiDAR Digital Elevation Model (DEM) development;
- River cross section survey;
- Hydrologic modelling and analysis;
- 2-dimensional (2D) hydraulic modelling;
- Environmental investigation; and
- Flood inundation and hazard mapping for the RDOS, Keremeos, and Princeton.

The results of Phase 2 will be used in the Phase 3 Flood Mitigation Plan to develop flood mitigation strategies, improve flood resiliency of the affected communities, and if necessary, amend bylaws.

1.4 Flood Mapping Areas

Flood hazard mapping was completed for three distinct study areas within the Similkameen River watershed. The three study areas are referred to as follows throughout this report:

- Keremeos study area
- Princeton Study area
- Tulameen Study area

The study areas, described further below, are protected by dikes at various locations. The dikes and their condition have been described in detail in the Ecora (2020) Similkameen River Phase 1 Risk Assessment report.

1.4.1 Keremeos Study Area

The Keremeos study area is centred around the Village of Keremeos, B.C. Figure 1.1 shows the study area extents which span 26 km from the Riverside R.V. Park Resort along Crowsnest Highway 3 in RDOS Electoral Area G, through the VoK to approximately 2 km south of Cawston, BC in RDOS Electoral Area B. The study includes portions of several LSIB Indian Reserves including Ashnola 10, Alexis 9, and Narcisse's Farm 4. The Similkameen River is the subject of the flood mapping in this study area. Several dikes protect floodplains in the Keremeos study area. These are shown on Figure 1.1, with corresponding dike numbers as referred to in the Phase 1 Risk Assessment Report (Ecora, 2020).

1.4.2 Princeton Study Area

The Princeton study area is centred around the Town of Princeton, B.C. at the confluence of the Similkameen and Tulameen Rivers. Figure 1.2 shows the study area for both rivers which starts approximately 5 km upstream of the confluence in RDOS Electoral Area H, extends through the Town of Princeton, and finishes again in RDOS Electoral Ares H approximately 6 km downstream of the confluence. The study area also includes the USIB Vermillion Forks 1 reserve lands. The Similkameen River and Tulameen River are both the subjects of the flood

mapping in this study area. Dikes protecting the Princeton study area are shown on Figure 1.2 with corresponding dike numbers as referred to in the Phase 1 Risk Assessment Report (Ecora, 2020).

1.4.3 Tulameen Study Area

The Tulameen study area is centred around the communities of Tulameen and Coalmont in RDOS Electoral Area H. Figure 1.3 shows the study area for both rivers which starts approximately 3.5 km upstream of Tulameen and extends approximately 2 km downstream of Coalmont. The study area also includes Otter Creek and a portion of Otter Lake. The Tulameen River, Otter Creek and the south shore of Otter Lake are the subjects of the flood mapping in this study area. Dikes protecting the Tulameen study area are shown on Figure 1.3 with the corresponding dike number as referred to in the Phase 1 Risk Assessment Report (Ecora, 2020).

2. Hydrologic Assessment

2.1 General

Hydrological assessment was completed on the Similkameen and Tulameen Rivers for the purposes of determining design flows at key locations along the river as well as to evaluate potential effects due to climate change. The analysis completed involved the collection of regional stream gauge data as well as climatic data including historical climatic and snow course data. The acquisition of this data is discussed in Sections 2.2 and 2.3. Analysis completed for flow generation for the flood maps based on the hydrometric data collected is provided in Section 2.4. Further, Section 2.5 provides discussion on a HEC-HMS model that was created to represent the watershed with a focus towards modelling the effects of climate change. For completeness, this section reiterates some of the information provided in the Flood Risk Assessment.

2.2 Hydrometric Data

Within the Similkameen Watershed (Figure 2.1) there are several hydrometric stations operated by the Water Survey of Canada (WSC) that have many years of recorded peak instantaneous or maximum daily data. Referencing the available WSC data, it was found that there has been a total of 59 stations installed throughout the Similkameen Watershed. Of the 59, only 12 remain active and only 15 of the 59 had enough peak data to be incorporated into frequency analysis. Details on the stations which have been incorporated into the analysis are listed below in Table 2.1. Stations excluded from this list had insufficient data for the purposes of peak flow determination. Figure 2.2 provides a map of regional hydrometric stations with labels for the stations in this table.

Table 2.1 Regional Hydrometric Stations

Station Name	Station Number	Latitude	Longitude	Period or Record	Drainage Area (km^2)	Status
KEREMEOS CREEK BELOW WILLIS INTAKE	08NL045	49° 15' 32" N	119° 49' 32" W	1971 - 2019	181	Active
ASHNOLA RIVER NEAR KEREMEOS	08NL004	49° 12' 27" N	119° 59' 36" W	1912 - 2019	1050	Active
EWART CREEK NEAR CATHEDRAL PARK	08NL076	49° 7' 57" N	120° 02' 16" W	1998 - 2019	250	Active
HEDLEY CREEK NEAR THE MOUTH	08NL050	49° 21' 51" N	120° 04' 07" W	1973 - 2019	388	Active
SIWASH CREEK NEAR PRINCETON	08NL039	49° 39' 46" N	120° 20' 07" W	1967 - 2019	263	Active

Station Name	Station Number	Latitude	Longitude	Period or Record	Drainage Area (km^2)	Status
SIMILKAMEEN RIVER NEAR NIGHTHAWK	08NL022	48° 59' 05" N	119° 37' 02" W	1928 - 2019	9190	Active
SIMILKAMEEN RIVER NEAR KEREMEOS	08NL006	49° 13' 16" N	119° 57' 28" W	1911 - 1932	5960	Discontinued
SIMILKAMEEN RIVER NEAR HEDLEY	08NL038	49° 22' 37"N	120° 09' 08" W	1965 - 2019	5580	Active
SIMILKAMEEN RIVER AT PRINCETON	08NL007	49° 27' 34" N	120° 30' 12" W	1914 - 2019	1810	Active
TULAMEEN RIVER AT PRINCETON	08NL024	49° 27' 27" N	120° 31' 06" W	1950 - 2019	1780	Active
TULAMEEN RIVER BELOW VUICH CREEK	08NL071	49° 27' 56" N	120° 58' 44" W	1974 - 2019	253	Active
OTTER CREEK AT TULAMEEN	08NL023	49° 32' 44" N	120° 45' 12" W	1912 - 1985	673	Active
WHIPSAW CREEK BELOW LAMONT CREEK	08NL036	49° 22' 09" N	120° 34' 11" W	1964 - 1999	185	Discontinued
PASAYTEN RIVER ABOVE CALCITE CREEK	08NL069	49º 05' 56" N	120° 34' 45" W	1974 - 2019	566	Active
SIMILKAMEEN RIVER ABOVE GOODFELLOW CREEK	08NL070	49º 05' 38" N	120° 40' 21" W	1973 - 2019	408	Active

Based on the historical hydrometric data, flooding in the Similkameen River is generally due to spring freshet snowmelt-driven events with the river reaching its peak sometime in May or early June. The one exception to this is that a major tributary to the Similkameen River, the Tulameen River, generally floods due to the rain-on-snow events that take place in late fall or early winter. While spring flooding is typically what has been noted in the Similkameen River including the reach above Princeton, fall rain-on-snow events have the potential to cause flooding and be responsible for annual peak flow event.

The top five flood events on the Similkameen River as recorded at the Water Survey of Canada (WSC) hydrometric station “Similkameen River Near Nighthawk” (Station number 08NL022) are as follows:

- June 1, 1972 – 1270 m^3/s
- May 30,1948 – 1080 m^3/s
- May 10, 2018 – 883 m^3/s
- June 17, 1974 – 881 m^3/s
- June 17, 1950 – 818 m^3/s

All five of the major flood events at this station are a result of spring flooding and represent peak instantaneous values. This hydrometric station has 91 years of records spanning from 1928 to 2019.

The top five flood events along the Tulameen River as recorded at the WSC hydrometric station “Tulameen River at Princeton” (Station number 08NL024) are as follows:

- November 29, 1995 – 708 m^3/s
- November 6, 2006 – 502 m^3/s
- May 30, 1972 – 442 m^3/s (Estimated)
- January 4, 1984 – 424 m^3/s (Estimated)
- November 10, 1990 – 406 m^3/s

The floods of 1995, 2006, 1984 and 1990 represent years when the peak was in the fall; while 1972 is the sole year in the top five that was a result of a freshet driven flood in the spring. It is noted that the peak instantaneous values for 1972 and 1984 were not provided in the historical data set and thus the peaks were estimated using a ratio between the maximum daily value (mean of the day in which the peak was recorded) and the maximum instantaneous value. The estimated ratio was based on a comparison of maximum daily and maximum instantaneous values of years were both the peak instantaneous and maximum daily average was available.

Details of the analysis of the hydrometric data are given in Section 2.4.

2.3 Climatic and Snow Pillow Data

Several climate stations operated by the Meteorological Service of Canada (MSC) are located within the study region. A map of available climatic stations and snow pillow stations is provided in Figure 2.3. Table 2.2 below provides details on several climate stations within or near the Similkameen watershed.

Table 2.2 Climate Stations Within or Near the Similkameen watershed

Station Name	Station Number	Period of Record	Latitude	Longitude	Elevation (m)	Annual Rainfall (mm)	Annual Snowfall (cm)
Princeton A	1126510	1936 - 2020	49°28’ N	120°30’ W	702	245.7	125.1
Hedley	1123360	1904 - 2005	49°21’ N	120°04’ W	517	324.0	73.2
Hedley NP Mine	1123390	1904 - 2015	49°22’ N	120°01’ W	1651	286.6	269.1
Keremeos 2	1124112	1924 - 2000	49°12’ N	119°49’ W	435	256.6	68.9
Summerland CS	112G8L1	1994 - 2020	49°33' N	119°39' W	454	N/A	N/A
Penticton A	1126150	1953 - 2020	49°27' N	119°36' W	344	298.5	58.7
Hope Slide	1113581	1969 - 2014	49°16' N	121°14' W	685	932.7	287.8
Peachland	1126070	1971 - 2020	49°47' N	119°43' W	345	309.5	83.9
Oliver	1125760	1938 - 2008	49°10' N	119°34' W	315	302.7	42.7
Oliver STP	1125766	1924 - 2019	49°10' N	119°32' W	297	284.5	45.2
Merritt STP	1125079	1968 - 2019	50°07' N	120°48' W	609	254.5	66.7
Osoyoos West	1125865	1967 - 2008	49°02' N	119°26' W	297	279.4	43.8
Osoyoos CS	1125852	1994 - 2020	49°01' N	119°26' W	283	N/A	N/A
Jellicoe	1123721	1995 - 2020	49°40' N	120°20' W	929	N/A	N/A

Stations within the Similkameen watershed include Princeton A, Hedley, Hedley NP Mine, Keremeos 2, and Jellicoe. Table 2.3 below provides the magnitudes and dates of recorded extreme daily rainfall and extreme daily snowfall events for stations within the watershed. Note the Jellicoe station was excluded from Table 2.3 because extreme event data were not available for this station.

Table 2.3 Magnitudes and Dates of Extreme Events at Select Climate Stations

Station Name	Extreme Daily Precipitation		Extreme Daily Snowfall (cm)	
	Depth (mm)	Date	Depth (cm)	Date
Princeton A	121.9	December 21, 1936	57.2	December 27, 1949
Hedley	63.5	February 23, 1909	50.8	January 21, 1935
Hedley NP Mine	52.3	August 8, 1994	63.5	May 16, 1911
Keremeos 2	45.8	May 26, 1998	36.8	February 21, 1937

Table 2.4 below provides details on the snow pillow and snow course stations within or near the boundary of the catchment. Two of these stations, Trout Creek West and Shovelnose Mountain, were recently installed near manual snow course stations.

Table 2.4 Select Regional Pillow and Snow Course Stations

Station Name	Station No.	Elevation	Period of Record	Type
Blackwall Peak	2G03P	1,940 m	1967 – 2020	Automatic
Trout Creek West	2F01AP	1,420 m	2018 – 2020	Automatic
Shovelnose Mountain	1C29P	1,460 m	2018 – 2020	Automatic
Hamilton Hill	2G06	1,490 m	1960 – 2020	Manual
Missezula Mountain	2G05	1,550 m	1960 – 2020	Manual
Lost Horse Mountain	2G04	1,920 m	1960 – 2020	Manual
Mount Kobau	2F12	1,810 m	1966 – 2020	Manual

In addition to the three automated snow pillow stations listed in Table 2.4, there are 5 active and 6 inactive manual snow courses within the catchment that are, or were, used to collect data at defined intervals. Manual snow course data is generally collected on a monthly or semi-monthly basis. Table 2.5 summarizes statistical values from select snow pillow stations considered in the analysis.

Table 2.5 Snow Pillow and Snow Course Statistics at Select Stations

Snow Water Equivalent (mm)	Blackwall Peak (Automatic)	Missezula Mountain (Manual)[1]	Hamilton Hill (Manual)[1]	Lost Horse Mountain (Manual)[1]	Mount Kobau (Manual)[1]
Highest Maximum on Record	1582	516	851	554	602
Lowest Maximum on Record	442	90	102	138	128
Average Maximum on Record	860	225	330	259	339
2018 Snow Water Equivalent	1045	284	354	455	568

[1] Manual snow course readings are taken near the end of the month during the winter and are unlikely to fully represent the peak

2.4 Regional Hydrologic Analysis

Flood frequency analyses were conducted for a selection of regional hydrometric stations using the HYFRAN Version 2.2 software. Four different frequency distributions: Gumbel, Three Parameter Lognormal, Weibull and Log Pearson Type III were applied to the data. Distributions that were found to be poor fits were eliminated and the averages of the extreme flows from the remaining distributions were taken to establish the peak flows for a range of return periods. In cases where there was sufficient peak (annual maximum instantaneous) data, the peak data was utilized and in cases where there was limited peak data the annual maximum daily data was utilized. For the frequency analysis conducted using maximum daily data a peaking factor was applied to provide a peak flow estimate. The peaking factor was determined using the ratio between the maximum daily and peak flows in years when both flow measurements were available.

Extreme floods have historically been defined in terms of their return period, which is a measure of how often they can be expected to occur over a period of time much greater than the return period. In other words a 200-year flood can be expected to occur 5 times in a 1000-year period, but not at 200-year intervals. Because of an incorrect public perception that a 200-year flood tends to occur every 200 years, some practitioners now use the term Annual Exceedance Probability (AEP) instead of return period. Using this approach, a 200-year flood is designated as the 0.5% AEP flood, i.e. in any given year the flood has a 0.5% chance of occurring. There is ongoing discussion as to which designation is preferred, but the choice has been made to continue with the traditional terminology in this report.

The floods of 20, 200, 500 and 1000-year return periods are provided in the tables below. These return periods are consistent with those specified in the Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC (EGBC, 2018). Also shown are the return period floods with a 10% increase in accordance with EGBC (2018) to account for the potential change in peak flow magnitude due to climate change and land surface changes within the watershed. Each of these flood flows was compared to the Hay & Co. (1995) flow estimates. These results are summarized for three select WSC hydrometric stations, including:

- Tulameen River at Princeton (Station No. 08NL024);
- Similkameen River at Princeton (Station No. 08NL007); and
- Similkameen River at Nighthawk (Station No. 08NL022).

Tulameen River at Princeton

In the case of the station Tulameen River at Princeton, the data was separated into two different populations, one corresponding to spring snowmelt generated events and the second corresponding to fall/winter rain-on-snow events. A frequency analysis was completed for each event type to establish different return period floods. The results of this analysis are provided in Table 2.6 below.

Table 2.6 Frequency Analysis Results for Tulameen River at Princeton Hydrometric Station

Return Period (years)	Ecora Flow Estimate Spring Freshed (m^3/s)	Ecora Flow Estimate Fall/Winter Event (m^3/s)	Ecora Flow Estimate Fall/Winter Event +10% Climate Change (m^3/s)	1995 Hay & Co. Flow Estimate (m^3/s)
20	345	460	506	372
200	449	859	945	487
500	487	1,010	1,110	530
1000	516	1,120	1,230	N/A

In comparing Ecora's results to the Hay & Co. results it was notable that the 1995 flood study did not make a distinction between spring and fall/winter events. Furthermore in 1995, the year in which the Hay & Co. study was published, the station at this location recorded a peak flow of 708 m^3/s resulting from a fall/winter storm. Considering this, the 1995 flood would have corresponded to an event much greater than the 500-year event estimated in the 1995 study, while corresponding to a return period of approximately 100 years using the current study estimates.

Ecora further notes that during the 2018 spring flooding, the Tulameen River peaked at 226 m^3/s, which is consistent with a flood between a 2 and 3-year event before factoring in climate change.

Similkameen River at Princeton

Reviewing hydrometric data from the station Similkameen River at Princeton, the peak flows were found to be primarily governed by spring snowmelt generated events and the analysis was limited to these events. The results of the frequency analysis for this station are shown in Table 2.7.

Table 2.7 Frequency Analysis Results for Similkameen River at Princeton Hydrometric Station

Return Period (years)	Ecora Flow Estimate Spring Freshet (m^3/s)	Ecora Flow Estimate Spring Freshet +10% Climate Change (m^3/s)	1995 Hay & Co. Flow Estimate (m^3/s)
20	422	464	353
200	580	638	471
500	639	703	516
1000	682	750	N/A

Based on the analysis, it was found that the peak flow during the 2018 flood was 302 m^3/s, which corresponds roughly with a 5-year return period flood. The highest peak flow on record for this station (1972) is estimated at 550 m^3/s. This is an estimate as only the maximum daily average flow was recorded. The peak was estimated using the ratio between the peak and maximum daily average flow from years where both flow measurements were available. Using the Hay & Co. flow estimates, the 1972 flood would have corresponded to flows much

greater than the 500-year return period flood while using the revised estimates from the current study, it would correspond to a flood between the 100-year and 200-year floods before factoring in climate change.

Similkameen River near Nighthawk

A frequency analysis of the spring snowmelt generated flood was completed using similar methods as for the Similkameen River near Nighthawk. The results are summarized in Table 2.8.

Table 2.8 Frequency Analysis Results for Similkameen River near Nighthawk Hydrometric Station

Return Period (years)	Ecora Flow Estimate Spring Freshet (m^3/s)	Ecora Flow Estimate Spring Freshet +10% Climate Change (m^3/s)	1995 Hay & Co. Flow Estimate (m^3/s)
20	859	945	892
200	1230	1350	1320
500	1390	1530	1500
1000	1500	1650	N/A

The 2018 flood was the third highest flow on record for this station. The estimated peak (maximum instantaneous) flow was 915 m^3/s. This corresponds to approximately a 35-year return period, before factoring in the effects of climate change. The highest recorded flood at this location was in 1972 and had a peak flow of 1,300 m^3/s which corresponds to a return period of approximately 200-years, based on the Hay & Co. analysis, and between the 200 and 500-year events using the current analysis.

2.5 Design Flows

Design flows for the flood mapping areas were determined through the frequency analysis completed on the regional hydrometric stations detailed in Section 2.2. As part of the analysis, a relationship between maximum daily flow or peak instantaneous flow and watershed area was developed. From these relationships a series of projections of the 20-year, 200-year, 500-year and 1,000-year design floods based on watershed area were established. The graphs illustrating the relationship are provided in Figures 2.4 through Figure 2.6. Figure 2.4 shows the flow to watershed relationship for drainage areas greater than 1,000 km^2, Figure 2.5 shows the flow to watershed relationship for drainage areas less than 1,000 km^2, and Figure 2.6 shows the flow to watershed relationship for fall events generated by the Tulameen River system. Note that Figure 2.6 also includes is based on fall flood events measured at the “Similkameen River near Hedley” gauge in order to obtain an estimate of the combined fall peak flow event downstream the confluence of the Similkameen and Tulameen Rivers. Further discussion on how these values were input into the model is provided in Section 3.2.5, which discusses the design flood hydrographs.

2.6 Climate Change

The potential effects of climate change were reviewed to evaluate the potential impacts on future flood risk. Referencing the EGBC (2018) Professional Practice Guidelines, the following impacts due to climate change are expected within B.C:

- Average temperatures are expected to increase;
- The average annual precipitation is expected to increase with the increase primarily occurring during the winter months;
- For larger watersheds, surface runoff is expected to increase in winter months, an earlier freshet is expected, and drier conditions are expected in the summer months;

- For smaller watersheds, rain-dominated floods are expected with potentially higher peak flows due to increased storm precipitation intensity;
- Warmer winters are expected to raise winter snowlines; however, high elevation snowpacks may increase in depth because of increased precipitation conditions;
- A changed climate is expected to shift the ranges of forest species and result in an increased incidence of pest infestation; and
- Increases in temperature, lightning strikes, and summer droughts will increase the potential for forest fires.

The EGBC (2018) Professional Practice Guidelines also state that these changes are expected to result in an increase in the frequency of floods in small and medium drainage basins that will be dominated by rainfall runoff. Large drainage basins which are dominated by spring snowmelt-driven flood events may experience diminished flood magnitudes and more frequent low flows. However, the potential for a historically high flood event will remain, as a large winter snow accumulation followed by a sudden heatwave or rain event may still create large quantities of runoff and higher magnitude flood events.

Changes to the land throughout the watershed will also impact runoff by reducing attenuation and affecting runoff coefficients. Possible changes include a reduction or a change in vegetation due to drier summer conditions and due to increased wildfire risk.

Rising temperatures and increased precipitation may lead to a shift in areas that experience snowmelt-driven peak flows. Hamlet *et al.* (2013) anticipate that a shift from snow and mixed-rain-on-snow to rain-dominant behaviour will occur throughout the Columbia River system. This is significant as it was observed that there were associated shifts in streamflow timing from spring and summer to winter in basins with significant snow accumulation. There is a resulting likelihood that a greater percentage of the watershed will experience floods generated from fall/winter events.

According to current climate projections, key factors that influence peak flows, such as precipitation and temperature, are expected to increase within the Similkameen River Watershed. Using information provided in the report “Climate Projections for the Okanagan Region” (RDNO, *et al.*, 2020), the following notable observations that could influence peak flows within the study area include:

- Increases in spring nighttime low temperatures. Estimates indicate an increase of 3.0°C by the 2050s and an increase of 4.9°C by the 2080s based on temperatures recorded between 1971 and 2000);
- 27% decrease in frost days (days where the minimum temperature is less than 0°C) by the 2050s. At the valley bottom a decrease of 49% is expected. 46% decrease in frost days by the 2080s. At the valley bottom a decrease of 71% is expected;
- 30 fewer ice days (days where the maximum temperature is less than 0°C), down from 75, for the entire regional district with 14 fewer ice days at the valley bottom by the 2050s, down from 28. 46 fewer ice days for the entire regional district and 20 fewer ice days by the 2080s;
- Increases in the amount of precipitation in the fall, winter and spring with the amount of summer precipitation decreasing. Average increase in precipitation by the 2050s for the regional district is 10% in the spring, 9% in the fall, and 5% in the winter. Average increase in precipitation by the 2080s is 15% in the spring, 17% in the fall, and 12% during the winter; and
- 1 in 20-year wettest day precipitation event within the catchment is expected to increase by 14% by the 2050s and by 32% by the 2080s.

Overall impacts that primarily affect flooding in the Similkameen are expected to include earlier onset of spring peak flows due to average increased temperatures, a possible reduction in the average snowpack and increases in precipitation. These important climate parameters were analysed as part of the hydrological model detailed in the following sections. Trend analyses were completed on historical hydrometric data with the resulting graphs provided in Figure 2.7 and Figure 2.8. Figure 2.7 shows the trends in peak instantaneous values during the spring while Figure 2.8 shows the trends in maximum daily values during the fall. It is noted that maximum daily flow values were used in the fall trend analysis due to the peak instantaneous values not being as readily available in comparison to the spring events. The trend analyses may not fully reflect actual conditions as they can be skewed by wet or dry periods. Mann-Kendall Tests were run on each of the time-series to determine if any identifiable trend was present. Based on the results of the tests none of the time series contained an increasing trend. The potential effects of climate change were evaluated further through the development of a hydrologic model which is discussed in the following sections.

2.7 Hydrologic Model

A hydrological model was created for the Similkameen watershed with U.S. Army Corps if Engineers Hydrologic Engineering Center Hydrologic Modeling System (HEC-HMS) v4.6.1 modelling software. The model was constructed to represent the hydrologic processes associated with flooding events. The following sections discuss the model creation, calibration, inputs, and results of analysis completed using the hydrologic model. Note that due to coarse nature of climatic data, the resulting hydrographs only provide approximate results. To get more accurate results, the model would require a larger number of climatic stations with sufficient data to represent the whole watershed.

2.7.1 Supporting Information and Input Data

The hydrologic model was developed such that modelled basins correspond to gauged locations within the watershed. This was done to allow for comparison of recorded data and modelled results. The model was calibrated based on the 2018 flood event, which is further detailed in Section 2.7.2.

The hydrologic model principally considers the spring freshet event, with the period between March 31st and June 30th being modelled. This period is sufficiently long to capture historical recorded peaks at the “Similkameen River near Nighthawk” station which has recorded peaks as early as April 23rd in 2016 and as late as June 23rd in 1967. The hydrologic model focused on spring events because the Similkameen River annual maximum flows are dominated by spring events at the gauge location.

Inputs to the model were based on publicly available information including rainfall, snow course and temperature data. Precipitation and temperature data were obtained online through the Meteorological Service of Canada (MSC) website for key stations within the watershed or in the immediate surrounding area. Snow course data was obtained online through the BC Ministry of Environment and BC Ministry of Environment and Climate Change Strategy.

Snow Course Input

Snow course data was input into the model using Snow Water Equivalent (SWE) corresponding to the start of the modelled period, which is March 31st. To input the SWE into the model it was required that a SWE value corresponding to the average elevation of the watershed was obtained. To accomplish this, an SWE-elevation relationship was created using observations from BC’s snow pillow stations within the surrounding area. To determine the relationship between SWE and elevation for the snow pillow stations mentioned in Section 2.3, a plot of observations versus elevation was completed and an equation established. The equation was then used to determine the approximate magnitude of SWE in each of the catchments. As there are a limited number of snow pillow stations within the catchment only a single relationship was made for the entire watershed. As such, inputs

are only considered to be estimates, as local variability due to factors other than elevation could not be considered. The ability for the model to represent accurate snowpack is heavily affected by the distribution and accuracy of snow pillow stations and therefore the sparse distribution of snow pillow stations in relation to the size of the watershed is a limitation of the model.

Rainfall Input

Rainfall inputs were based on gauge data available through the Meteorological Service of Canada (MSC). Rainfall data was taken from the stations Princeton A, Hope Slide, and Jellicoe. Information on these stations is provided in Section 2.3. These stations were selected as they had complete rainfall records for the time period of interest. As with the snow pillow stations, a rainfall to elevation relationship was established to represent changing magnitudes of rainfall with elevation. This was done by utilizing estimates of extreme rainfall events supplied with rainfall Intensity-Duration-Frequency (IDF) curves for available MSC stations. Elevation adjusted rainfall was then applied to each catchment based on the proximity of the catchment to the station as well as the hydrologic zone the catchment is located in. The ability for the model to represent accurate precipitation distribution is heavily affected by the distribution and accuracy of precipitation stations and therefore the coarse distribution of precipitation stations in relation to the size of the watershed is another limitation of the model.

Temperature Input

Temperature inputs were based on gauge data at Princeton A. Temperature observations were limited to Princeton A to maintain model simplicity and because of its central location within the catchment. Changes in temperature with elevation were represented through a lapse rate. While an initial lapse rate of -6.2°C/1000 m was determined by comparing temperature readings at different stations this number was changed in several catchments as part of model calibration. The ability for the model to represent accurate temperature distribution is heavily affected by the distribution and accuracy of temperature stations and therefore the coarse distribution of temperatures stations in relation to the size of the watershed represents a further limitation of the model.

2.7.2 Model Calibration

Calibration of the model was carried out using hydrometric data recorded at the WSC hydrometric stations located within the watershed with a focus on calibrating to match flows recorded at the hydrometric gauge station Similkameen River at Nighthawk. The 2018 spring flood event formed the basis of the calibration. The stream gauge hydrographs are based on the daily recorded values, which represent the average flow during that day. As the model is not able to fully account for localized conditions throughout the model it was decided that a modelled peak value would not be representative of actual conditions. A peaking factor would need to be applied to the maximum recorded flow to accurately represent the maximum instantaneous flow.

The calibration of the model resulted in a maximum modelled flow of 835 m^3/s at the hydrometric stream gauge station Similkameen River Near Nighthawk. This is approximately 6% less than the maximum daily flow of 883 m^3/s recorded by the Nighthawk station in 2018. A comparison between the modelled hydrograph and the recorded hydrograph is provided in Figure 2.9.

Due to limitations in data availability it is difficult to fully capture or reconcile all the differences between the modelled results and what was recorded. Limitations in data include limited coverage or observations of local climate conditions within several areas of the watershed. These limitations mean that highly localized precipitation events may not have been adequately captured. It is acknowledged that the model is not expected to be a perfect representation of the processes within the watershed and that parameters included within the model may not scale well to other events, however the calibration is considered to be adequate for the present purpose.

2.7.3 Modelled Climate Change Scenarios

To evaluate how changes in climate might affect peak flows, projected changes in key climate parameters were analyzed. Climate projections specified in the report Climate Projections for the Okanagan Region (RDNO *et al.* 2020) were used in conjunction with projections available online through the Pacific Climate Impacts Consortium (PCIC) to analyze the effects on flow. The projections provided from these sources included projections for the 2050s and 2080s. The projections by RDNO *et al.*, 2020 used a baseline of 1971 to 2000 while the PCIC projections used a baseline of 1961 to 1990. Key parameters that were subject to change included rainfall, snow water equivalent, and temperature. While climate change is likely to affect other parameters such as land use and vegetation, these changes have not been considered in this analysis. Table 2.9 provides a list of scenarios and summarizes the results. All changes allowed for the fact that some increases above the baseline have already taken place and as such increases were prorated to take into consideration that the hydrograph modelled occurred in 2018. The hydrographs that were produced by the model at the Similkameen River at Nighthawk gauge are shown in Figure 2.10.

Table 2.9 Summary of Modelled Scenarios with Results

#	Scenario	Altered Parameters	Peak Flow (m^3/s)[1]	Timing of Peak
0	2018 Modelled Baseline	N/A	835	May 10
1	2055 – Decreased SWE	SWE decreased by 28% from 1961 – 1990 baseline based on PCIC projection of a 28% median decrease in precipitation as snow. Decreased reflected in the initial SWE in the model.	774	May 10
2	2055 – Increased Rainfall	10% increase in rainfall from the 1971 – 2000 baseline for the whole RDOS as identified in the 2020 projections report. Increase evenly distributed amongst rainfall events.	850	May 10
3	2055 – Increased Temperature	An increase in temperature of 3.2°C. All temperatures inputs increased by the same margin.	720	April 18
4	2055 – Combined Effects	All changes detailed in scenarios 1 through 3 incorporated into a single scenario.	654	April 29
5	2085 – Decreased SWE	SWE decreased by 46% from 1961 – 1990 baseline based on PCIC projection of a 46% median decrease in precipitation as snow	659	May 9
6	2085 – Increased Rainfall	15% increase in rainfall from the 1971 – 2000 baseline for the whole RDOS as identified in the 2020 projections report. Increase evenly distributed amongst rainfall events.	863	May 10
7	2085 – Increased Temperature	An increase in temperature of 5.2°C. All temperatures inputs increased by the same margin.	768	April 18
8	2085 – Combined Effects	All changes detailed in scenarios 5 through 7 incorporated into a single scenario.	727	April 18

[1] Peak flow as measured at the Similkameen River at Nighthawk station

The most noticeable impact on the 2018 freshet hydrograph was that in scenarios that included increase in temperatures, the peak of the hydrograph occurred sooner. Further, decreases in snow water equivalent showed a decrease in peak flows by approximately 7% in Scenario 1 and 20% in Scenario 5. Increases in the average rainfall in Scenarios 2 and 6 led to increases in peak flow of approximately 2% and 3% respectively. Combining changes in all three parameters resulted in a reduction of peak flows when applied to the 2018 freshet hydrograph. Overall observations are consistent with the current body of knowledge concerning climate change. It

is noted that while the combined scenarios resulting in decreases in peaks, this is unlikely to be fully representative of all effects. Potential effects call for increased variability and although the long-term average effects suggest a reduction in peak flows, it is considered prudent to allow for a potential increase in peak flows. The EGBC (2018) Practice Guidelines state that a 10% increase factor should be applied to design flows where no clear trend is present, while a larger increase should be used if a clear trend is identified. The recommendation of increasing peak flows by 10% is followed.

3. Hydraulic Modelling

3.1 Model Description

To address the flood mapping requirements of the RDOS, VoK, and ToP, three separate hydraulic models were developed for the respective study area described in Section 1.4. The models were developed using The U.S. Army Corps of Engineers Hydrologic Engineering Center River Analysis System (HEC-RAS) version 5.0.7. The GeoHECRAS software by CivilGEO was used to assist in the model development and analysis.

The hydraulic models were developed using a two dimensional (2D) unsteady flow approach to simulate flow within river channels and floodplain areas.

3.2 Supporting Information and Input Data

3.2.1 Terrain and Channel Geometry

2D hydraulic models require input in the form of a digital elevation model (DEM) to define the terrain. DEMs include local variations in topography caused by the natural ground surface, roadways, dikes, buildings, and other solid impediments to flow. LiDAR was collected in 2019 for the Ministry of Forests, Lands, and Natural Resource Operations and Rural Development (MFLNRORD) for the Similkameen River valley in support of the National Disaster Mitigation Program (NDMP). LiDAR tiles covering the study areas were processed to create three local raster DEMs with 1 m cell resolution and non-vegetated vertical accuracy of 10 cm. The LiDAR DEMs are referenced to the Natural Resources Canada's (NRCan) release of the 2013 Canadian Geodetic Vertical Datum (CGVD2013) and NAD83 horizontal datum

One of the limitations of LiDAR is that it is unable to map underwater topography, also referred to as bathymetry. Ecora completed an extensive channel survey consisting of over 200 river cross-sections to address this issue and to ensure that the channel geometry was accurately represented in the hydraulic models. The LiDAR DEM and cross-section locations are shown for the Keremeos, Princeton, and Tulameen study areas in Figure 3.1 through Figure 3.3, respectively. The cross-section survey referenced the CGVD28 vertical datum and had to be corrected to be consistent with the LiDAR DEM which referenced CGVD2013. The comparison between ground survey points and equivalent LiDAR points is summarized in Table 3.1.

Table 3.1 Summary of the Elevation Difference between the LiDAR and Cross-Section Survey

Study Area	Average Difference (m)
Keremeos	0.38
Princeton	0.31
Tulameen	0.34

The cross-sections for each study area were corrected by adding the average difference presented in Table 3.1 to the surveyed elevations. The corrected channel geometry was interpolated between cross-sections to create a 3-

dimensional river channel model and embedded into the LiDAR DEM to create a cohesive terrain and river channel model. NRCan provides tools for correcting between CGVD2013 and CGVD28, however the direct comparison between the survey and LiDAR data allowed for the correction of some of the intrinsic errors associated with both the LiDAR and the survey data. Further discussion of NRCan's correction tools is provided in Section 3.3.

The terrain was discretized into a continuous computational mesh using the 2D adaptive mesh algorithm in GeoHECRAS. The mesh was refined using breaklines around channel banks, dikes, roadways, and other lateral flow impediments clearly defined by the DEM.

3.2.2 Model Extents and Boundary Conditions

The model extents were defined by polygons encompassing a larger area than the expected floodplains. Each model was assigned a set of boundary conditions to define flow behaviour at the upstream and downstream model extents. Upstream boundary conditions were defined by observed or synthetic flow hydrographs and the downstream boundary conditions were defined by the normal flow depth and the channel slope. The model boundary extents are summarized in Table 3.2.

Table 3.2 Model boundary description

Boundary Type	Model Study Area		
	Keremeos	Princeton	Tulameen
Upstream - Flow Hydrograph	▪ Similkameen at Riverside RV Park ▪ Ashnola River at Ashnola Campground	▪ Similkameen River west of Princeton ▪ Tulameen River west of Princeton	▪ Tulameen River west of Tulameen ▪ Otter Creek at Otter Lake ▪ Granite Creek near Coalmont
Downstream - Normal Depth	▪ Similkameen River south of Cawston	▪ Similkameen River east of Princeton	▪ Similkameen River south of Coalmont

3.2.3 Surface Roughness

Water flowing in open channels and over floodplains is governed by the channel and land surface geometry and the corresponding surface roughness. Land use and hydrology datasets were used to define spatially varied surface roughness coefficients, commonly referred to as "Manning's n" values. The National Hydrography Network geodatabase (Index No. 08nl000) was used to define the Similkameen and Tulameen River channels and other water bodies. All other land use types were defined by the Baseline Thematic Mapping Present Land Use Version 1 available for download on iMapBC.

Table 3.3 summarizes the different land use types and their corresponding Manning's n values. Initial values were based on reasonable documented values and the calibrated values were derived through the procedure discussed below in Section 3.3.

Table 3.3 Surface Roughness Coefficients

Land Class	Source	Initial Values			Final Values		
		Keremeos	Princeton	Tulameen	Keremeos	Princeton	Tulameen
Waterbodies	National Hydrography Network	0.032	0.032	0.032	0.05	0.04/0.05	0.04
Agriculture	Baseline Thematic Mapping Present Land Use Version 1	0.035	0.035	0.035	0.044	0.044	0.044
Alpine		0.04	-	-	0.05	-	-
Barren Surfaces		0.032	0.032		0.04	0.04/0.05	

Land Class	Source	Initial Values			Final Values		
		Keremeos	Princeton	Tulameen	Keremeos	Princeton	Tulameen
Fresh Water	(Downloaded from iMapBC)	0.032		0.032	0.04	-	0.04
Mining		-	0.035	-	-	0.044	-
Old Forest		0.08	0.08	0.1	0.1	0.1	0.125
Range Lands		0.035	0.035		0.044	0.044	
Recently Logged		0.04	0.04	0.08	0.05	0.05	0.125
Residential Agricultural Mixtures		0.04	-	-	0.05	-	-
Selectively Logged		0.04	0.04	0.08	0.05	0.05	0.1
Shrubs		0.06	-	-	0.06	-	-
Sub alpine Avalanche Chutes		0.04	-	-	0.05	-	-
Urban		0.06	0.06	0.06	0.075	0.075	0.075
Wetlands			0.06	0.06		0.075	0.075
Young Forest		0.06	0.06	0.08	0.075	0.075	0.075

3.2.4 Bridges

Bridges spanning the Similkameen River, Tulameen River, and other tributaries within the model extents were reviewed. Bridge piers within the Similkameen River and Tulameen Rivers were represented in the models by manually adjusting the DEM and refining the computational mesh. Bridge chords could not be represented in the model, which is a limitation of all 2D HEC-RAS models. Historical observations do not indicate high water levels exceeding any bridge chord elevations and therefore it was not considered a significant limitation that would impact model results.

The location of each of the bridges is shown on Figure 3.4. The bridges represented in the model are summarized in Table 3.4.

Table 3.4 Summary of bridges represented in 2D model mesh

Bridge Name	Model	Bridge Location	Number of Bridge Piers
Abandoned Railway Bridge - Tulameen	Princeton	Lat:49.463ºN Long: 120.505ºW	1
Abandoned CPR Trestle Bridge - Tulameen	Princeton	Lat: 49.447º Long: 120.532ºW	3
Princeton Silver Bridge	Princeton	Lat: 49.459°N; Long: 120.504°W	2
Ashnola #1 Bridge	Keremeos	Lat: 49.463°; Long: 120.505 W°	4
South Keremeos Bridge	Keremeos	Lat: 49.200°; Long: 119.843°W	3

3.2.5 Design Flood Hydrographs

The regional hydrologic analysis resulted in estimates of instantaneous peak flows at key locations for a range of return periods. Traditionally in BC, floodplain maps were based on design floods with return periods of 20 and 200 years. The 20-year flood has been used to apply Health Act requirements for septic systems while the 200-year flood has been used in the design of flood mitigation works and to establish flood construction levels. For this study, Ecora consulted the Professional Practice Guidelines for Legislated Flood Assessments in a Changing

Climate in BC (EGBC, 2018). The guidelines suggest that the 20 and 200-year design floods be applied for lower risk situations while the 500, 1000, or 2500-year design floods be applied in situations where there is moderate, high or very high loss potential, respectively. After evaluating the Phase 1 Risk Assessment results, Ecora determined that 20-year (Q_{20}), 200-year (Q_{200}) and 500-year (Q_{500}) design floods should be evaluated.

Through the hydrologic analysis, it was discovered that the largest flooding events on the Similkameen River have typically occurred in the spring months, while on the Tulameen River, the largest events have occurred in the fall. Accordingly, the frequency analyses were completed separately for spring and fall/winter events with the more conservative of the two results being used to define the flood maps. The peak flows were converted to a set of synthetic flood hydrographs to use as inputs to the hydraulic models. During model calibration, the synthetic hydrographs were only used when and where observed streamflow data was unavailable.

The timing of the design flood hydrograph was derived from the 2018 daily average streamflow measured at Water Survey of Canada station 08NL022 Similkameen River near Nighthawk. The daily average hydrograph was first normalized and then scaled up based on the instantaneous peak flows estimated for the model input boundaries. Peak flow values were derived from the regional hydrologic frequency analysis results previously presented in Section 2.4. The normalized hydrograph is shown in Figure 3.5. The scaling approach is considered conservative because it assumes that the instantaneous peak flow lasts for an entire day, which in most cases is an overestimation of the peak flow duration. The conservative approach did not adversely impact the flood maps since they are focused on the magnitude of the peak rather than the exact timing.

Each model has inflows from multiple rivers (See Table 3.2) which adds complexity related to combined probability events where rivers meet. In some years, the rivers may peak at virtually the same time, while in other years, they may peak on different days, or even months. While it is possible that the equivalent return period events (e.g., Q_{200}) could occur at the same time, it results in a combined event with larger return period (i.e., lower annual exceedance probability). When a small river meets a large river, the combined effect is generally negligible; however, when two large rivers meet, the effect can be significant. Using the spring frequency-magnitude relationship for Similkameen and Tulameen Rivers in Princeton as an example, the significance of combined events can be demonstrated. Upstream of their confluence, the Q_{200} for the spring freshet flows in the Similkameen River and Tulameen Rivers is 580 m^3/s, and 449 m^3/s, respectively which, when combined, equals 1029 m^3/s. Based on the frequency-magnitude relationship of the Similkameen River downstream of the confluence, this combined flow corresponds to a spring freshet event with a > 700-year return period. The issue of combined probability had to be addressed to avoid overestimating flood magnitudes and the approach used for each of the models is described below.

3.2.5.1 Keremeos Hydraulic Model Design Flow

The Keremeos hydraulic model simulates flow in the Similkameen River, and the Ashnola River, with the confluence located upstream of the Village of Keremeos. The Similkameen River also receives flow from Keremeos Creek in the Village of Cawston, however flow in this creek is relatively small was not explicitly represented in the model. The issue of combined events occurs at the confluence of the Similkameen River and Ashnola River. As described above, while it is possible that the equivalent return period flow events (e.g., Q_{200}) could occur in the Similkameen River and Ashnola River at the same time, this occurrence would result in a flow event downstream of the confluence with a return period greater than 200 years. To address this, the flow in the Similkameen River was evaluated through the regional frequency analysis relationship to catchment area upstream of the confluence with the Ashnola River and at the downstream model boundary, south of the confluence with Keremeos Creek. The difference in flow was assigned to the Ashnola River boundary. In this case the Ashnola River was not evaluated for flooding and its assigned flow was only used to achieve the increase in flow required to maintain the specified return period in the Similkameen River downstream of the confluence. The design flows are summarized in Table 3.5.

Table 3.5 Summary of spring flood flows in the Keremeos hydraulic model

Reach Description	Catchment Area (km²)	Q_{20} (m³/s)	Q_{200} (m³/s)	Q_{500} (m³/s)	Flooding Evaluated? (Y/N)
Similkameen River upstream boundary to the confluence with the Ashnola River	6466	756.76 (832.43)[2]	1068.99 (1175.89)	1195.43 (1314.97)	Y
Ashnola River upstream boundary to the confluence with the Similkameen River[1]	1050	64.00 (70.40)	92.21 (101.43)	104.08 (114.49)	N
Similkameen-Ashnola confluence to the Similkameen River downstream boundary	7992	820.76 (902.83)	1161.20 (1277.32)	1299.51 (1429.46)	Y

[1] The Ashnola River flow upstream of the confluence with the Similkameen River **does not** correspond to the return period defined in this table. Ashnola River calculated as the difference between the Similkameen River flow at the downstream model boundary and upstream of the confluence.
[2] All bracketed flows represent a 10% increase due to potential future climate change.

3.2.5.2 Princeton Hydraulic Model Design Flow

The Princeton hydraulic model simulates flow in the Similkameen River and the Tulameen River with the confluence located in the ToP. As described above, the issue of combined events occurs at the confluence of the Similkameen and Tulameen Rivers. To address this, the flood events for the Similkameen and Tulameen Rivers were simulated separately, and their results were combined through GIS processing of model output. As noted above, the largest peak streamflow events upstream of the confluence tend to occur in spring for the Similkameen River (e.g., 1972, 2018) and the in fall/winter for the Tulameen River (e.g., 1995, 2006). As such, the design flood applied to the upstream model boundary for the Similkameen River was based on the frequency analysis of spring peak flow events while the Tulameen River flow was based on frequency analysis for fall/winter peak flow events. The design flood was evaluated at the downstream model boundary through the regional analysis relationship to catchment area for both spring and fall flow events.

The design flows for the spring and fall events are summarized in Table 3.6 and [1] The Tulameen River upstream of the confluence **does not** correspond to the return period defined in this table. The Tulameen River upstream of the confluence was calculated as the difference between the Similkameen River flow at the downstream model boundary and the Similkameen River upstream of the confluence.

[2] All bracketed flows represent a 10% increase due to potential future climate change.

Table 3.7, respectively. Note that during the spring design event, only the Similkameen River upstream of the confluence was evaluated for flooding since the fall/winter event produced larger flows in the Tulameen River and Similkameen River downstream of the confluence. Conversely, during the fall event, only flow in the Tulameen River upstream of the confluence, and the Similkameen River downstream of the confluence were evaluated for flooding. In the fall/winter event, flow from the Similkameen River was only used to achieve the increase in flow required to maintain the specified return period downstream of the confluence.

Table 3.6 Summary of Spring Design Flood Flows in the Princeton Hydraulic Model

Reach Description	Catchment Area (km²)	Q_{20} (m³/s)	Q_{200} (m³/s)	Q_{500} (m³/s)	Flooding Evaluated? (Y/N)
Similkameen River upstream boundary to the confluence with the Tulameen River	1810	422.00 (464.20)[2]	580.00 (638.00)	639.00 (702.90)	Y
Tulameen River upstream boundary to the confluence with the Similkameen River[1]	1780	206.66 (227.33)	304.42 (334.86)	348.10 (382.91)	N
Similkameen-Tulameen confluence to the Similkameen River downstream boundary	4231	628.66 (691.53)	884.42 (972.86)	1041.01 (1085.81)	N

[1] The Tulameen River upstream of the confluence **does not** correspond to the return period defined in this table. The Tulameen River upstream of the confluence was calculated as the difference between the Similkameen River flow at the downstream model boundary and the Similkameen River upstream of the confluence.
[2] All bracketed flows represent a 10% increase due to potential future climate change.

Table 3.7 Summary of Fall/Winter Design Flood Flows in the Princeton Hydraulic Model

Reach Description	Catchment Area (km²)	Q_{20} (m³/s)	Q_{200} (m³/s)	Q_{500} (m³/s)	Flooding Evaluated? (Y/N)
Similkameen River upstream boundary to the confluence with the Tulameen River[1]	1810	192.00 (211.20)[2]	144.00 (158.40)	186.00 (204.60)	N
Tulameen River upstream boundary to the confluence with the Similkameen River	1780	460.00 (506.00)	859.00 (944.90)	1010.00 (1111.00)	Y
Similkameen-Tulameen confluence to the Similkameen River downstream boundary	4231	652.00 (717.20)	1003.00 (1103.30)	1196.00 (1315.60)	Y

[1] The Similkameen River upstream of the confluence **does not** correspond to the return period defined in this table. The Similkameen River upstream of the confluence was calculated as the difference between the Similkameen River flow at the downstream model boundary and the Tulameen River upstream of the confluence.
[2] All bracketed flows represent a 10% increase due to potential future climate change.

3.2.5.3 Tulameen Hydraulic Model Design Flow

The Tulameen hydraulic model simulates flows in the Tulameen River, Otter Creek and Granite Creek. The Tulameen River – Otter Creek confluence occurs in the townsite of Tulameen and the Tulameen River – Granite Creek confluence occurs near the downstream model boundary, south of Coalmont. Limited streamflow records are available for the Tulameen River in the immediate vicinity of Tulameen, however it is assumed that the river exhibits similar characteristics observed downstream in the ToP where flooding occurring in both the spring and fall/winter with the largest events occurring in the fall/winter. Conversely, streamflow gauge data from Otter Creek indicates that Otter Lake flooding is worse in the spring.

Tulameen River flooding and Otter Creek/Otter Lake flooding were evaluated separately whereby the design flood for Tulameen River flooding was based on the frequency analysis of fall/winter peak flow events while the design flood for the Otter Creek/Otter Lake flooding was based on frequency analysis for spring peak flow events. The results were combined through GIS processing of model output. The design flows for the spring and fall design events are summarized in Table 3.8 and Table 3.9, respectively.

Note that during the spring design event, only Otter Creek/Otter Lake was evaluated for flooding since the fall/winter event produced larger flows in the Tulameen River. By simulating them separately, the issue of combined events occurring at the Tulameen River-Otter Creek confluence was avoided. The issue of combined events occurring at the Tulameen River-Granite Creek confluence was addressed by evaluating the regional frequency analysis relationship to catchment area upstream and downstream of the confluence with Granite Creek. The difference in flow was assigned to the Grantite Creek boundary. Granite Creek was not evaluated for flooding but it's inflows were considered to contribute to flooding on the Tulameen River.

Table 3.8 Summary of Spring Design Flood Flows in the Tulameen Hydraulic Model

Reach Description	Q_{20} (m³/s)	Q_{200} (m³/s)	Q_{500} (m³/s)	Flooding Evaluated? (Y/N)
Tulameen River upstream boundary to the confluence with Otter Creek	139.97 (153.97)[2]	198.26 (218.09)	220.48 (242.53)	N
Otter Creek upstream boundary to the confluence with the Tulameen River	63.03 (69.33)	92.05 (101.26)	102.93 (113.22)	Y

Tulameen-Otter confluence to the confluence with Granite Creek	202.82 (223.10)	290.31 (319.34)	323.41 (355.75)	N
Granite Creek upstream boundary to the confluence with the Tulameen River[1]	85.23 (93.75)	103.37 (113.71)	109.78 (120.76)	N
Tulameen-Granite confluence to the downstream model boundary	288.05 (316.86)	393.68 (433.05)	433.19 (476.51)	N

[1] Granite Creek upstream of the confluence with the Tulameen River **does not** correspond to the return period defined in this table. Granite Creek was calculated as the difference between the Tulameen River flow downstream of the confluence with Otter Creek and the Tulameen River flow at the downstream model boundary.
[2] All bracketed flows represent a 10% increase due to potential future climate change.

Table 3.9 Summary of Fall/Winter Design Flood Flows in the Tulameen Hydraulic Model

Reach Description	Q_{20} (m^3/s)	Q_{200} (m^3/s)	Q_{500} (m^3/s)	Flooding Evaluated? (Y/N)
Tulameen River upstream boundary to the confluence with Otter Creek	290.00 (319.00)[2]	522.00 (574.20)	607.00 (667.70)	Y
Otter Creek upstream boundary to the confluence with the Tulameen River	15.10 (16.61)	34.00 (37.40)	42.70 (46.97)	N
Tulameen-Otter confluence to the confluence with Granite Creek	305.10 (335.61)	556.00 (611.60)	649.70 (714.67)	Y
Granite Creek upstream boundary to the confluence with the Tulameen River [1]	131.90 (145.09)	258.00 (283.8)	306.30 (336.93)	N
Tulameen-Granite confluence to the downstream model boundary	437.00 (480.70)	814.00 (895.4)	956.00 (1051.60)	Y

[1] Granite Creek upstream of the confluence with the Tulameen River **does not** correspond to the return period defined in this table. Granite Creek was calculated as the difference between the Tulameen River flow downstream of the confluence with Otter Creek and the Tulameen River flow at the downstream model boundary.
[2] All bracketed flows represent a 10% increase due to potential future climate change.

3.3 Model Calibration

3.3.1 Calibration Approach

The Manning's n coefficient was used as the primary calibration variable. The Manning's n values corresponding to different land use classifications (Table 3.3) were adjusted to assess the model sensitivity to changes in surface roughness. The simulated water levels were compared to various datasets including stage-flow relationships from WSC streamflow gauges, observed high water marks, and established design flood elevations.

The calibration procedure followed Professional Practice Guidelines for Flood Mapping in BC (APEGBC, 2017) whereby the models were calibrated and validated against different datasets. In this case, the models were calibrated against the best available data which included stage-flow relationships from nearby stream gauge stations and/or documented flood elevations. WSC streamflow gauges and historical reports and drawings were reviewed to establish calibration targets. Bridge drawings provided by MoTI were used to identify historical flood elevations and dike reports (e.g., Amec, 2002) provided information on theoretical design water levels (e.g., Q_{200}). The models were then validated against the 2018 spring freshet or another suitable dataset.

It is noted that most historical observations predate the CGVD2013 vertical datum used by the LiDAR DEM to define the geometry of the hydraulic models. Unless otherwise stated, it was assumed that historical elevations reference the previous national datum (CGVD28). As such, historical elevation observations would appear higher when referenced to the newer datum. Ecora utilized the NRCan GPS-H webtool to estimate the required

correction factor for comparing simulated water levels to historical observations. Correction factors are listed in their respective section below.

3.3.2 Calibration Results

Manning's n values were first assigned to different land use types based on appropriate documented values for different channel and floodplain characteristics. The following calibration runs were conducted to test the sensitivity of the model to changes in surface roughness and to best match the available observations:

4. Initial Manning's n values
5. Initial Manning's n values were increased by 10%
6. Initial Manning's n values were reduced by 10%
7. Initial Manning's n values were increased by 25%
8. The final Manning's n values were selected based on the results from the previous runs.

The calibration procedure was stopped once a reasonable match to peak flow observations was achieved. Some numerical model instability was noted around the bridge piers due to the small model cell size relative to the chosen time step. Ideally, a sufficiently small time step would be chosen to satisfy the smallest model cells, however this would result in impractical model run times. The numerical instabilities only occurred locally around the bridge piers and did not propagate to adversely impact overall model performance. Optimization with regards to Manning's n and time step size could be completed in the future to further refine the model performance. The calibration results for each model are summarized below.

3.3.2.1 Keremeos Hydraulic Model

No long-term stage-flow monitoring data is available for the Similkameen River within the Keremeos model extents, however WSC streamflow monitoring stations at the Similkameen River near Hedley (08NL038) and the Similkameen River near Nighthawk (08NL022) indicate that the 1972 flood was only between 3% and 6% larger than the estimated Q_{200} flood. For that reason, it was assumed that the Q_{200} was a reasonable approximation of the 1972 flood conditions. Calibration targets within the Keremeos hydraulic model consisted of the 1972 high water mark (HWM) elevation recorded at the South Keremeos Bridge crossing and the design freeboard of Keremeos Dikes No. 1, 3, and 7 relative to the 1972 flood level. Table 3.10 provides a summary of the calibration targets for the Keremeos model.

Table 3.10 Summary of High Water Mark and Design Water Level Calibration Targets in the Keremeos Model.

Structure	Flood Event	Calibration Water Level Targets
South Keremeos Bridge	1972/Q_{200}	417.19 m[1] (HWM)
Dike No. 1		0.9 m below dike crest
Dike No. 3		0.5 to 1.5 m above dike crest
Dike No. 7		0.9 m below dike crest

[1] Documented water level of 416.839 corrected by 0.347 m to account for difference in CGVD28 and CGVD2013 vertical datum

The calibration results indicated that increasing the Manning's n of the Similkameen River channel to 0.05 and increasing all other values by 25% relative to the initial values (See Table 3.3) provided the best match to the calibration targets. Figure 3.6 through Figure 3.8 present the calibrated stream profiles compared to the calibration targets (Table 3.10).

Figure 3.6 shows the comparison of simulated water levels to the crest of Dike No. 1, located upstream of Keremeos on the left bank of the Similkameen River, and the HWM observed at the South Keremeos bridge over

the Similkameen River. The dike crest was generally designed to have 0.9 m of freeboard over the Q_{200} flood level, however several low sections, said to be below the Q_{200} flood level, have been reported near the South Keremeos Bridge. The calibrated Q_{200} water level closely matches the 0.9 m freeboard level at the upstream and downstream end of the dike, while slightly exceeding the dike crest around the South Keremeos Bridge. The simulated HWM at the South Keremeos Bridge was 417.17 m, which is 0.02 m below the observed HWM.

Figure 3.7 shows the comparison of simulated water levels to the crest of Dike No. 3, located upstream of the Ashnola No. 1 bridge (also referred to as the "Red Bridge") on the right bank of the Similkameen River. The dike crest is said to be below the Q_{200} flood level by between 0.5 m and 1.5 m. The calibrated Manning's n values resulted in water levels that exceed only a small portion of the dike crest by up to 0.8 m. It may be concluded that the model underpredicts water levels at this location, however it is not clear if the water levels were expected to exceed the dike crest over its entire length or only a small portion as observed in the model simulation.

Figure 3.8 shows the comparison of simulated water levels to the crest of Dike No. 7, extending between Keremeos and Cawston on the left bank of the Similkameen River. The dike crest was generally designed to have 0.9 m of freeboard over the Q_{200} flood level. The calibrated Q_{200} water levels consistently follow the assumed Q_{200} flood level profile for a large portion of the dike with only minor fluctuations on the high and low side.

Overall, the model does a reasonable job of matching available calibration targets and is deemed to be calibrated to an acceptable level for predicting flooding extents, elevation, and velocity.

3.3.2.2 Princeton Hydraulic Model

Calibration targets within the Princeton hydraulic model consisted of WSC streamflow monitoring stations and the documented Q_{200} water level from Crowsnest Highway No. 3 Princeton Bridge record drawings. Two gauges were identified that record both streamflow and stage within the Princeton hydraulic model:

- Similkameen River at Princeton (08NL007)
- Tulameen River at Princeton (08NL024)

The Similkameen River gauge is located just north of the Crowsnest Highway No. 3 Princeton Bridge, while the Tulameen River gauge is located along Riverside Drive near Nechiefman Street. Only the Tulameen River gauge has been surveyed relative to known datum (636.046 m, surveyed in 2019 relative to CGVD2013). The Similkameen River gauge could therefore only be used qualitatively. The stream gauges are also located within the interpolated portion of the modelled channel and therefore the modelled river cross sections at the gauge locations may differ slightly from field conditions and impact the ability of the model to match observed water levels.

The 2016 spring freshet was chosen as the calibration period because it represented an average year with respect to precipitation, snowpack, and magnitude of peak flow. Daily average streamflow measurements at the two stations were applied to their respective upstream model boundary. The freshet began in early April and lasted until approximately the end of June.

As mentioned above, the Similkameen River gauge has not been surveyed to a known datum and while no conclusions can be made about the absolute simulated stream stage, the model provides a reasonable match to timing and magnitude of the fluctuations. Results from the Tulameen River gauge (Figure 3.9) indicate that the model tends the underpredict the stage at low flows by approximately 20-35 cm for a range in Manning's n values. The deviation between simulated and observed water levels at low flows may be explained by the increased complexity of the streamflow-streambed interaction when flow depths are shallow. The resolution and scale of the hydraulic model has not been optimized to match complex shallow flow behaviour as this was not deemed to be a critical calibration objective. At higher flows the simulated stage exhibits a better match with observed values, which is more consistent with the flood-related objectives of this study. Increasing the Manning's n value by 10%

produced a good match to the 2016 maximum daily stage, however increasing Manning's n by 25% produced the best overall match.

The Q_{200} peak daily flow event was also simulated for the Similkameen River for comparison with the documented Q_{200} elevation from the Crowsnest Highway No. 3 Bridge record drawings. The flow corresponding to the Q_{200} elevation presented on the record drawings is unknown which may cause the elevation to differ slightly from the simulated value.

The Q_{200} elevation is listed as 636.2 m on the bridge record drawings and was adjusted by 0.27 m to 636.47 m to account for the different datum used in the hydraulic model. Table 3.11 summarizes the results. Simulated water levels are lower than the Q_{200} elevation by between 0.68 m and 0.19 m with a 25% increase in Manning's n giving the best result. To further improve the calibration, the Manning's n in the Similkameen River channel upstream of the confluence was increased to 0.05, which resulted in a residual of +0.03 m.

Overall, the model does a reasonable job of matching available calibration targets and is deemed to be calibrated to an acceptable level for predicting flooding extents, elevation, and velocity.

Table 3.11 Summary of Results for the Q_{200} Peak Flow Elevation at the Crowsnest Highway No.3 Bridge

Simulated Output	Manning's n Adjustment				
	Initial Values	+10%	-10%	+25%	+25%, Similkameen Channel = 0.05
Elevation (m)	635.98	636.12	635.82	636.31	636.50
Residual (m)	-0.52	-0.38	-0.68	-0.19	+0.03

3.3.2.3 Tulameen Hydraulic Model

Limited observations were available for the Tulameen study area. Given the consistency of the calibration results for the Keremeos and Princeton models, it was assumed a 25% increase in Manning's n would also be a suitable adjustment for the Tulameen model.

Some historical observations were found for Otter Creek, a 1.1 km long tributary that connects Otter Lake to the Tulameen River. Historical streamflow and Otter Lake stage measurements were analyzed for the Otter Creek at Tulameen gauge station (Station No. 08NL023) and Otter Lake near Tulameen gauge station (Station No. 08NL059), respectively. It was assumed that given their direct connection, the frequency analysis completed for Otter Creek could be used to predict the corresponding elevation in Otter Lake by correlating daily flow and stage observations. The elevation for the Otter Lake gauge station was surveyed as 776.64 m and adjusted by 0.27 m to 776.91 m to account for the difference in datum from CGVD28 to CGVD2013.

The period of record for the two gauges overlapped during the 1970s and 1980s and Figure 3.10 shows the relationship between daily average lake stage and daily average streamflow at the two stations. Overall, the stage-flow relationship spanned across low-moderate return period flow. At the low end of the stage-flow relationship the graph appears to be hysteretic (i.e. a stage can correspond to two different flows depending on whether it is rising or falling), making it difficult to determine a suitable relationship for the whole dataset. Therefore, flows less than 10 m^3/s were ignored in the comparison. This was deemed to be a reasonable assumption since matching the behaviour at higher flows is more important for flood mapping purposes. The simulated stage-flow relationship between Otter Lake and Otter Creek was compared for the same range in flows as the observed dataset. The simulated lake stage is at the upper end of the observed values for a given discharge through Otter Creek indicating that the model reasonable albeit slightly conservative.

The limited available observations for the Tulameen model show that the model may be slightly overpredicting the levels in Otter Lake, and subsequently Otter Creek. While there were no known observations for the Tulameen River the reasonable match in Otter Lake/Otter Creek combined with the strong calibration of the Tulameen River

at Princeton suggests that the model is calibrated to a reasonable level for predicting flooding extents, elevation, and velocity.

3.3.3 Model Validation

The calibrated models were evaluated against additional data to validate the effectiveness at simulating different events. The 2018 spring flood event that took place in the Similkameen River watershed was selected based on the availability of photographs and anecdotal observations. Information regarding HWMs and flood extents during the 2018 event consisted of drone and helicopter aerial imagery and statements from public works staff. Numerous sources of uncertainty are present in the observed data such as the timing of observations and photographs relative to the actual peak stream flow and the accuracy of observed HWMs. Furthermore, the lack of streamflow measurements for the Keremeos and Tulameen hydraulic models means that the actual peak flows cannot be known and therefore the assumed simulated flows may differ slightly from reality.

3.3.3.1 Keremeos Hydraulic Model

Streamflow in the Keremeos hydraulic model was estimated for the 2018 flood event since no streamflow measurements were available for the Similkameen River. Outside of the model area, WSC streamflow monitoring stations along the Similkameen River near Hedley (Station No. 08NL038) and near Nighthawk (Station No. 08NL022) indicate the river peaked on May 10, 2018 with return periods of 13 years and 36 years, respectively. High flows were also observed in the Ashnola River near Keremeos (Station No. 08NL004) with a 60-year flood peak occurring on May 17, 2018. Flow characteristics at the Hedley gauge are assumed to be the most representative for the upstream Keremeos model boundary due to their proximity to one another. To be conservative, a 15-year return period was used to calculate inflow to the Similkameen River upstream of the confluence with the Ashnola River. Inflows from the Ashnola River were based on the Ashnola River near Keremeos streamflow gauge (Station No. 08NL004). It was assumed that the peak flow of the Similkameen River occurred on May 10, 2018 and therefore the inflow to the Ashnola River was not scaled to peak flows since its peak occurred one week later. The resulting flow through the Keremeos area corresponded to a return period of approximately 22 years. The simulated flows are summarized in Table 3.12.

Table 3.12 Summary of Maximum Estimated 2018 Flood Flows in the Keremeos Hydraulic Model

Reach Description	Catchment Area (km²)	Simulated Peak Flow (m³/s)	Return Period (years)
Similkameen River upstream boundary to the confluence with the Ashnola River	6466	716	15
Ashnola River upstream boundary to the confluence with the Similkameen River	1050	118[1]	N/A
Similkameen-Ashnola confluence to the Similkameen River downstream boundary	7992	834	22

[1] The Ashnola River flow is based on the maximum daily average flow on May 10th, 2018 from the Ashnola River near Keremeos streamflow gauge station (08NL004)

Keremeos public works staff reported that floodwaters rose to within 0.6 m of the dike crest near 2nd Street in Keremeos. For comparison, simulated peak water levels rose to within approximately 1.1 m of the dike crest suggesting that the model is underpredicting water levels by 0.5 m at this location. However, comparing the simulated inundation extents with aerial photos obtained from a May 10th helicopter reconnaissance flight, the model appears to slightly overpredict the level of floodplain inundation. This suggests some potential inconsistency in the observations and may reflect a difference in the observation times. Overall, the model results fall between the available observations and validate the utility of the model for predicting flooding extents, elevation, and velocity.

3.3.3.2 Princeton Hydraulic Model

Streamflow data relevant to the Princeton hydraulic model consisted of daily average stage elevations at the Tulameen River streamflow measurement station (Station No. 08NL024) and the observed HWM relative to the dike crest elevation on the Similkameen River near Bar Street. The model was first run using average daily flows to assess the match to the Tulameen River gauge measurements. The average daily flows were then scaled up to match peak flows and the model was run again to assess the HWM elevation observed along the Similkameen River. The simulated inflows are summarized in Table 3.13.

Table 3.13 Summary of Maximum 2018 Flood Flows in the Princeton Hydraulic Model

Reach Description	Catchment Area (km²)	Simulated Average Daily Flow (m³/s)	Simulated Peak Flow (m³/s)	Return Period[1] (years)
Similkameen River upstream boundary to the confluence with the Tulameen River	1810	246	302	3.6
Tulameen River upstream boundary to the confluence with the Similkameen River	1780	226	253	3.4
Similkameen-Tulameen confluence to the Similkameen River downstream boundary	4231	472	555	11

[1] Return period of peak flow.

Figure 3.11 shows the comparison between the simulated and observed daily average streamflow at the Tulameen River at Princeton (Station No. 08NL024) streamflow monitoring station. The simulated water levels match the observed water levels reasonably well with the match improving at higher flows where the model overpredicted the maximum water level by 11 cm. Princeton public works staff also reported that Similkameen River floodwaters rose to within 0.3 m of the dike crest between Bar Street and the Highway 3 Princeton Bridge. Simulated peak water levels at this location rose to within approximately 0.4 m of the dike crest. Overall, the model was able to match available observations to a reasonable degree of accuracy which validates the utility of the model for predicting flooding extents, elevation, and velocity.

3.3.3.3 Tulameen Hydraulic Model

Most of the flooding that occurred in the Tulameen townsite during the 2018 spring flood event was due to high water levels in Otter Lake, not the Tulameen River. As such, limited information was available to validate the performance of the Tulameen River portion of the model. The Tulameen model was developed using the same approach and input datasets as the Keremeos and Princeton models and it is assumed that a similar level of performance could be expected for the Tulameen model.

Based on a review of aerial imagery taken from a helicopter reconnaissance flight in May 2018 water levels in Otter Lake are estimated to have reached an elevation of at least 779.2 m. It is not known when the photo was taken relative to the occurrence of the highest water level. Furthermore, the return period of the 2018 event is not known since neither the Otter Creek nor the Otter Lake monitoring station is still active making a meaningful comparison to model results impossible. The 1981 flood maps indicate that the 20-year and 200-year flood elevations at the outlet of the lake are 779.87 m and 780.37 m (after subtracting 60 cm of freeboard and adding 27 cm to account for the difference in datum). Applying the Q_{20} and Q_{200} spring design event to the Tulameen hydraulic model, the Otter Lake level reaches 780.00 m and 780.4 m, 0.13 m and 0.03 m above the previously estimated Q_{20} and Q_{200} levels, respectively. This similarity with the previous analysis is not unexpected since limited new data have come available since the previous flood mapping study.

At a minimum, the model is demonstrated to produce similarly conservative results as the previous study. The consistency between the two studies provides validation for the Tulameen hydraulic model for predicting flooding extents, elevation, and velocity.

3.3.4 Model Limitations

Ecora developed the hydraulic models using generally accepted engineering best practices, however, all models have inherent limitations that should be understood and acknowledged before interpreting the results:

- HEC-RAS assumes a fixed streambed condition and does not consider the effects of scour, erosion or deposition that may occur during high flow events.
- The LiDAR DEM used to define the geometry of the hydraulic models was processed to remove buildings. Buildings were implicitly represented by increasing the roughness in urban areas. The DEM was also modified by Ecora to include interpolated channel geometry in areas obscured by the water surface. Some of the channel bed complexity will have been lost during the interpolation process which will have an impact on flow characteristics, channel capacity and flood elevations.
- Geospatial datasets used to define Manning's n roughness area boundaries may differ from the actual boundaries and are likely an oversimplification of the actual roughness distribution.
- The model mesh was developed using an automated irregular mesh generation algorithm built into the GeoHECRAS software. The mesh was refined further at key locations such as dikes, riverbanks, and bridge piers. Ecora attempted to balance the level of refinement with the model run times to maintain reasonable productivity throughout the project. Potentially improved local-scale model performance could be achieved through further refinement at the cost of increased computational effort.
- Calibration to peak flows was based on limited data points at specific locations. The calibrated values may not capture the natural spatial variability in stream channel and floodplain parameters.
- The models have been deemed suitable for the flood mapping and risk assessment tasks. Further refinement may be required to apply the models for localized hydraulic assessment or design. A Qualified Professional should be consulted for local-scale assessments.

4. Flood Mapping

4.1 Mapping Criteria and Standards

As described in Section 3.2.5, the Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in B.C. (EGBC, 2018) were consulted to select the design flood events for the mapping tasks. The 2D hydraulic model results were used to develop flood maps for the Q_{20}, Q_{200}, and Q_{500} flood events. The types of flood maps produced include:

- Flood inundation extents and depth
- Flood construction levels (Q_{20}, and Q_{200} only)
- Flood hazard based on flood depth and velocity (Q_{200}, and Q_{500} only)

Flood maps produced follow standards defined in Flood Mapping in BC – Professional Practice Guidelines (APEGBC, 2017) and were also guided by the Okanagan Flood Mapping Standards (NHC, 2017).

Topographic mapping standards were met by Ecora through the use of a LiDAR DEM with 1 m x 1 m cell resolution and 10 cm bare-earth vertical accuracy combined with a GPS river cross-section survey. NAD83 was used to define the horizontal control while vertical control was established with either the CGVD28 or CGVD2013 datum. Care was taken during the model development and calibration process to account for datasets referenced to different vertical datums.

4.2 Flood Mapping Scenarios

Multiple model scenarios were simulated for each of the design events, each with and without a 10% adjustment factor applied to the flow to quantify the potential future impacts of climate change. The scenarios include:

1. Scenario 1: Flow constrained by existing topography (i.e., unaltered DEM terrain).
2. Scenario 2: Flow not constrained by any dikes
3. Scenario 3: Dike breach (Keremeos and Princeton study areas only)

Scenario 1 represents flow occurring through the natural river channel constrained by the natural bank elevation and dikes where present. Flow can overtop the dikes and enter floodplain areas if the dike crest elevation is exceeded. Scenario 1 is considered the

Scenario 2 represents flow occurring through the natural river channel constrained by only natural bank elevations. The hydraulic models were modified such that the dikes do not act as impediments to flow allowing water to freely enter the floodplain at the elevation occurring behind the dikes. Scenario 2 is intended to represent an intermediate level of impact between keeping the dikes intact (Scenario 1) and simulating a dike breach or failure (Scenario 3) and allows for comparison to the previous flood mapping (Hay & Co., 1995) which applied a similar approach.

Scenario 3 represents flow occurring through the natural river channel constrained by the natural bank elevation and dikes, where present. Discrete dike breaches were applied in the Keremeos and Princeton models by manually adjusting the DEM. Breaches were assigned to be 100 m wide in accordance with the Flood Mapping Guidelines (APEGBC, 2017). Flow can enter floodplain areas either through the breach or by overtopping the dikes. Flood hazard mapping was completed for each of the scenarios as described further below. The dike breach for the Keremeos study area was located on the left bank of the Similkameen River at the upstream end of Dike No.1, which protects farmsteads west of the VoK and the Village itself. Dike No. 1 is an orphan dike and its integrity is essential for protecting the Village from flooding. The dike breach for the Princeton study area was applied to ToP Dike No.15 on the left bank of the Similkameen river east of Cormack Marsh Park along River Road. The location chosen falls between two low/non-existent points along the dike.

The flood maps are numbered according to Table 4.1. Index sheets showing the areas covered by each map are given in Figures 4.1, 4.16 and 4.31 for the Keremeos, Princeton and Tulameen areas, respectively. Further discussion on the mapping results is provided in the following sections.

Table 4.1 Summary of mapping scenarios and figure numbers

Study Area	Scenario No.	20-year Event	200-year Event	500-year Event	Map Sheet Numbers	Indicating
Keremeos	1	Fig. 4.2	Fig. 4.3	Fig. 4.4	1-8	Depth
	2	Fig. 4.5	Fig. 4.6	Fig. 4.7	1-8	Depth
	3		Fig. 4.8	-	4,5	Depth

Study Area	Scenario No.	20-year Event	200-year Event	500-year Event	Map Sheet Numbers	Indicating
	Composite[1]	Fig. 4.9	Fig. 4.10	-	1-8	Flood Construction Level
	1		Fig. 4.11	Fig. 4.12	1-8	Hazard
	2		Fig. 4.13	Fig. 4.14	1-8	Hazard
	3		Fig. 4.15	-	4,5	Hazard
Princeton	1	Fig. 4.17	Fig. 4.18	Fig. 4.19	1-4	Depth
	2	Fig. 4.20	Fig. 4.21	Fig. 4.22	1-4	Depth
	3		Fig. 4.23	-	2	Depth
	Composite[1]	Fig. 4.24	Fig. 4.25	-	1-4	Flood Construction Level
	1		Fig. 4.26	Fig. 4.27	1-4	Hazard
	2		Fig. 4.28	Fig. 4.29	1-4	Hazard
	3		Fig. 4.30	-	2	Hazard
Tulameen	1	Fig. 4.32	Fig. 4.33	Fig. 4.34	1-4	Depth
	2	Fig. 4.35	Fig. 4.36	Fig. 4.37	1-4	Depth
	Composite[1]	Fig. 4.38	Fig. 4.39	-	1-4	Flood Construction Level
	1		Fig. 4.40	Fig. 4.41	1-4	Hazard
	2		Fig. 4.42	Fig. 4.43	1-4	Hazard

[1] Composite indicates a combination of Scenarios 1, 2, and 3.

4.3 Flood Inundation and Depth Hazard

4.3.1 Overview

Flood inundation and depth maps were created using the simulated maximum water surface elevations produced by HEC-RAS for the Q_{20}, Q_{200} and Q_{500} events.

Flood depths for each of the above scenarios were determined by subtracting the DEM elevation from the simulated water surface elevation wherever floodwaters were present. Each flood map was prepared showing the depth and inundation extents for a given return period with the potential future effects of climate change. For comparison, the inundation extents without climate change were also presented on each map.

Flood depth colour coding standards were based on the Japanese methods described in Professional Practice Guidelines for Flood Mapping in BC (APEGBC, 2017) and Okanagan Flood Mapping Standards (NHC, 2017). Table 4.2 describes the different flood depth hazards.

Table 4.2 Flood depth hazard description

Flood Depth (m)	Colour Code	Hazard Description
< 0.1		Most buildings expected to be dry; underground infrastructure and basements may be flooded.
0.1 to 0.3		Water may enter buildings at grade, but most expected to be dry; walking in moving water or driving is potentially dangerous; underground infrastructure and basements may be flooded.
0.3 to 0.5		Water may enter ground floor of buildings; walking in moving or still water or driving is dangerous; underground infrastructure and basements may be flooded.
0.5 to 1.0		Water on ground floor; underground infrastructure and basements flooded; electricity failed; vehicles are commonly carried off roadways.
1.0 to 2.0		Ground floor flooded; residents evacuate.
> 2.0		First floor and often higher levels covered by water; residents and workers evacuate.

4.3.2 Keremeos Study Area

The full Keremeos map set is laid out for each scenario in 8 separate sheets illustrated in Figure 4.1. Flood inundation and depth maps for the Keremeos study area are presented in Figure 4.2 through Figure 4.8. Observations for each of the scenarios are summarized in Table 4.3.

Table 4.3 Summary of Flood Inundation and Depth in the Keremeos Study Area

Study Area	Reach Description	Observation
Scenario 1	Similkameen River upstream of the Village of Keremeos (Figures 4.2 – 4.4., Maps #1-4)	▪ Some inundation of Riverside RV park resort during Q_{20}. Inundation increases with Q_{200} and Q_{500}. ▪ Minor inundation of Sunkatchers RV park during Q_{20}. Extensive inundation occurs during Q_{200} and Q_{500}. ▪ Increasing inundation of un-diked floodplains under Q_{20}, Q_{200} and Q_{500}, respectively. ▪ Overtopping Orphan dike No.3 and 4 on right bank during Q_{20}, Q_{200} and Q_{500}.
	Similkameen River through the Village of Keremeos (Figures 4.2 – 4.4, Map #5)	▪ Orphan dike No.1 on left bank not overtopped during Q_{20}. Overtopping of orphan dike No. 1 near Bridge Street occurs during Q_{200} and Q_{500} causing widespread inundation of VoK ▪ Floodwaters trapped behind Dike VoK No. 2, results in high inundation depths in Village centre under Q_{200} and Q_{500}. ▪ Wastewater treatment plant inundated during Q_{200} and Q_{500}. ▪ Inadequate protection of orphan dike No. 6 on right bank allows for extensive inundation of floodplains under Q_{20}, Q_{200} and Q_{500} design flood.
	Similkameen River South of the Village of Keremeos (Figures 4.2 – 4.4, Maps #6-8)	▪ Orphan dike No. 7 limits inundation of floodplain on left bank between Keremeos and Cawston under Q_{20}. Some minor inundation under Q_{200} and Q_{500} in low-lying areas ▪ Flooding during Q_{20} due to backwater effect at Keremeos Creek outlet near Cawston. Severity of flooding increases with Q_{200} and Q_{500}.
Scenario 2	Similkameen River upstream of the confluence with the Tulameen River (Figure 4.5 – 4.7 Sheet 1-4)	▪ Where no dikes are present, Scenario 2 and Scenario 1 show similar results. ▪ Inundation extent increases in areas protected by Dikes No.3 and 4 on right bank compared to Scenario 1. ▪ Left bank floodplain area south east of Ashnola No. 1 Bridge experiences shallower inundation depths under Scenario 2 due to increased inundation of right bank floodplain without orphan dike No. 4.
	Tulameen River upstream of the confluence with the Similkameen River (Figure 4.5 – 4.7., Sheet 5)	▪ Inundation of agricultural area west of VoK under Q_{20} with minimal inundation in village centre. Inundation of Village centre increases with Q_{200} and Q_{500} but remains less than in Scenario 1 and Scenario 3. ▪ Inundation extents increase in areas protected by orphan dike No. 6 on right bank compared to Scenario 1. Increasing inundation extent and depth under Q_{200} and Q_{500}, respectively.
	Similkameen River downstream of the confluence with the Tulameen River (Figure 4.5 – 4.7, Sheet 6-8)	▪ Considerable inundation under Q_{20}, Q_{200} and Q_{500} between Dike No. 7 and Highway 3. ▪ Numerous small, isolated depressions become inundated under Q_{20}, Q_{200} and Q_{500}.
Scenario 3	Similkameen River through the Village of Keremeos (Figure 4.8, Sheet 4-5)	▪ Inundation extents are a combination of Scenario 1 and Scenario 2 with widespread flooding occurring in the VoK and agricultural areas to the west.

4.3.3 Princeton Study Area

The full Princeton map set is laid out for each scenario in 4 separate sheets illustrated in Figure 4.16. Flood inundation and depth maps for the Princeton study areas are presented in Figure 4.17 through Figure 4.23. Observations for each of the scenarios are summarized in Table 4.4.

Table 4.4 Summary of Flood Inundation and Depth in the Princeton Study Area.

Study Area	Reach Description	Observation
Scenario 1	Similkameen River upstream of the confluence with the Tulameen River (Figure 4.17 – 4.19, Sheet 1-2)	▪ Similkameen River floodplain inundation extensive in sparsely populated areas upstream of Princeton where dikes are not present. ▪ Q_{20} causes overtopping of Princeton Dike No. 15 on left bank of Similkameen River near Burton Ave. ▪ Widespread overtopping of ToP dike No. 15 during Q_{200} and Q_{500}. Inundation on left bank covers large majority of residential floodplain area south of Highway 3 and large portion of downtown core north of Highway 3.
	Tulameen River upstream of the confluence with the Similkameen River (Figure 4.17 – 4.19, Sheet 1-2)	▪ Tulameen River floodplain inundation extensive in sparsely populated areas upstream of Princeton where dikes are not present. ▪ Q_{20} causes overtopping of ToP dike No. 17 on the left bank of the Tulameen River near Poplar St., and ToP dike No. 16 on the right bank of the Tulameen River near Bridge St. ▪ Widespread overtopping of ToP dike No. 16 and 17 during Q_{200} and Q_{500}. Considerable residential areas inundated.
	Similkameen River downstream of the confluence with the Tulameen River (Figure 4.17 – 4.19, Sheet 3-4)	▪ Floodplain inundation in unprotected sections of river increases with return period. ▪ Overtopping of ToP dike No. 13 Rivers Edge RV Park and the subdivision protected by Dike No. 12 on the right bank near the downstream mapping extents during Q_{200} and Q_{500}.
Scenario 2	Similkameen River upstream of the confluence with the Tulameen River (Figure 4.20 – 4.22, Sheet 1-2)	▪ Increased in inundation extents under Q_{20} compared to Scenario 1. Only minor changes under Q_{200} and Q_{500} since dikes are overtopped in Scenario 1. ▪ Inundation extents vary only slightly with increasing return period, however depth increases.
	Tulameen River upstream of the confluence with the Similkameen River (Figure 4.20 – 4.22, Sheet 1-2)	▪ Increased inundation extents under Q_{20} compared to Scenario 1. Only minor changes under Q_{200} and Q_{500} since dikes are overtopped in Scenario 1. ▪ Inundation extents vary only slightly with increasing return period, however depth increases.
	Similkameen River downstream of the confluence with the Tulameen River (Figure 4.20 – 4.22, Sheet 3-4)	▪ Floodplain inundation in unprotected sections of river increases with return period. ▪ Little change between Scenario 1 and Scenario 2 for all return periods.
Scenario 3	Tulameen River upstream of Tulameen (Figure 4.23, Sheet 2)	▪ Dike is ineffective at containing Q_{200} as shown in Scenario 1 therefore dike breach does not produce an appreciable increase in flooding. ▪ Inundation on left bank covers large majority of residential floodplain area south of Highway 3 and large portion of downtown core north of Highway 3.

4.3.4 Tulameen Study Area

The full Tulameen map set is laid out for each scenario in 4 separate sheets illustrated in Figure 4.31. Flood inundation and depth maps for the Tulameen study areas are presented in Figure 4.32 through Figure 4.37. Observations for each of the scenarios are summarized in Table 4.5.

Table 4.5 Summary of Flood Inundation and Depth in the Princeton Study Area.

Study Area	Reach Description	Observation
Scenario 1	Tulameen River upstream of Tulameen (Figures 4.32 – 4.34, Sheet 1)	▪ Tulameen River floodplain inundation extensive in sparsely populated areas upstream of Tulameen where dikes are not present. Inundation increases with return period. ▪ Flooding extents contained on north side of river by Tulameen Rd.
	Tulameen River, Otter Creek and Otter Lake (Figures 4.32 – 4.34, Sheet 2)	▪ Flooding of north half of Tulameen townsite extensive under Q_{20}, Q_{200}, and Q_{500}. Inundation extends to 4th street under Q_{20} and slightly beyond 4th street under Q_{200} and Q_{500}.

Study Area	Reach Description	Observation
		▪ Flooding along Otter Creek extensive under Q_{20}, Q_{200}, and Q_{500} ▪ Flooding from Tulameen River at south end of townsite affecting some properties between areas protected by orphan dike No. 19.
	Tulameen River downstream of Tulameen to Coalmont (Figures 4.32 – 4.34, Sheets 3-4)	▪ Floodplain inundation in unprotected sections of river between Tulameen and Coalmont. Inundation increases with return period. ▪ Coalmont dikes offer protection against Q_{20} but minimal protection against Q_{200} and Q_{500} with widespread inundation of townsite.
Scenario 2	Tulameen River upstream of Tulameen (Figure 4.35 – 4.37, Sheet 1)	▪ Since no dikes present in this reach, Scenario 2 and Scenario 1 show similar results.
	Tulameen River, Otter Creek and Otter Lake (Figures 4.35 – 4.37, Sheet 2)	▪ Flooding from Tulameen River extends north to Otter Lake. Inundation through Tulameen townsite is discontinuous under Q_{20} and becomes more widespread and continuous under Q_{200} and Q_{500}. ▪ Deepest inundation occurs at north and south edges of townsite with shallower depths in the middle.
	Tulameen River downstream of Tulameen to Coalmont (Figures 4.38 – 4.39, Sheets 3-4)	▪ Extensive inundation of Coalmont under Q_{20} with complete inundation under Q_{200} and Q_{500}

4.4 Flood Construction Level

Official floodplain extents along with the corresponding flood construction levels (FCL) were determined by adding 0.6 m of freeboard to the instantaneous peak Q_{200} flood levels. The Health Act requirement for septic systems was also established by adding 0.6 m of freeboard to the Q_{20} flood elevations. Freeboard refers to the vertical offset added to the simulated flood elevation to account for uncertainties in modelling results. There is currently no provincial standard for freeboard and the traditional practice of adding 0.6 m to maximum daily flood levels or 0.3 m to maximum instantaneous levels (whichever gave greater levels) is being replaced by a more flexible approach depending on the uncertainties in the analysis, projected climate change, and the possibility of occurrence of phenomena such as debris floods, ice jams, debris jams, and sedimentation. Ultimately it is the owner's decision what freeboard to adopt depending on their risk tolerance, but a recommendation is typically made by a suitably qualified Professional Engineer or Geoscientist. Ecora acknowledges the sources of uncertainty listed above and recommends the use of 0.6 m of freeboard, which is consistent with many modern flood mapping studies.

The primary output produced by the 2-D hydraulic models is a 3-D water surface. The addition of freeboard to the 3-D surface involved a multi-step procedure to capture the change in inundation extents as a result of the freeboard. The steps are as follows:

1. The simulated water surfaces for Scenarios 1, 2, and 3 were combined into a single raster dataset. The combined raster was made up of the maximum values of the three scenarios. This result is referred to as the simulated surface. The simulated surface is discontinuous in areas where it intersects with the DEM.
2. Using the flood elevation contours from the simulated surface, a continuous surface was interpolated across the entire model domain. The values of the simulated surface described above were preserved and combined with the interpolated surface. This result is referred to as the composite interpolated surface.
3. 60 cm of freeboard was added to the composite interpolated surface.
4. The composite surface plus freeboard was checked against the DEM elevation. Areas where the composite interpolated surface plus freeboard exceeded the DEM were preserved, while all other areas were removed. This result is the FCL.

The adjusted inundation extents and FCLs for the Keremeos, Princeton and Tulameen study areas are shown in the following figures:

- Keremeos: Figures 4.9 and 4.10
- Princeton: Figures 4.24 and 4.25
- Tulameen: Figures 4.38 and 4.39

The FCL approach taken in this study differs from previous practice in which flood levels were projected behind dikes based on the flood elevation within the channel. The projection method has the potential to overestimate flood levels by a considerable margin depending on flood elevation in the channel compared to the elevation of the floodplain. It is noted that previous FCLs by Hay & Co. (1995) adopted a similar approach to Scenario 2 of this study where unconstrained flood levels were allowed to occupy the area behind the dikes. Ecora has improved upon this previous study by also simulating discrete dike breaches in the Keremeos and Princeton study areas. The composite FCL produced developed for this study represents a realistic range of potential flooding conditions as a result of dike overtopping, the absence of any dikes, and specific dike breaches. While this method is less conservative than projecting the channel flood elevations across the floodplain, it produces flood elevations that are more realistic and more manageable for the ToP, VoK and RDOS. Additional information on the flood construction level approach is included in Appendix A.

4.5 Flood Hazard Rating

4.5.1 Overview

The flood hazard was quantified based on a combination of the simulated flow depth and flow velocity. Numerous methods exist for quantifying the flood hazard. For this study, a method developed in the U.K., and detailed in APEGBC (2017), was chosen, and is based on the following formula:

$$HR = d * (v + 0.5) + DF \quad (Equation\ 1)$$

Where HR = (flood) hazard rating

d = depth of floodwaters (m)

v = velocity of floodwaters (m/s)

DF = debris factor (= 0, 0.5, or 1 depending on probability that debris will lead to a significantly greater hazard)

Since debris flows are not expected to significantly increase the hazard, the debris factor was set to 0. The numeric hazard rating produced from Equation 1 has been translated into the potential physical hazard to persons exposed to flood inundation. The hazard classification is summarized in Table 4.6. The hazard maps were created from the simulated output from flow events that were increased by 10% to account for the potential future impacts of climate change.

Table 4.6 Hazard to People Classification Summary

Hazard Rating (HR)	Colour Code	Hazard to People Classification
< 0.75		Very low hazard (caution)
0.75 to 1.25		Danger for some (includes children, the elderly, and the infirm)
1.25 – 2.00		Danger for most (includes the general public)
> 2.00		Danger for all (includes emergency services)

4.5.2 Keremeos Study Area

Flood hazard maps for the Keremeos study area are presented in Figure 4.11 through Figure 4.15.

4.5.3 Princeton Study Area

Flood hazard maps for the Keremeos study area are presented in Figure 4.26 through Figure 4.30.

4.5.4 Tulameen Study Area

Flood hazard maps for the Keremeos study area are presented in Figure 4.40 through Figure 4.43.

4.6 Recommended Use of Maps

4.6.1 Flood Depth and Hazard Rating

The flood depth and hazard rating maps are described above for Scenario 1, 2, and 3. Each scenario gives a unique set of results and therefore the user of these maps should understand the circumstances for which the different maps should be applied. In general, the flood depth and hazard rating maps are best used as a decision-making tool for emergency management and prioritizing flood mitigation measures.

Scenario 1 is the most representative of reality and therefore it should be consulted under most circumstances with Scenario 2 and 3 being considered supplementarily.

Scenario 2 is a supplementary scenario to broadly understand the flood response without the protection from dikes. It is also a useful illustration of how dikes have changed the natural flood response of the study area. The primary intent for developing this scenario is to assist in the creation of comprehensive flood construction level maps. It provides high-level insight into the flood response in areas that may otherwise not be subjected to flooding under Scenario 1 or 3. On its own, Scenario 2 should be used for informational purposes only because it is hypothetical in nature.

Scenario 3 is also supplementary and was produced to understand the impacts of flooding during a “worst-case-scenario” dike breach. This Scenario should be consulted if a dike breach occurs in the exact or a similar location to what has been simulated. The primary intent of this scenario is to assist in the creation of comprehensive flood construction level maps; however it can also be used for emergency response and mitigation planning for its specific situation.

4.6.2 Flood Construction Level

The FCL maps are based on a composite flood that combines the results of Scenario 1, 2 and 3. The FCL maps are regulatory in nature and they are primarily intended to delineate the floodplain and, as the name suggests, define the flood construction levels within the flood mapping area. FCL maps should be used to inform policy such as official community plans and development by-laws. The multiple scenarios to cover a range in possible flooding mechanisms and the composite approach to the FCL mapping is intended to identify the most significant hazard for a specific area.

4.7 Mapping Limitations

Ecora developed the flood maps using generally accepted industry best practices, however, the maps have inherent limitations that should be understood and acknowledged before relying on the results:

- The reliability of the simulated flood elevations is limited by the accuracy of the data sources used to develop the hydraulic models including the LiDAR DEM, hydrometric station data, and land use data.
- Flood maps are based on design flood conditions in the Similkameen River, the Tulameen River, Otter Creek, and Otter Lake. Flooding from additional tributaries was not considered and these maps should not be relied upon for such predictions.
- The flood maps produced should be considered regional in nature and were not developed at a resolution to predict site-scale impacts. A suitably qualified Professional Engineer or Geoscientist should be consulted for site-scale analysis.
- Isolated areas of inundation may reflect the model resolution not capturing small-scale variation in topography. Ecora has elected to keep the isolated areas as they reflect low-lying areas of inadequate drainage as described in the Professional Practice Guidelines for Flood Mapping in BC (APEGBC, 2017). However, poorly drained areas have not been exhaustively investigated and other areas may exist in addition to those shown on the flood maps.
- Actual flood levels and extents may vary from those shown on the flood maps. Additional flood risk may therefore still exist in areas located beyond the mapped extents. Ecora assumes no liability for variations of flood levels, extents, or hazard from those shown on the flood maps.
- This report does not provide flood depth, extent, or hazard mapping for the Ashnola River floodplain. The Ashnola River outfall at the Similkameen River is considered an alluvial fan and is subject to special flood hazard consideration. Channel erosion, and avulsion are likely to occur during a flood event making predicting the flooding outcome difficult. This limitation should be acknowledged and understood before viewing the Keremeos study area map set.

5. Summary and Recommendations

5.1 Summary

Ecora completed flood mapping for the Village of Keremeos, the Town of Princeton, and part of RDOS Electoral Areas B, G, and H which includes the communities of Tulameen, and Coalmont, and Cawston. The flood mapping comprises Phase 2 of the Similkameen River Flood Risk Assessment, Flood Mapping, and Flood Mitigation Planning project.

A comprehensive hydrologic assessment of the Similkameen watershed was completed, along with the development of a HEC-HMS hydrologic model. The hydrologic assessment used regional relationships of peak flow data and catchment area to estimate the design flood events at different points within the flood mapping study areas. The hydrologic assessment determined that increasing flow by 10% adequately represented future climate change and land use impacts in accordance with the Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC (EGBC, 2018). This increase was applied to the hydrographs generated by the HEC-HMS model.

Three 2D unsteady flow hydraulic models were developed using the HEC-RAS modelling software for the purpose of producing flood depth and hazard maps and flood construction levels. The models were individually calibrated to streamflow and stage data for time periods with available data. The models were validated against the 2018 flood event and other available data sources. Design flood hydrographs applied to the hydraulic models were developed through a comprehensive regional analysis of hydrometric station data within the Similkameen River Watershed.

Three different scenario configurations were simulated to evaluate the likely range in potential flooding conditions within floodplain areas. The three scenarios included:

1. Scenario 1: Flow constrained by existing topography (i.e., unaltered DEM terrain).
2. Scenario 2: Flow not constrained by any dikes
3. Scenario 3: Dike breach (Keremeos and Princeton study areas only)

Flood extents and inundation depths were mapped for 20-year, 200-year and 500-year design events while the flood hazard was mapped for the 200-year and 500-year events. Maps were produced for all three scenarios, however only the 200-year design event was mapped for dike breach scenarios. Flood construction levels were mapped for the 20-year and 200-year design events with elevations based on a composite result of the three scenarios described above with the addition of 0.6 m for freeboard.

5.2 Recommendations

Although the intention of this report is to document the technical approach taken to produce the associated flood maps, general recommendations were developed to provide guidance in the usage of the derived maps. The recommended application of the maps is as follows:

- The maps developed in this study should be used as decision-making tools for emergency management. The Scenario 1 flood mapping results should be used to inform improvements to emergency plans. These improvements can lead to better response timing and better allocation of resources in a flood event. The flood depth and hazard rating maps are the most useful maps for this purpose.
- The flood mapping should be integrated into the RDOS Emergency Operations Center (EOC) Dashboard to enable the EOC to aid in operational flood response planning and decision making during an emergency.
- The modelling data files produced during the flood mapping should be used by the municipalities to test the efficacy of their temporary flood mitigation measures during a design flood event; and to estimate the resources required to handle flood waters in an emergency.
- The FCL maps developed in this study should be used for regulatory purposes and should replace the historical flood maps (Hay & Company Consultants Inc (Hay & Co.), 1995) referenced in the existing development bylaws and official community plans. Development

limitations that would accompany the flood maps would serve to prevent construction in areas perceived to have a high risk of flooding.

- It is recommended that the maps be shared with the Province (MFLNRORD, Emergency Management BC, MoTI) to assist them in their flood response planning. Sharing the maps with Provincial regulators would highlight the significance of the various flood events, especially in locations where orphaned dikes are relied upon for flood protection. These maps provide a visual aid which highlights the risks associated with each orphan dike structure within the study areas.
- Sharing the flood mapping results with the Ministry of Transportation and Infrastructure will highlight occurrences where egress routes may be compromised and can allow the Province the opportunity to develop procedures for maintaining access routes. This information can also initiate discussions about improving transportation corridors where dikes act as roadways.
- The flood mapping results and the technical report highlight areas at risk and can be used as supporting documents for securing future funding for flood mitigation works within the study area.
- The flood maps presented in this report should be used by the ToP and VoK in the Phase 3 Flood Mitigation Planning component of the Similkameen River Flood Risk Assessment, Flood Mapping, and Flood Mitigation Planning project.
- The scope of the Phase 3 Flood Mitigation Planning only explores mitigation works within the ToP and VoK. If future funding can be secured, the flood mapping results should be used for flood mitigation planning within the Electoral Area B, G and H study areas.

It is recommended that prior to using the flood maps produced in his study, all individuals and municipalities should familiarize themselves with the associated limitations, as described in this report and listed on the flood map index pages. Users should understand that each flood mapping scenario gives a unique set of results and therefore the purpose of each map varies.

References

Amec Earth and Environmental Ltd., 2002. Similkameen River Diking Report – Information Gathering for Dikes with No Local Authority.

Association of Professional Engineers & Geoscientists, 2017. Flood Mapping in BC – Professional Practice Guidelines

Ecora Engineering and Resource Group Ltd., 2020. Flood Risk Assessment of the Similkameen River. Prepared for the Regional District of Okanagan-Similkameen, The Town of Princeton, and The Village of Keremeos

Engineers & Geoscientists BC (EGBC), 2018. Legislated Flood Assessments in a Changing Climate in BC – Professional Practice Guidelines

Hay & Company Consultants Inc (Hay & Co.), 1995. Floodplain Mapping Program, Similkameen and Tulameen Rivers at Princeton and Similkameen and Ashnola Rivers at Keremeos - Design Brief

Northwest Hydraulic Consultants Ltd. (NCH), 2017. Okanagan Floodplain Mapping Standards. Prepared for the Okanagan Basin Water Board (OBWB)

Regional District of North Okanagan, Regional District of Central Okanagan, Regional District of Okanagan-Similkameen, and Pinna Sustainability, 2020. Climate Projections for the Okanagan Region.

Figures

Appendix A

Flood Construction Level Memo (October 30, 2020)

Memo

To:	Caleb Pomeroy, P.Eng., PMP	**Date:**	October 30, 2020
C:		**File:**	GK-19-548-RDO
From:	Spencer Malott, P.Eng., Barrett Van Vliet, P.Eng.	**Memo No.**	1
Subject:	Similkameen River Flood Mapping – Flood Construction Level Options		

1. Introduction

The Regional District of Okanagan-Similkameen (RDOS) in partnership with the Town of Princeton (ToP) and the Village of Keremeos (VoK) retained Ecora Engineering & Resource Group Ltd. (Ecora) to conduct a Flood Risk Assessment (FRA), Flood Mapping (FM) and Flood Mitigation Planning (FMP) study for the Similkameen River. The flood mapping phase of the study is currently underway, and the purpose of this memo is to present options for establishing flood construction levels (FCLs).

2. Flood Construction Level Mapping

2.1 Flood Mapping Scenarios

Multiple model scenarios were simulated for each of the design flood events. For the purpose of this memo Ecora only evaluated the FCLs for the 200-year design flood event (Q200). The scenarios include:

1. Scenario 1: Flow constrained by existing topography (i.e., unaltered LiDAR DEM terrain);
2. Scenario 2: Flow not constrained by dikes; and
3. Scenario 3: Dike breach (Keremeos and Princeton study areas only)

Scenario 1 represents flow through the natural river channel constrained by the natural bank elevation and dikes where present. Flow can overtop the dikes and enter floodplain areas. Scenario 2 was configured such that the dikes do not act as impediments to flow and water can freely enter the floodplain at the elevation occurring behind the dikes. Scenario 3 is the same as Scenario 1 with the addition of discrete dike breaches applied in the Keremeos and Princeton models by manually adjusting the DEM.

For the Keremeos dike breach scenario, a 100 m wide breach was added at the upstream end of Keremeos Dike No. 1 west of Keremeos on the left bank of the Similkameen River. For the Princeton dike breach scenario, a 100 m wide breach was added near Bar Street on the left bank of the Similkameen River.

2.2 FCL Methodology

Once the preferred scenario or combination of scenarios has been established, Ecora proposes to generate FCLs through GIS processing of the simulated water surface to create a continuous interpolated surface to which 0.6 m freeboard will be added. The interpolated surface plus freeboard will then be compared to the DEM to determine

the FCL inundation extents. Each scenario will produce a slightly different outcome for FCL. Ecora anticipates that a combination of the three scenarios will produce the most realistic FCLs. The following sections demonstrate the expected differences between the scenarios at select locations and provide commentary on the recommended approach.

2.3 FCL Comparison

FCLs were calculated at select locations in Keremeos, Princeton and Tulameen flood mapping areas by adding 0.6 m to the simulated Q200 flood level. Figure 1 through Figure 5 shows the FCLs at the select locations. Elevations are relative to Natural Resources Canada's (NRCan) 2013 Canadian Geodetic Vertical Datum (CGVD2013). For comparison, elevations relative to CGVD2013 are approximately 0.3 m higher than those relative to CGVD28 through the study areas.

Keremeos

Figure 1 shows the FCLs for select locations in the Village of Keremeos under the three Scenarios described above. From left, to right, the first FCL location presented is in an agricultural floodplain area west of the Village of Keremeos. This floodplain area is protected by Keremeos Dike No.1 which only overtops downstream of this location in Scenario 1. Here, flood construction levels are highest under Scenario 2 when the protection of the dikes is removed. However, removal of the dikes has the added benefit allowing water escape back into the main river channel. As a result, FCLs within the village centre are higher under Scenario 1 and Scenario 3 where the dikes restrict flow back into the main river channel. At the wastewater treatment plant, the FCL is expected to be a maximum of 413.9 m, which is approximately 1 m above the ground surface elevation.

Figure 2 shows the FCLs for an agricultural area slightly east of Keremeos. From left to right, the first FCL is in an area that is well protected by the dikes. The FCL is higher under Scenario 1 because it is governed by the flood elevation in the channel while Scenario 2 is governed by the flood elevation across the floodplain. Scenario 1 may be overly conservative at this location since it does not represent simulated flow within the floodplain. The second FCL is in an area where the dike is overtopped and therefore Scenario 1 and Scenario 2 produce more similar FCLs.

Princeton

Figure 3 shows the FCLs for select locations in the Town of Princeton under the three scenarios described above. Flood FCLs in Princeton show little variability between the scenarios since the dikes offer little protection against the Q200 design flood event in both the Tulameen and Similkameen River channels. Differences in flood levels could be expected at lower flows (e.g., 20-year flood) where the dikes provide more adequate protection.

Tulameen

Figure 4 shows the FCL for a select location in the community of Tulameen. This area is only partially protected by a dike therefore Scenario 1 and 2 result in similar FCLs.

Figure 5 shows the FCL for a select location in the community of Coalmont. Under Scenario 1, the dike protecting this community partially overtops. By comparison, Scenario 2 causes widespread flooding of the whole townsite and results in a higher FCL at the select location.

3. Discussion

Scenario 1 and Scenario 3 represent the most realistic conditions for potential means of flooding within the study areas. Ecora notes that flooding impacts could be further understood by conducting multiple individual dike breach scenarios along every section of dike, however this represents a scope of work that is not practical. The

inclusion of Scenario 2 aims to provide a compromise to this by allowing flood waters to freely enter all floodplain areas regardless of the presence of dikes. The results support the application of multiple scenarios due to the varying level of protection offered by the dikes. In general, the results indicate the following:

- In areas where dikes are overtopped, the difference between scenario results is small (<10 cm). Conversely, in areas where the dikes are not overtopped the difference between scenarios may be large (>1m);
- In areas where dikes are not overtopped, flood construction levels projected behind the dikes are more conservative. In some cases, they may be unrealistically conservative; and
- There is no clear preferred scenario to represent the FCL.

4. Recommendations

Ecora recommends combining the three scenarios to produce a composite map of the maximum simulated water surface elevation. FCLs should be established from this composite water surface. Doing so would maximize the amount of simulated data set used to interpolate the FCLs. Ecora believes this approach strikes a balance between being conservative and producing realistic FCLs.

5. Closure

We trust this memo meets your requirements. Please contact Ecora if you have any questions or comments concerning this report.

Sincerely,

Prepared by:

Spencer Malott, MESc., P.Eng.
Water Resources Engineer
spencer.malott@ecora.ca

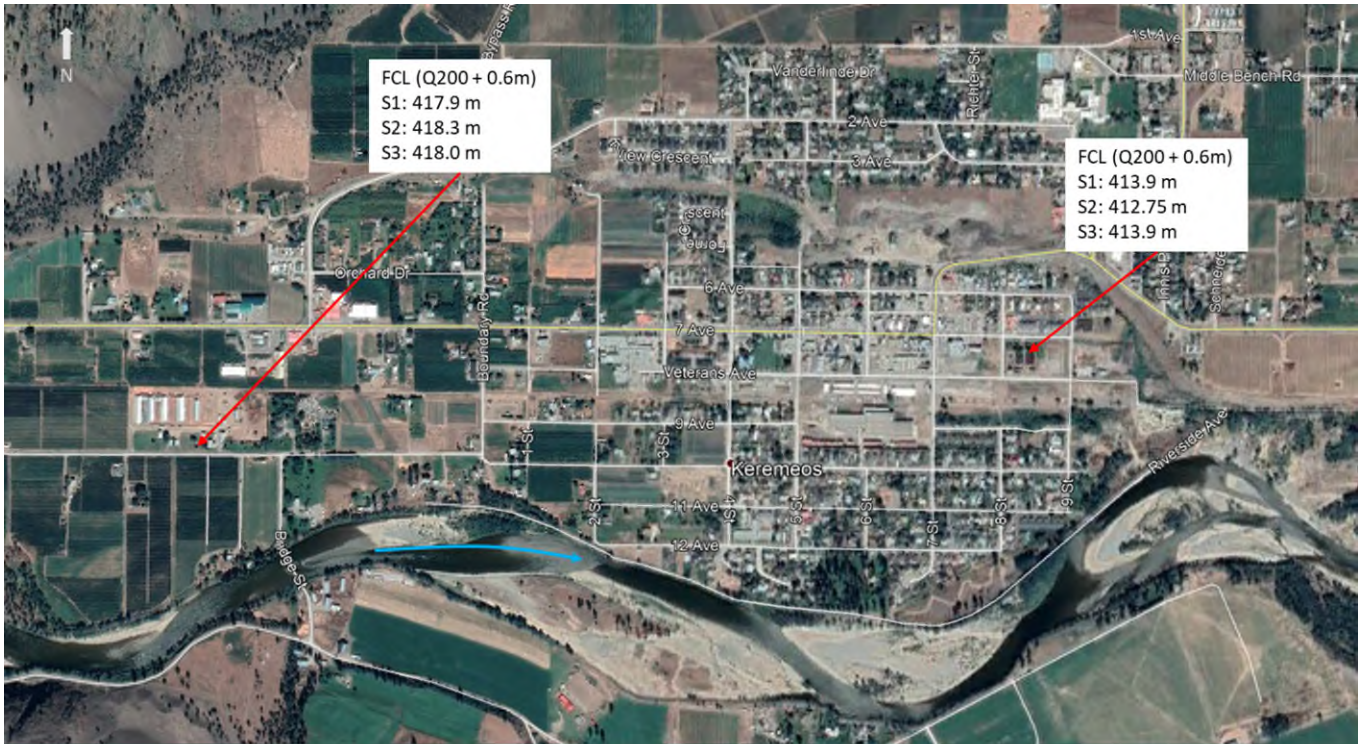

Figure 1: Approximate flood construction levels in Keremeos under different flood mapping scenarios.

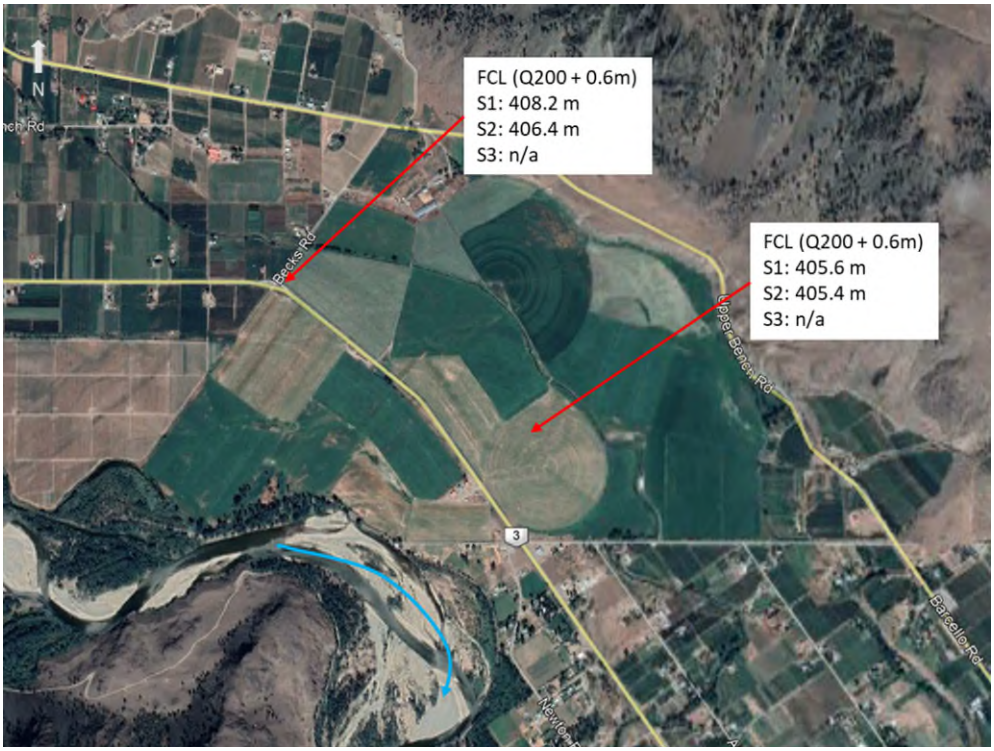

Figure 2: Approximate flood construction levels east of Keremeos under different flood mapping scenarios.

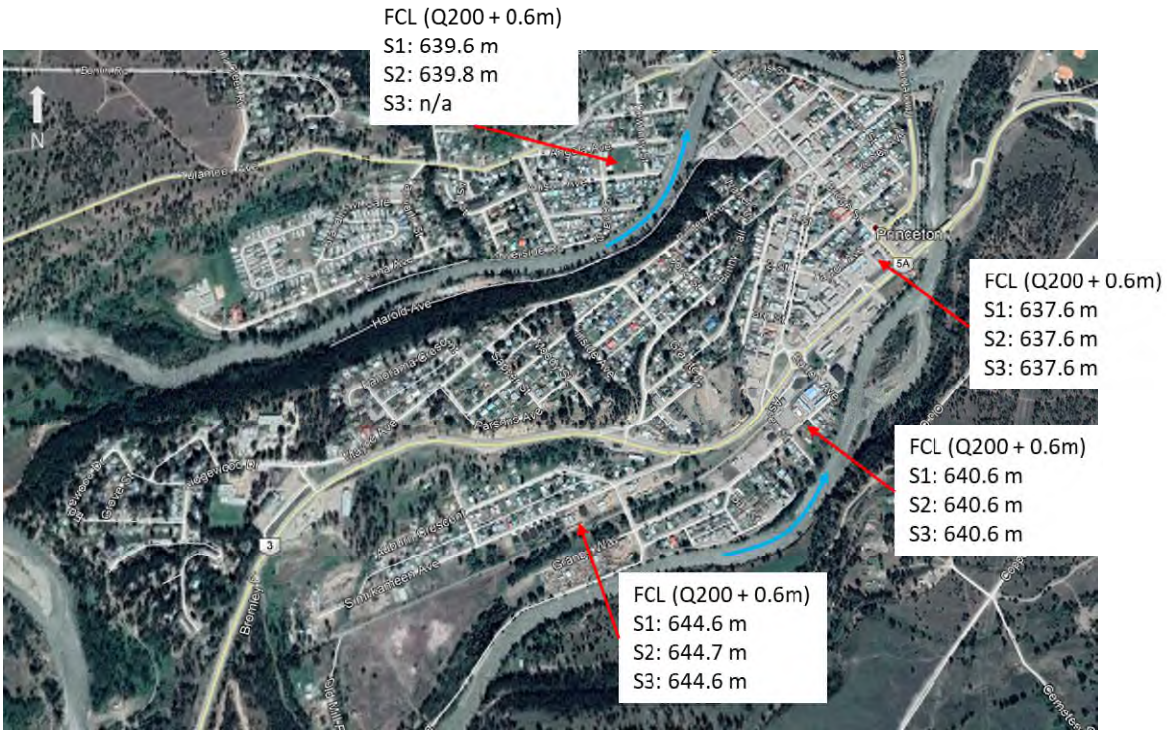

Figure 3: Approximate flood construction levels in Princeton under different flood mapping scenarios.

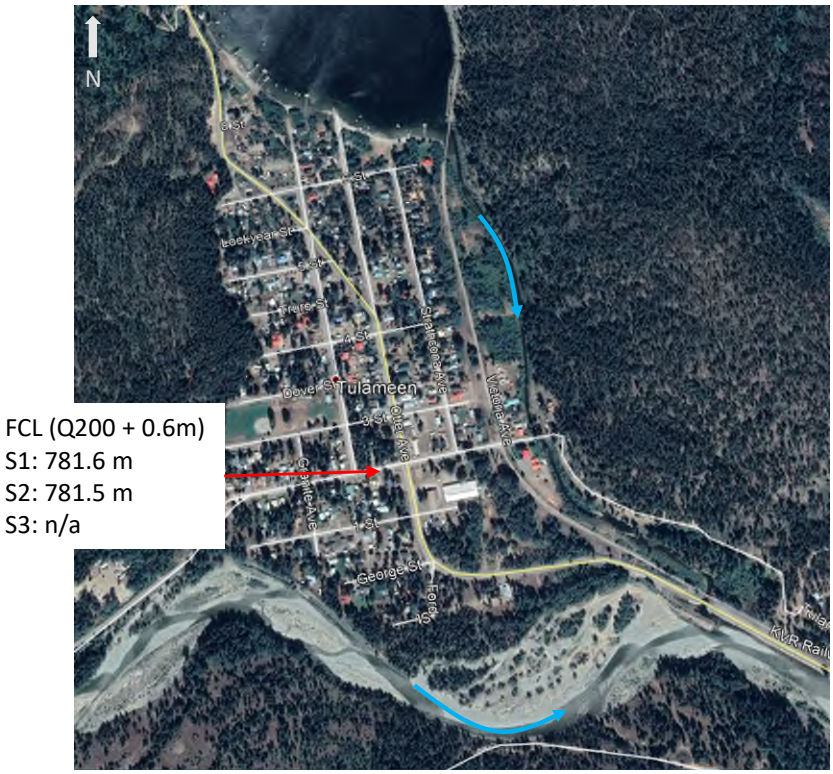

Figure 4 Approximate flood construction levels in Tulameen under different flood mapping scenarios.

Figure 5 Approximate flood construction levels in Coalmont under different flood mapping scenarios

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
BOARD of DIRECTORS MEETING

Thursday, June 17, 2021
1:00 pm

REGULAR AGENDA

A. APPROVAL OF AGENDA

RECOMMENDATION 1 (Unweighted Corporate Vote – Simple Majority)
THAT the Agenda for the RDOS Board Meeting of June 17, 2021 be adopted.

1. Consent Agenda – Corporate Issues

a. Okanagan Falls Parks and Recreation Committee – May 13, 2021
THAT the Minutes of the May 13, 2021 Okanagan Falls Parks and Recreation Committee be received.

b. Naramata Parks and Recreation Committee – May 24, 2021
THAT the Minutes of the May 24, 2021 Naramata Parks and Recreation Committee be received.

c. Similkameen Recreation Commission – Member Appointment
THAT the Board of Directors appoint Sarah Martin and Eileen Oliver-Bauer to the Similkameen Recreation Commission for a two-year term, ending December 31, 2022.

d. Parks and Recreation Commission, Electoral Area "F" – Member Appointment
THAT the Board of Directors appoint Darryl Dietrich to the Electoral Area "F" Parks and Recreation Commission for a two-year term ending December 31, 2022.

e. Electoral Area "E" Advisory Planning Commission (APC) Appointment
THAT the Board of Directors appoint Adrienne Federigo as a member of the Electoral Areal "E" Advisory Planning Commission until October 31, 2022.

f. Advisory Planning Commission, Electoral Area "I" – May 19, 2021
THAT the Minutes of the May 19, 2021 Advisory Planning Commission, Electoral Area "I" be received.

g. Advisory Planning Commission, Electoral Area "D" – May 25, 2021
THAT the Minutes of the May 25, 2021 Advisory Planning Commission, Electoral Area "D" be received.

h. Community Services Committee – June 3, 2021
THAT the Minutes of the June 3, 2021 Community Services Committee meeting be received.

i. Corporate Services Committee – June 3, 2021
THAT the Minutes of the June 3, 2021 Corporate Services Committee meeting be received.

j. Planning and Development Committee – June 3, 2021
THAT the Minutes of the June 3, 2021 Planning and Development Committee meeting be received.

THAT Zoning Amendment Bylaw No. 2895, 2020, being a bylaw to introduce zoning regulations for metal storage containers not be amended;

AND THAT prior to 3rd reading, Amendment Bylaw No. 2895, 2020, be considered by the Electoral Area Advisory Planning Commissions (APCs);

AND THAT an amendment to the Regional District's Building Bylaw No. 2805, 2018, be initiated in order to delete the requirement for a Siting Permits when placing a metal storage container.

k. RDOS Regular Board Meeting – June 3, 2021
THAT the minutes of the June 3, 2021 RDOS Regular Board meeting be adopted.

RECOMMENDATION 2 (Unweighted Corporate Vote – Simple Majority)
THAT the Consent Agenda – Corporate Issues be adopted.

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2. Consent Agenda – Development Services

a. Development Variance Permit Application, 710 Ritchie Avenue, Electoral Area "E"
i. Permit
THAT Development Variance Permit No. E2021.020-DVP, an applicaton to vary a sideyard setback at 710 Ritchie Ave. in Naramata, be approved.

b. Development Variance Permit Application, 210-290 Anna Avenue, Electoral Area "E"
i. Permit
THAT Development Variance Permit No. E2021.025-DVP, an application to vary the height of an accessory building at 290 Anna Ave. in Naramata, be approved.

c. Temporary Use Permit Application, 251 Alder Avenue, Electoral Area "I"
i. Permit
ii. Representations
THAT Temporary Use Permit No. I2021.007-TUP, an application for a Vacation Rental at 251 Alder Ave. in Kaleden, be approved.

d. Development Variance Permit Application, 206 Maple Avenue, Electoral Area "I"
i. Permit
ii. Representations
THAT Development Variance Permit No. I2021.027-DVP, an application for rear and sideyard setbacks for a new garage, be approved.

RECOMMENDATION 3 (Unweighted Rural Vote – Simple Majority)
THAT the Consent Agenda – Development Services be adopted.

B. DEVELOPMENT SERVICES – Rural Land Use Matters

1. Petition to Enter the Electoral Area "H" Fire Protection Local Service Area – 260 Bonlin Road

a. **Amendment Bylaw No. 2934**

RECOMMENDATION 4 (Unweighted Corporate Vote – Simple Majority)
THAT Bylaw No. 2934, 2021, being a bylaw to amend "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to include 260 Bonlin Road in the fire prevention and suppression service within a portion of Electoral Area 'H', be read a first, second and third time.

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2. Agricultural Land Commission Referral (Subdivision) – 4301 McLean Creek Road, Electoral Area "D"

RECOMMENDATION 5 (Unweighted Corporate Vote – Simple Majority)
THAT the application to subdivide the parcel located at 4301 McLean Creek Road (Lot 1, Plan KAP26887, District Lots 551, 2701 & 3090, SDYD) "be authorized" to proceed to the Agricultural Land Commission.

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3. Zoning Bylaw Amendment, 79 Twin Lakes Road, Electoral Area "I"

a. Bylaw No. 2457.20

RECOMMENDATION 6 (Unweighted Rural Vote – Simple Majority)
THAT Bylaw No. 2457.20, 2018, a bylaw to amend the Electoral Area "I" Zoning Bylaw to rezone parts of two legal parcels to facilitate the development of the Twin Lakes Golf Resort for residential development, be adopted.

C. COMMUNITY SERVICES

1. Town of Oliver Request to Provide Road Rescue Service in RDOS

a. Letter April 27, 2021 – Johansen to Kozakevich
b. Letter June 1, 2021 – Gaudry to Johansen

This item was deferred from the May 20, 2021 meeting to allow for feedback from the affected Fire Chiefs.

RECOMMENDATION 7 (Unweighted Corporate Vote – Simple Majority)
THAT the Regional District grant authority to the Town of Oliver to provide a Road Rescue Service within the geographic boundary of the Regional District of Okanagan Similkameen along the eastern portion of Fairview Road starting from Willowbrook Road and continuing westerly to the summit at a visual road widening.

D. FINANCE

1. 2021 SOFI Report

a. Statement of Financial Information

RECOMMENDATION 8 (Weighted Corporate Vote – Majority)
THAT the Board of Directors approve the Regional District of Okanagan-Similkameen Statement of Financial Information for the year ended December 31, 2020 pursuant to the F*inancial Information Act,* Financial Information Regulation Schedule 1, subsection 9(2).

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2. Purchase of 105 Highway 3 East, Princeton

RECOMMENDATION 9 (Weighted Corporate Vote – Majority)
THAT the Regional District of Okanagan Similkameen authorize the expenditure of $150,000 from the Area "H" Community Facilities Capital Reserve Fund to partner with the Town of Princeton for the purchase of 105 Highway 3 East (Legal Description Lot "A" Plan KAP72285 District Lot 10S 1822 Land District 54, PID 025-533-665) on the following conditions:

- **The purchase price of the land and improvements be no more than $300,000.**
- **The Vermillion Forks Metis Association, the Town of Princeton and the Regional District agree on a five (5) year lease for the operation of the improvements, with an option to purchase by VFMA, extendable for an additional five (5) years.**

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3. City of Penticton Overhead Resolution

a. Overhead Report

RECOMMENDATION 10 (Unweighted Corporate Vote – Simple Majority)
THAT the Board receive the City Review of RDOS Overhead Cost Allocation and the resolution from the City of Penticton for information; and,

THAT the Penticton Report on the Regional District Overhead Allocation Policy be referred to Administration for consideration and report.

E. LEGISLATIVE SERVICES

1. **Kaleden Sewer**
   a) Bylaw No. 1239.09
   b) Bylaw No. 2889
   c) Bylaw No. 2890
   d) Bylaw No. 2923

RECOMMENDATION 11 (Unweighted Corporate Vote – Simple Majority)
THAT first, second and third reading of Okanagan Falls Sanitary Sewer Service Area Amendment Bylaw No. 1239.09, 2021 be rescinded and the bylaw abandoned; and,

THAT first, second and third reading of Kaleden Extension of the Okanagan Falls Sewer Service Establishment Bylaw No. 2889, 2020, be rescinded and the bylaw abandoned; and,

THAT first, second and third reading of Kaleden Extension of the Okanagan Falls Sewer Service Loan Authorization Bylaw No. 2890, 2020 be rescinded and the bylaw abandoned; and further,

THAT first, second and third reading of Kaleden Extension of the Okanagan Falls Sewer Service Capital Reserve Establishment Bylaw No. 2923, 2021, be rescinded and the bylaw abandoned.

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2. **South Okanagan Conservation Fund – Update and Request for Direction**

RECOMMENDATION 12 (Unweighted Corporate Vote – Simple Majority)
THAT the funding approval of the Okanagan Nation Alliance Trout Creek project be extended to June 30, 2021 to allow completion of the engineer designs selected by the most recent steering committee meeting; and further,

THAT the Freshwater Fisheries Society of BC project approved for 2022 delivery be cancelled due to receiving 100% funding from another granting organization.

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3. **2021 UBCM Resolutions and Convention**

This item was considered at the Corporate Servcies Committee of June 17, 2021

RECOMMENDATION 13 (Unweighted Corporate Vote – Simple Majority)
THAT the following Resolutions be submitted to the 2021 UBCM Convention for consideration:

Organ Donation

WHEREAS the population of British Columbia is 5.071 million but only 1.555 million British Columbians have registered their organ donor decision;

AND WHEREAS one organ donor can save up to 8 lives:

THEREFORE BE IT RESOLVED that UBCM request that the Province of British Columbia enact Provincial legislation whereby an individual is deemed to consent to the individual's organs and tissues being used for transplantation activities, with the inclusion of an "opt-out" provision, similar to the Presumed Consent Organ Transplant Act passed by the Province of Nova Scotia.

Multi-jurisidictional Cooperation

WHEREAS legislation does not provide regional districts authority to enforce regulatory bylaws on Crown Land and Road Rights-of-Way in Electoral Areas;

AND WHEREAS clarity on responsibility for enforcement in rural areas is required for constituents for issues that may cross federal, provincial, First Nation and/or regional district jurisdiction;

NOW THEREFORE BE IT RESOLVED that the Union of British Columbia Municipalities petition the provincial government to develop a formal multi-jurisdictional process for working in conjunction with lead agencies and governing bodies to resolve outstanding regulatory enforcement issues, by joint cooperation of the various government agencies.

Housing Needs Reports

WHEREAS Bill 18 - 2018 amended the Local Government Act (LGA) to require all local governments to complete Housing Needs Reports by April 2022, and every five years thereafter.

AND WHEREAS rural electoral areas of Regional Districts have access to very limited resources and staffing in which to undertake Housing Needs Report updates;

AND WHEREAS promoting sprawling residential development into rural areas contradicts sustainable planning principles;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities petition British Columbia to amend the Local Government Act, Division 22, Section 585.11 to exempt Regional Districts from undertaking Housing Needs Reports in the future.

Wildfire Risk Prevention in BC Building Code

WHEREAS the frequency and intensity of wildfire activity is a rapidly increasing hazard posing a threat to the public across the province;

AND WHEREAS certain changes to the BC Building Code are urgently needed as part of the response to reduce the risk of wildfire threat to the public;

THEREFORE BE IT RESOLVED that the Union of BC Municipalities request the Province of British Columbia to amend the BC Building Code to restrict the use of certain flammable materials such as wood and vinyl siding and wood shake roofing to reduce the risk to life and property due to wildfire activity.

RECOMMENDATION 14 (Unweighted Corporate Vote – Simple Majority)
That the following Meeting Requests be submitted to the 2021 UBCM Convention: ·

- **Solid Waste Update – Minister of Environment**
  - **BioCover Approval**
  - **Leachate Recovery Update**
  - **Organics Processing & Treatment Facility Approval and Grants ·**
- **Horizontal Management – Premier Horgan**

F. CAO REPORTS

1. Verbal Update

G. OTHER BUSINESS

1. Chair's Report

2. Board Representation

a. Developing Sustainable Rural Practice Communities - *McKortoff*
b. Municipal Finance Authority – *Kozakevich (Chair), Coyne (Vice Chair, Alternate)*
c. Municipal Insurance Association – *Kozakevich (Chair), Coyne (Vice Chair, Alternate)*
d. Okanagan Basin Water Board - *McKortoff, Holmes, Knodel, Pendergraft (Alternate to McKortoff), Obirek (Alternate to Holmes), Monteith (Alternate to Knodel)*
e. Okanagan Film Commission – *Gettens, Obirek (Alternate)*
f. Okanagan Regional Library – *Monteith, Obirek (Alternate)*
g. Okanagan-Kootenay Sterile Insect Release Board – *Bush, Kozakevich (Alternate)*
h. Southern Interior Municipal Employers Association – *Knodel, Kozakevich (Alternate)*
i. Starling Control – *Bush, Knodel (Alternate)*
j. Fire Chief Liaison Committee – *Pendergraft, Knodel, Monteith, Obirek, Roberts*
k. Intergovernmental Indigenous Joint Council – *Kozakevich, Coyne, Roberts*
l. Okanagan-Similkameen Regional Hospital District – *Sentes, McKortoff (Alternate)*

3. Directors Motions

a. Directors Motion – Director Monteith (Unweighted Corporate Vote – Simple Majority)

THAT Finance present RDOS budgets to Directors for all services with a -2, 0, 2 and 3 percent increase at the budget committee meetings annually and that Finance present RDOS budget in a live format to allow Directors to visually see impact to each electoral area and member municipality during decision making during all budget discussions.

4. Board Members Verbal Update

H. ADJOURNMENT

Minutes

Okanagan Falls Parks & Recreation Commission

Webex Meeting of May 13, 2021

Okanagan Falls Community Centre, 1141 Cedar Street, Okanagan Falls, BC

Present:	Mr. R. Obirek, Director, Electoral Area "D"
Members:	Linda Finner, Chair, Kelvin Hall, Matt Taylor, Barbara Shanks, Doug Lychak, Joanne Kleb, Judy Garner; Jillian Johnston; Phyllis Radchenko
Absent:	Alf Hartviksen, Shari Rowland
Staff:	Recording Secretary:
Delegates:	None

1. CALL TO ORDER

The meeting was called to order at 7:11 p.m.

Quorum Present

ADOPTION OF AGENDA

RECOMMENDATION

It was Moved and Seconded that the Agenda of May 13, 2021 be adopted.

CARRIED

2. APPROVAL OF PREVIOUS MEETING MINUTES

2.1 **RECOMMENDATION**

It was Moved and Seconded that the Minutes for the Okanagan Falls Parks and Recreation Commission meetings of March 25 and April 8, 2021 be approved.

CARRIED

3. CORRESPONDENCE / DELEGATIONS

3.1 None

4. RDOS STAFF REPORTS

4.1 None

5. COMMISSION MEMBER REPORTS

5.1 L. Finner and Matt Taylor provided a report to Commission Members on meetings held with Director Obirek, M. Woods, L. Finner, M. Taylor and J. Garner.

5.2 D. Lychak provide an update on the Garnett Family Park construction.

6. RDOS DIRECTOR'S REPORT

6.1 Director Obirek provided an update.

7. BUSINESS ARISING

7.1 Master Plan – L. Finner

Discussion

Action Item:

The Chair asked that all members come prepared to provide their input at the upcoming Regional Parks, Recreation and Trails Master Plan Meeting, May 20th from 6-8pm.

7.2 Community Survey – L. Finner

The Commission discussed the email from RDOS staff outlining the process for a community survey, to help inform the 2022 Budget process, related to parks and recreation.

Action Item:

Commission members to share their suggested survey questions with the Chair by May 23, who will compile the list and send to staff.

8. ADJOURNMENT

RECOMMENDATION

It was Moved and Seconded that the meeting be adjourned at 9:10 p.m.

CARRIED

NEXT MEETING – Thursday, June 10, 2021

Chair, Parks and Recreation Commission – Electoral Area "D"

Recording Secretary

Minutes

Naramata Parks & Recreation Commission

Meeting of May 24, 2021, 6:30 p.m.

WebEx Virtual Meeting - Naramata, BC

Present:	Karla Kozakevich, Director, Electoral Area "E"
Members:	Dennis Smith (Chair), Maureen Balcaen, Nicole Verpaelst, Cynthia Enns, Adrienne Fedrigo, Tom Hoenisch arrived at 6:57 p.m., Richard Roskell
Absent:	Ashley Selwood
Staff:	None
Guests:	None
Recording Secretary:	Heather Lemieux (Recording Secretary)
Delegates:	None

1. CALL TO ORDER

The meeting was called to order at 6:32 p.m. Quorum present.

ADOPTION OF AGENDA

Added 6.2 Cycling Projects Update & BMX Park Cleanup Day.

1.1 RECOMMENDATION

It was Moved and Seconded that the Agenda for the Naramata Parks & Recreation Meeting of May 24, 2021 be adopted as amended and all presentations and reports be received.

CARRIED

2. APPROVAL OF PREVIOUS MEETING MINUTES

2.1 RECOMMENDATION

It was Moved and Seconded that the Minutes for Naramata Parks and Recreation Commission of April 26, 2021 be approved as presented.

CARRIED

3. CORRESPONDENCE / DELEGATIONS

3.1 Naramata Parent Advisory Council (PAC) — Recreation Grant — Delegation absent. Discussed the 2020 financial reconciliation and annual report. Recreation grant decision deferred to next meeting.

3.2 Naramata Slow Cittaslow — Spirit Park Storage — Delegation absent. Discussed relocating a storage shed from the Naramata Centre to Spirit Park. Discussed locations, purpose, and to proceed with a tentative agreement subject to RDOS staff input.

RECOMMENDATION

It was Moved and Seconded to ask RDOS staff to suggest a suitable location at Spirit Park for a storage shed.

CARRIED

4. RDOS STAFF REPORTS — Staff Absent

None

5. RDOS DIRECTOR REPORT — Karla Kozakevich, Director, Electoral Area "E"

5.1 Naramata Community Fund — Update provided on Spirit Park donation.

5.2 Manitou Park — A meeting was held to discuss indigenous sculpture and signage with Penticton Indian Band (PIB). Discussed budget, location, design, and signage. Fortis BC is contributing to the project cost with a grant.

5.3 Wharf Park — Discussed indigenous educational signage.

6. COMMISSION MEMBER REPORTS

6.1 Parks Maintenance — M. Balcean reported that there have been toilet paper thefts and graffiti. Discussed washrooms opening date, over seeding, overnight camping issues at Wharf Park, and feedback from dog owners, park mobility access and security patrols.

ACTION — K. Kozakevich to follow up with RDOS staff for security patrol start date

6.2 Cycling Projects Update & BMX Park Cleanup Day — C. Enns reported on trail building projects. A BMX track volunteer clean up day is being planned. RDOS staff will be contacted to arrange. Discussed logistics, liability, timing, and environmental considerations.

6.3 Manitou Park — A. Fedrigo reported that positive feedback was received on the new pathway. A Parks & Trails Master Plan meeting was held.

6.4 2022 Budget Process & Commission Survey Discussion — Questions are needed for the survey. Discussed survey timing, and project planning,

ACTION — K. Kozakevich to request that A. Romero to send out the existing questions to NPR members.

7. BUSINESS ARISING

7.1 Dog Park & Waste Discussion — ONGOING

8. ADJOURNMENT

8.1 RECOMMENDATION

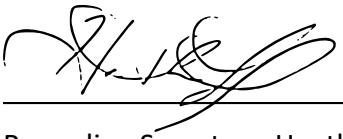
It was Moved and Seconded that the Naramata Parks & Recreation Meeting be adjourned at 7:33 p.m.

CARRIED

NEXT MEETING: June 28, 2021 at 6:30 p.m.

Location TBD

Chair, Dennis Smith, Naramata Parks & Recreation Commission – Electoral Area "E"



Recording Secretary, Heather Lemieux

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Similkameen Recreation Commission Appointment

Administrative Recommendation:
THAT the Board of Directors appoint the following members to the Similkameen Recreation Commission for a two-year term, ending December 31, 2022.

Similkameen Recreation Commission

- Sarah Martin
- Eileen Oliver-Bauer

Reference:
Bylaw 2732, 2016 Regional District of Okanagan-Similkameen Parks and Recreation Commission Establishment Bylaw.

Background:
Pursuant to the Bylaw 2732, 2016, Parks and Recreation Commissions are appointed by and advise the Board of Directors regarding matters related to a local parks and recreation service area. Members must reside in the service area and may serve for two years. New members can be appointed at any time provided there are vacancies. Advertisements for membership occurs each fall with most members beginning their term on January 1st each year.

Analysis:
The Electoral Area Directors have reviewed the new applications, and are recommending Sarah Martin and Eileen Oliver-Bauer be appointed to the Similkameen Recreation Commission.

Alternatives:
That the Board not appoint the new members to the Similkameen Recreation Commission.

Respectfully submitted:

"Justin Shuttleworth"

_____

J. Shuttleworth, Parks & Facilities Manager

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Electoral Area "F" Parks and Recreation Commission Appointment

Administrative Recommendation:
THAT the Board of Directors appoint the following member to the Electoral Area "F" Parks and Recreation Commission for a two year term, ending December 31, 2022.

Area "F"
Parks and Recreation Commission

Darryl Dietrich

Purpose:
To appoint a new member to the Electoral Area "F" Parks and Recreation Commission.

Reference:
Bylaw 2732, 2016 Regional District of Okanagan-Similkameen Parks and Recreation Commission Establishment Bylaw.

Background:
Pursuant to the Bylaw 2732, 2016, Parks and Recreation Commissions are appointed by and advise the Board of Directors regarding matters related to a local parks and recreation service area. Members must reside in the service area in which they serve and terms are for two years. New members can be appointed at any time provided there are openings. Advertisements for membership occurs each fall with most members beginning their term January 1st each year.

Analysis:
The Electoral Area Director has reviewed the new application, and is recommending Daryl Dietrich be appointed to the Area "F" Parks and Recreation Commission.

Alternatives:
That the Board not appoint the new member to the Area "F" Parks and Recreation Commission.

Respectfully submitted:

"Justin Shuttleworth"

_____

J. Shuttleworth, Parks & Facilities Manager

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Electoral Area "E" Advisory Planning Commission (APC) Appointment

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Administrative Recommendation:

THAT the Board of Directors appoint Adrian Federigo as a member of the Electoral Area "E" Advisory Planning Commission until October 31, 2022.

Purpose:

The purpose of this report is to seek the Board appointment of a member of the Area Planning Commission for Electoral Area "E".

Background:

The role of Area Planning Commission is to provide recommendations to the Regional District on all matters referred to it by the Regional District or by its Electoral Area Director respecting land use, the preparation and adoption of an official community plan or a proposed bylaw and permits under Divisions 2, 7, 9 and 11 of Part 26 of the *Local Government Act*.

Section 4 of Bylaw 2339 (Advisory Planning Commissions) provides for the appointment of members, requiring the Board, by resolution, to appoint members to each Commission on the recommendation of the respective Electoral Area Director.

At least two-thirds of the members of a Commission for an Electoral Area shall be residents of that electoral area. Commission appointments shall be made by the Board for terms which run concurrent with the Board term, and no term of appointment shall extend beyond the term of the Electoral Area Director unless re-appointed by the Board.

Analysis:

Ms. Federigo has submitted an application to sit on the APC for Electoral Area "E" and Director Kozakevich has recommended that this application be brought forward for appointment by the Board.

Respectfully submitted:

_____

C. Malden, Manager of Legislative Services

Minutes

Electoral Area 'I' Advisory Planning Commission

Meeting of Wednesday 19th of May, 2021

Via Online "WebEx"

Present: Subrina Monteith, Director, Electoral Area "I"

Members: Adele Dewar (Chair), Darlene Bailey – Vice Chair, Chris Struthers – Secretary, Doreen Olson, Sandie Wilson, Bob Handfield, Bruce Shepherd

Absent: John Davis, Mike Gane,

Staff: Christopher Garrish

Recording Secretary: Chris Struthers

Delegates: Martine Sallaverry, Rocky Druar (251 Alder)

1. CALL TO ORDER

The meeting was called to order at 5:31 pm

2. ADOPTION OF AGENDA

MOTION

It was Moved and Seconded that the Agenda be adopted.

CARRIED UNANIMOUSLY

3. APPROVAL OF PREVIOUS MEETING MINUTES

MOTION

It was Moved and Seconded by the APC that the Minutes of March 17th 2021 be approved.

CARRIED UNANIMOUSLY

4. APPLICATIONS

4.1 I2021.007-TUP – Temporary Use Permit (251 Alder)

Delegates present.

Discussion.

MOTION

THAT the APC recommends to the RDOS Board of Directors that the proposed temporary use be approved.

CARRIED UNANIMOUSLY

5. NEW BUSINESS

No other business.

6. ADJOURNMENT

MOTION

It was Moved and Seconded that the meeting be adjourned at 6:01 pm.

CARRIED UNANIMOUSLY

Adele R Dewar (May 19, 2021 18:20 PDT)

Advisory Planning Commission Chair

Chris Struthers (May 20, 2021 09:10 PDT)

Advisory Planning Commission Recording Secretary / minute taker.

Minutes

Electoral Area "D" Advisory Planning Commission

Meeting of May 25, 2021

Location: https://rdos.webex.com Time: 7:00 p.m.

Present:

Director:	Ron Obirek
Members:	Doug Lychak (Chair), Malcolm Paterson, Jill Adamson, Norm Gaumont, Don Albright, Kelvin Hall, Kurtis Hiebert, Jerry Stewart
Absent:	Alf Hartviksen Navid Chaudry, Almira Nunes
Staff:	Chris Garrish, Planning Manager
	Cory Labreque, Planner II
Recording Secretary:	Regional District Staff
Delegations:	None

1. CALL TO ORDER

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

ADOPTION OF AGENDA

MOTION

It was Moved and Seconded that the Agenda be adopted.

CARRIED (UNANIMOUSLY)

2. APPROVAL OF PREVIOUS MEETING MINUTES

MOTION

It was Moved and Seconded by the APC that the Minutes of May 11, 2021, be approved.

CARRIED (UNANIMOUSLY)

3. DEVELOPMENT APPLICATIONS

3.1 C4 Zone Review - OCP & Zoning Bylaw Amendment (D2018.089-ZONE)

Administrative Report submitted by Christopher Garrish, Planning Manager.

Discussion.

MOTION

It was Moved and Seconded that the APC recommends to the RDOS Board of Directors that the proposed changes to the Okanagan Falls Town Centre Transition (C4) Zone be approved.

CARRIED

3.2 Renewal of Vacation Rental Temporary Use Permits (TUPs) Development Procedures Bylaw Amendment (X2021.003-DPB)

Administrative Report submitted by Christopher Garrish, Planning Manager.

Discussion.

MOTION

It was Moved and Seconded that that the APC recommends to the RDOS Board of Directors that the proposed amendments to the processing procedures for vacation rental TUP renewals be denied.

CARRIED

4. ADJORNMENT

MOTION

It was Moved and Seconded that the meeting be adjourned at 8:50 p.m.

CARRIED

Advisory Planning Commission Chair

Cory Labrecque

Advisory Planning Commission Recording Secretary / minute taker

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Community Services Committee

Thursday, June 3, 2021
10:00 a.m.

MINUTES

MEMBERS PRESENT:

Chair M. Bauer, Village of Keremeos
Vice Chair S. Monteith, Electoral Area "I"
Director G. Bush, Electoral Area "B"
Director B. Coyne, Electoral Area "H"
Director S. Coyne, Town of Princeton
Director R. Gettens, Electoral Area "F"
Director D. Holmes, District of Summerland
Director M. Johansen, Town of Oliver
Director R. Knodel, Electoral Area "C"
Director K. Kozakevich, Electoral Area "E"
Director S. McKortoff, Town of Osoyoos
Director M. Pendergraft, Electoral Area "A"
Director R. Obirek, Electoral Area "D"
Director T. Roberts, Electoral Area "G"
Director K. Robinson, City of Penticton
Director J. Sentes, City of Penticton
Director E. Trainer, District of Summerland
Director J. Vassilaki, Alt. City of Penticton
Director C. Watt, City of Penticton

MEMBERS ABSENT:

STAFF PRESENT:

B. Newell, Chief Administrative Officer
C. Malden, Manager of Legislative Services

A. APPROVAL OF AGENDA

RECOMMENDATION 1
It was MOVED and SECONDED
THAT the Agenda for the Community Services Meeting of June 3, 2021 be adopted. - **CARRIED**

B. BC Transit – For Information Only

Delegation

- Chelsea Mossey, Senior Manager, Government Relations; and,
- Adriana McMullen, Senior Transit Planner

Ms. Mossey and Ms. McMullen advised the Committee on the impact of COVID-19 on BC Transit, as well as future plans.

C. ADJOURNMENT

It was MOVED and SECONDED
THAT the meeting adjourn. - **CARRIED**

The meeting adjourned at 10:45 a.m.

APPROVED:

M. Bauer
Community Services Committee Chair

CERTIFIED CORRECT:

B. Newell
Corporate Officer

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Corporate Services Committee

Thursday, June 3, 2021
9:40 a.m.

MINUTES

MEMBERS PRESENT:

Chair K. Kozakevich, Electoral Area "E"
Vice Chair S. Coyne, Town of Princeton
Director M. Bauer, Village of Keremeos
Director G. Bush, Electoral Area "B"
Director B. Coyne, Electoral Area "H"
Director R. Gettens, Electoral Area "F"
Director D. Holmes, District of Summerland
Director M. Johansen, Town of Oliver
Director R. Knodel, Electoral Area "C"
Director S. McKortoff, Town of Osoyoos
Director S. Monteith, Electoral Area "I"
Director R. Obirek, Electoral Area "D"
Director M. Pendergraft, Electoral Area "A"
Director T. Roberts, Electoral Area "G"
Director K. Robinson, City of Penticton
Director J. Sentes, City of Penticton
Director E. Trainer, District of Summerland
Director J. Vassilaki, City of Penticton
Director C. Watt, City of Penticton

MEMBERS ABSENT:

STAFF PRESENT:

B. Newell, Chief Administrative Officer
C. Malden, Manager of Legislative Services

A. APPROVAL OF AGENDA

RECOMMENDATION 1
It was MOVED and SECONDED
THAT the Agenda for the Corporate Services Meeting of June 3, 2021 be adopted. - **CARRIED**

B. 2021 UBCM CONVENTION

1. Organ Donation

WHEREAS the population of British Columbia is 5.071 million but only 1.555 million British Columbians have registered their organ donor decision;

AND WHEREAS one organ donor can save up to 8 lives:

THEREFORE BE IT RESOLVED that UBCM request that the Province of British Columbia enact Provincial legislation whereby an individual is deemed to consent to the individual's organs and tissues being used for transplantation activities, with the inclusion of an "opt-out" provision, similar to the Presumed Consent Organ Transplant Act passed by the Province of Nova Scotia.

2. Multi-jurisdictional resolution

WHEREAS regulatory enforcement issues in Electoral Areas may have jurisdictional boundaries that fall within Federal or Provincial, First Nations and/or Regional Districts or multi-jurisdictional areas,

THEREFORE BE IT RESOLVED that a formal multi-jurisdictional process for working in conjunction with lead agencies and governing bodies be established to resolve outstanding regulatory enforcement issues by joint cooperation of various governmental agencies.

A revised version of this proposed resolution (to remove reference to Electoral Areas, and to include reference to current practice leading to inaction) will be brought to the June 17, 2021 Corporate Services Committee meeting.

C. ADJOURNMENT

It was MOVED and SECONDED
THAT the meeting adjourn. - **CARRIED**

The meeting adjourned at 9:59 a.m.

APPROVED:

_____
K. Kozakevich
RDOS Board Chair

CERTIFIED CORRECT:

_____
B. Newell
Corporate Officer

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
Planning and Development Committee

Thursday, June 3, 2021
9:01 a.m.

MINUTES

MEMBERS PRESENT:

Chair R. Knodel, Electoral Area "C"
Vice Chair M. Pendergraft, Electoral Area "A"
Director M. Bauer, Village of Keremeos
Director G. Bush, Electoral Area "B"
Director B. Coyne, Electoral Area "H"
Director S. Coyne, Town of Princeton
Director R. Gettens, Electoral Area "F"
Director D. Holmes, District of Summerland
Director M. Johansen, Town of Oliver
Director K. Kozakevich, Electoral Area "E"
Director S. McKortoff, Town of Osoyoos
Director S. Monteith, Electoral Area "I"
Director R. Obirek, Electoral Area "D"
Director T. Roberts, Electoral Area "G"
Director K. Robinson, City of Penticton
Director J. Sentes, City of Penticton
Director E. Trainer, District of Summerland
Director J. Vassilaki, City of Penticton
Director C. Watt, City of Penticton

MEMBERS ABSENT:

STAFF PRESENT:

B. Newell, Chief Administrative Officer
C. Malden, Manager of Legislative Services

A. APPROVAL OF AGENDA

RECOMMENDATION 1
It was MOVED and SECONDED
THAT the Agenda for the Planning and Development Committee Meeting of June 3, 2021 be adopted.
CARRIED

B. Zoning Amendment Bylaw No. 2895 – Regulation of Metal Storage Containers
Electoral Areas "A", "C", "D", "E", "F" & "I"

RECOMMENDATION 2
It was MOVED and SECONDED
THAT Zoning Amendment Bylaw No. 2895, 2020, being a bylaw to introduce zoning regulations for metal storage containers not be amended;

AND THAT prior to third reading, Amendment Bylaw No. 2895, 2020, be considered by the Electoral Area Advisory Planning Commissions (APCs).

It was MOVED and SECONDED
THAT the motion be amended to add, "THAT an amendment to the Regional District's Building Bylaw No. 2805, 2018, be initiated in order to delete the requirement for a Siting Permits when placing a metal storage container." - **CARRIED**
Opposed: Director Obirek

QUESTION ON THE MAIN MOTION:
THAT Zoning Amendment Bylaw No. 2895, 2020, being a bylaw to introduce zoning regulations for metal storage containers not be amended;

AND THAT prior to 3rd reading, Amendment Bylaw No. 2895, 2020, be considered by the Electoral Area Advisory Planning Commissions (APCs);

AND THAT an amendment to the Regional District's Building Bylaw No. 2805, 2018, be initiated in order to delete the requirement for a Siting Permits when placing a metal storage container.
CARRIED

C. ADJOURNMENT

It was MOVED and SECONDED
THAT the meeting adjourn. - **CARRIED**

The meeting adjourned at 9:40 a.m.

APPROVED:

R. Knodel
Committee Chair

CERTIFIED CORRECT:

B. Newell
Corporate Officer

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
BOARD of DIRECTORS MEETING

Minutes of the Regular Board Meeting of the Regional District of Okanagan-Similkameen (RDOS) Board of Directors held at 10:46 a.m. on Thursday, June 3, 2021 in the Boardroom, 101 Martin Street, Penticton, British Columbia.

MEMBERS PRESENT:

Chair K. Kozakevich, Electoral Area "E"
Vice Chair S. Coyne, Town of Princeton
Director M. Bauer, Village of Keremeos
Director G. Bush, Electoral Area "B"
Director B. Coyne, Electoral Area "H"
Director R. Gettens, Electoral Area "F"
Director D. Holmes, District of Summerland
Director M. Johansen, Town of Oliver
Director R. Knodel, Electoral Area "C"
Director S. McKortoff, Town of Osoyoos
Director S. Monteith, Electoral Area "I"
Director R. Obirek, Electoral Area "D"
Director M. Pendergraft, Electoral Area "A"
Director T. Roberts, Electoral Area "G"
Director K. Robinson, City of Penticton
Director J. Sentes, City of Penticton
Director E. Trainer, District of Summerland
Director J. Vassilaki, City of Penticton
Director C. Watt, City of Penticton

MEMBERS ABSENT:

STAFF PRESENT:

B. Newell, Chief Administrative Officer
C. Malden, Manager of Legislative Services

Chair Kozakevich read a statement extending deep condolences to the Tk'emlups te Secwepemc First Nation regarding the remains of 215 missing children detected buried on the grounds of the former Kamloops Indian Residential School. The statement was followed by a moment of silent reflection to honour and show respect for the young lives lost.

A. APPROVAL OF AGENDA

RECOMMENDATION 1 (Unweighted Corporate Vote – Simple Majority)
IT WAS MOVED AND SECONDED
THAT the Agenda for the RDOS Board Meeting of June 3, 2021 be adopted. - **CARRIED**

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1. Consent Agenda – Corporate Issues

a. Advisory Planning Commission, Electoral Area "A" APC – March 5, 2021
THAT the minutes for the March 5, 2021, Electoral Area "A" Advisory Planning Commission be received.

b. Advisory Planning Commission, Electoral Area "E" – May 10, 2021 Minutes
THAT the minutes of the May 10, 2021 Electoral Area "E" Advisory Planning Commission be received.

c. Advisory Planning Commission, Electoral Area "F" – March 22, 2021 Minutes
THAT the minutes of the March 22, Electoral Area "F" Advisory Planning Commission be received.

d. Corporate Services Committee – May 20, 2021
THAT the Minutes of the May 20, 2021 Corporate Services Committee meeting be received.

e. Environment and Infrastructure Committee – May 20, 2021
THAT the Minutes of the May 20, 2021 Environment and Infrastructure Committee meeting be received.

f. Planning and Development Committee – May 20, 2021
THAT the Minutes of the May 20, 2021 Planning and Development Committee meeting be received.

g. Protective Services Committee – May 20, 2021
THAT the Minutes of the May 20, 2021 Protective Services Committee meeting be received.

h. RDOS Regular Board Meeting – May 20, 2021
THAT the minutes of the May 20, 2021 RDOS Regular Board meeting be adopted.

RECOMMENDATION 2 (Unweighted Corporate Vote – Simple Majority)
IT WAS MOVED AND SECONDED
THAT the Consent Agenda – Corporate Issues be adopted. - **CARRIED**

B. DEVELOPMENT SERVICES – Building Inspection

1. Building and Bylaw Contraventions – 2857 Naramata Road, Electoral Area "E"

The property owner addressed the Board.

RECOMMENDATION 3 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT a Section 302 Notice on Title, pursuant to Section 302 of the Local Government Act and Section 57 of the *Community Charter* (made applicable to Regional Districts by Section 302 of the LGA), be filed against the title of lands described as Lot 22, District Lot 207, SDYD, Plan 576 except Plan H16696, that certain works have been undertaken on the lands contrary to the Regional District of Okanagan-Similkameen Building Bylaw No. 2805, 2018;

AND THAT injunctive action be commenced against the property owners to bring the property into compliance with Regional District regulations.

It was MOVED and SECONDED
That the motion be amended to proceed with a Section 302 Notice on Title only. - **CARRIED**

QUESTION ON THE MAIN MOTION
THAT a Section 302 Notice on Title, pursuant to Section 302 of the Local Government Act and Section 57 of the *Community Charter* (made applicable to Regional Districts by Section 302 of the LGA), be filed against the title of lands described as Lot 22, District Lot 207, SDYD, Plan 576 except Plan H16696, that certain works have been undertaken on the lands contrary to the Regional District of Okanagan-Similkameen Building Bylaw No. 2805, 2018. - **CARRIED**

C. DEVELOPMENT SERVICES – Untidy/Unsightly Bylaw Enforcement

1. Untidy and Unsightly Property Contravention – 1108 Kingston Avenue, Hedley – Electoral Area "G"

The Chair enquired whether the property owner or agent was present to address the Board; however, they were not.

RECOMMENDATION 4 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT the Regional District commence the process to bring Lot 16, Block 2, District Lot 2482, SDYD, Plan KAP2565 (1108 Kingston Avenue) into compliance with the Regional District of Okanagan-Similkameen's Untidy and Unsightly Premises Regulatory Control Bylaw No. 2521, 2010. - **CARRIED**

D. DEVELOPMENT SERVICES – Rural Land Use Matters

1. Temporary Use Permit Application – 128 Saliken Drive, Electoral Area "D"

a. Permit
b. Representations

The property owner addressed the Board.

RECOMMENDATION 5 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT Temporary Use Permit No. D2021.005-TUP to allow a short-term vacation rental in a 4-bedroom house at 128 Saliken Drive be denied. - **DEFEATED**
Opposed: Directors Kozakevich, Vassilaki, Bush, Watt, Trainer, Johansen, McKortoff, S. Coyne, Knodel, Roberts, Holmes, Bauer, Gettens, Pendergraft, Sentes, Robinson

It was MOVED and SECONDED
THAT the Board of Directors approve Temporary Use Permit No. D2021.005-TUP, with the conditions that it is limited to a 2 bedroom, 4 person limit, 2 parking stalls, and extended to December 31, 2022. - **CARRIED**

2. OCP & Zoning Bylaw Amendments – Okanagan Falls Commercial Zone review (Okanagan Falls Town Centre Plan- Phase 3)

a. Bylaw No. 2455.38
b. Bylaw No. 2603.15
c. Representations

RECOMMENDATION 6 (Unweighted Rural Vote – Simple Majority)
It was MOVED and SECONDED
THAT Official Community Plan (OCP) Amendment Bylaw No. 2603.15, 2021, and Zoning Amendment Bylaw 2455.38, 2021 be read a first and second time and proceed to public hearing; AND,

THAT the Board of Directors considers the process, as outlined in this report from the Chief Administrative Officer dated June 3, 2021, to be appropriate consultation for the purpose of Section 475 of the *Local Government Act*; AND,

THAT, in accordance with Section 477 of the *Local Government Act*, the Board of Directors has considered Amendment Bylaw No. 2603.15, 2021, in conjunction with its Financial and applicable Waste Management Plans; AND,

THAT the holding of a public hearing be scheduled for the Regional District Board meeting of July 8, 2021; AND

THAT staff give notice of the public hearing in accordance with the requirements of the *Local Government Act*.
CARRIED

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3. Zoning Bylaw Amendment – Electoral Areas "A", "C", "D", "E", "F", "G", "H" & "I"

a. Bylaw No. 2932
b. Representations

RECOMMENDATION 7 (Unweighted Rural Vote – Simple Majority)
It was MOVED and SECONDED
THAT Bylaw No. 2932, 2021, Regional District of Okanagan-Similkameen Secondary Suite and Accessory Dwelling Floor Area Zoning Amendment Bylaw be read a first and second time and proceed to public hearing; AND,

THAT the holding of a public hearing be scheduled for the Regional District Board meeting of July 8, 2021; AND,

THAT staff give notice of the public hearing in accordance with the requirements of the *Local Government Act*.
CARRIED

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4. Minutes – Board of Variance – April 6, 2021

RECOMMENDATION 8 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT the Board of Variance minutes of April 6, 2021 be referred to administration to undertake a review of the Board recommendations contained therein to determine potential impact to current resources and workplans or to confirm legislative and/or legal authority. - **CARRIED**

5. Minutes – Electoral Area "D" APC – April 13, 2021

RECOMMENDATION 9 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT the April 13, 2021 minutes of the Area "D" APC be referred to administration to undertake a review of the recommendations therein to determine potential impact to current resources and workplans or to confirm legislative and/or legal authority. **- CARRIED**

E. PUBLIC WORKS

1. Air Quality – Central Okanagan Regional District
a. Request to present

RECOMMENDATION 10 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT the Chair of the Central Okanagan Regional District be invited to appear before the Board to discuss Air Quality, at her earliest convenience. **- CARRIED**

F. COMMUNITY SERVICES

1. Okanagan Falls Parks and Recreation Commission Resolutions.
a. Okanagan Falls Parks and Recreation minutes – March 25, 2021
b. Okanagan Falls Parks and Recreation minutes – April 8, 2021

RECOMMENDATION 11 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
THAT the minutes of the March 25 & April 8, 2021 Okanagan Falls Parks and Recreation Commission meetings be received. **- CARRIED**

RECOMMENDATION 12 (Unweighted Corporate Vote – Simple Majority)
It was MOVED and SECONDED
That the request for the Regional District to submit an application to South Okanagan Similkameen Conservation Program (SOSCP) to investigate "save the aster, save the beach" be referred to SOSCP for comment. **- CARRIED**

2. Commitment of Funds to Construct a Multi-Purpose Sports Facility in Princeton

RECOMMENDATION 13 (Weighted Corporate Vote – Majority)
It was MOVED and SECONDED
THAT the Regional District of Okanagan Similkameen authorize the use of up to $31,250 from the Area "H" Community Works Program; contingent on the Princeton Lacrosse Association receiving a Provincial Community Gaming Program grant to construct a multi-sports facility**. - CARRIED**

G. LEGISLATIVE SERVICES

1. Indigenous relations update – Information Only

H. CAO REPORTS

1. Verbal Update

I. OTHER BUSINESS

1. Chair's Report

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2. Directors Motions

a. Notice of Motion – Director Monteith
THAT Finance present RDOS budgets to Directors for all services with a -2, 0, 2 and 3 percent increase at the budget committee meetings annually and that Finance present RDOS budget in a live format to allow Directors to visually see impact to each electoral area and member municipality during decision making during all budget discussions.

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3. Board Members Verbal Update

J. ADJOURNMENT

IT WAS MOVED AND SECONDED
THAT the meeting adjourn. - **CARRIED**

The meeting adjourned at 12:38 p.m.

APPROVED:

K. Kozakevich
RDOS Board Chair

CERTIFIED CORRECT:

B. Newell
Corporate Officer

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Development Variance Permit Application — Electoral Area "E"
710 Ritchie Avenue, Naramata (E-00689.000)

Administrative Recommendation:

THAT Development Variance Permit No. E2021.020-DVP, an applicaton to vary a sideyard setback at 710 Ritchie Ave. in Naramata, be approved

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Proposed Development:

This application is seeking a variance to the interior side parcel line setback that applies to the 710 Ritchie Avenue in order to alter the roof of an existing, non-conforming accessory building.

Specifically, it is being proposed to reduce the minimum interior side parcel line setback in the Residential Single Family One (RS1) Zone for an accessory building from 3.0 metres to 0.93 metres.

In support of this request, the applicant has stated that "the existing roof requires replacing due to age. The added wall height will provide [the] addition of privacy for both parties, while remaining on [the] existing foot print."

Site Context:

The subject property is approximately 557 m^2 in area and is situated on the south side of Ritchie Avenue and east side of Seventh Street in Naramata. The property is currently developed to one single detached dwelling and one accessory building.

The surrounding pattern of development is characterised by residential and the local school and Naramata Town Centre nearby.

Background:

The current boundaries of the subject property were created by a Plan of Subdivision deposited with the Land Titles Office in Kamloops July 8th, 1908 while available Regional District records indicate that building permits have not previously been issued for this property.

Under the Electoral Area "E" Official Community Plan (OCP) Bylaw No. 2458, 2008, the subject property is currently designated Low Density Residential (LR) and is the subject of a Watercourse Development Permit Area and a WDP has previously been issued for the proposal.

Under the Electoral Area "E" Zoning Bylaw No. 2459, 2008, the property is currently zoned Residential Single Family One (RS1) which alllows, among other secondary uses, accessory buildings and structures.

Under Section 8.0 (Floodplain Regulations) of the Zoning Bylaw, the subject property is within the floodplain associated with Naramata Creek.

BC Assessment has classified the property as "Residential" (Class 01).

Public Process:

Adjacent property owners will have received notification of this application with written comments regarding the proposal being accepted until the commencement of the regular Board meeting. Any comments will be on the agenda as separate item.

Analysis:

In considering this proposal, Administration notes the variance is to accommodate the modification of an aging roof on an existing, non-conforming accessory building.

The Zoning Bylaw's use of setback regulations is generally to provide physical separation between neighbouring properties in order to protect privacy and prevent the appearance of overcrowding.

Minimum setbacks from parcel lines are used to maintain a minimum space between buildings in a residential neighbourhood to allow access to sunlight, to provide separation for fire safety or to mitigate nuisances (like noise) that might come from an adjacent building.

In this instance, Administration does not consider accommodating an interior side parcel setback reduction to 0.93 metres to replace a roof negatively impacting the surrounding area, as it is within the existing building footprint and the roof is designed to slope away from the adjacent parcel (which will direct stormwater away from the property line), and there are no windows facing the adjacent parcel to impact privacy.

Further, the subject building is accessed from the rear lane and there is no access to the building (vehicle or pedestrian) provided within the proposed reduced setback.

Conversely, Administration recognises that the structure could be seen as having an appearance of overcrowding.

For these reasons, Administration supports the requested variance and is recommending approval.

Alternatives:

1. That the Board Deny Development Variance Permit No. E2021.020-DVP.
2. That the Board defer consideration of the application and it be referred to the Electoral Area "E" Advisory Planning Commission.

Respectfully submitted	**Respectfully submitted**	**Endorsed by**:
Colin Martin		
Colin Martin, Planning Student	J. Peachey, Planner I	C. Garrish, Planning Manager

Attachments: No. 1 – Site Photo (Ritchie Avenue Frontage - May 2021)

No. 2 – Site Photo (Laneway Frontage – May 2021)

Attachment No. 1 – Site Photo (Ritchie Avenue Frontage - May 2021)

Attachment No. 2 – Site Photo (Laneway Frontage – May 2021)

Development Variance Permit

FILE NO.: E2021.020-DVP

Owner: Agent:

GENERAL CONDITIONS

1. This Development Variance Permit is issued subject to compliance with all of the bylaws of the Regional District of Okanagan-Similkameen applicable thereto, except as specifically varied or supplemented by this Permit.

2. The land described shall be developed strictly in accordance with the terms and conditions and provisions of this Permit, and any plans and specifications attached to this Permit that shall form a part thereof.

3. Where there is a conflict between the text of the permit and permit drawings or figures, the drawings or figures shall govern the matter.

4. This Development Variance Permit is not a Building Permit.

APPLICABILITY

5. This Development Variance Permit is substantially in accordance with Schedules 'A', 'B', 'C', 'D', 'E', 'F', and 'G', and applies to and only to those lands within the Regional District described below, and any and all buildings, structures and other development thereon:

   Legal Description: Lot 1, Block 70, Plan 519, District Lot 210, SDYD

   Civic Address: 710 Ritchie Avenue, Naramata

   Parcel Identifier (PID): 009-490-345 Folio: E-00689.000

CONDITIONS OF DEVELOPMENT

6. The land specified in Section 5 may be developed in accordance with the following variances to the Electoral Area "E" Zoning Bylaw No. 2459, 2008, in the Regional District of Okanagan-Similkameen:

   a) the minimum side parcel line setback for a accessory building in the Residential Single Family One (RS1) Zone, as prescribed in Section 11.1.6(b)(iv), is varied:

      i) from: 3.0 metres

         to: 0.93 metres to the outermost projection as shown on Schedule 'B'.

COVENANT REQUIREMENTS

7. Not Applicable

SECURITY REQUIREMENTS

8. Not applicable

EXPIRY OF PERMIT

9. The development shall be carried out according to the following schedule:

   a) In accordance with Section 504 of the *Local Government Act* and subject to the terms of the permit, if the holder of this permit does not substantially start any construction with respect to which the permit was issued within two (2) years after the date it was issued, the permit lapses.

   b) Lapsed permits cannot be renewed; however, an application for a new development permit can be submitted.

Authorising resolution passed by the Regional Board on _____, 2021.

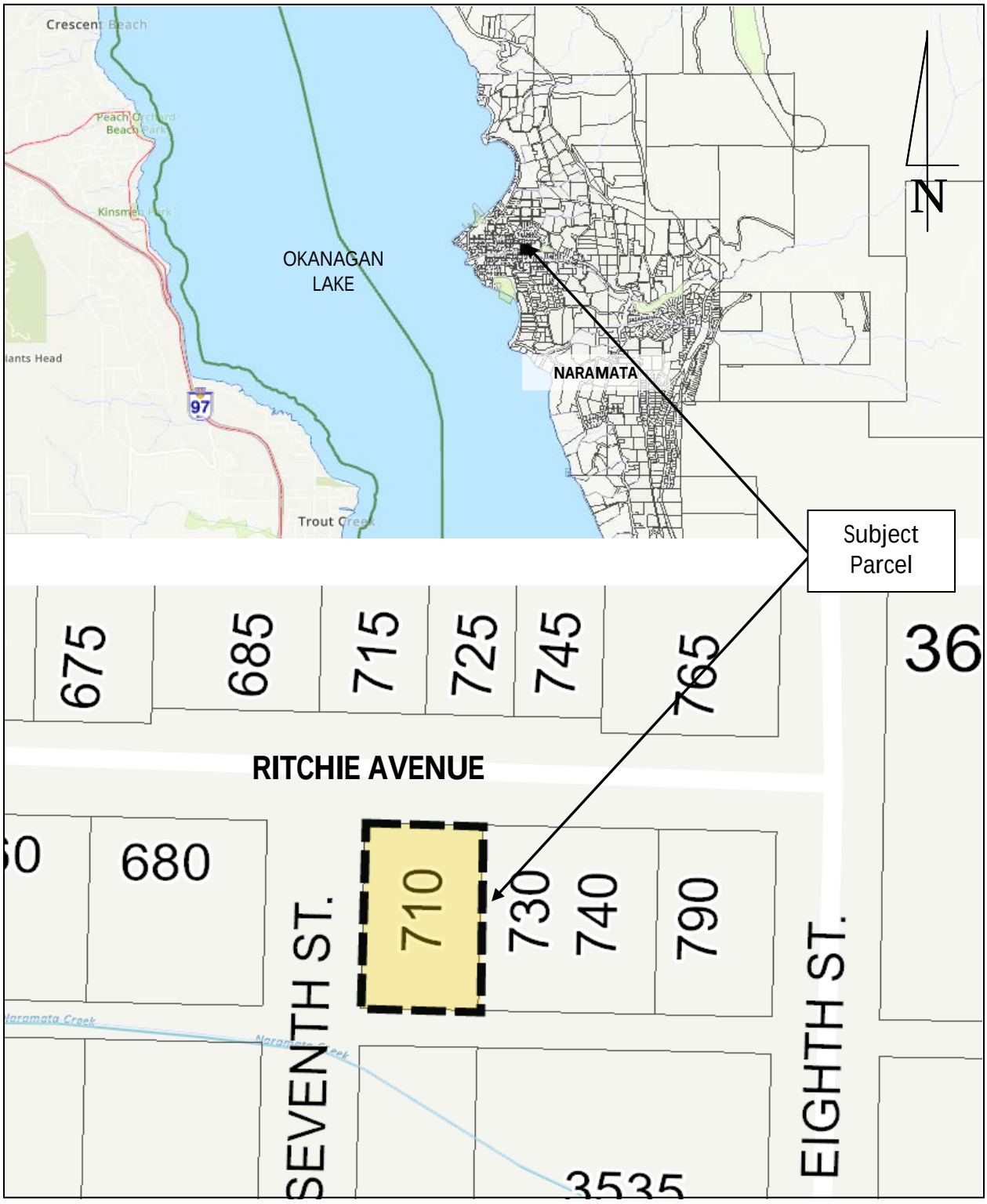
_____

B. Newell, Chief Administrative Officer

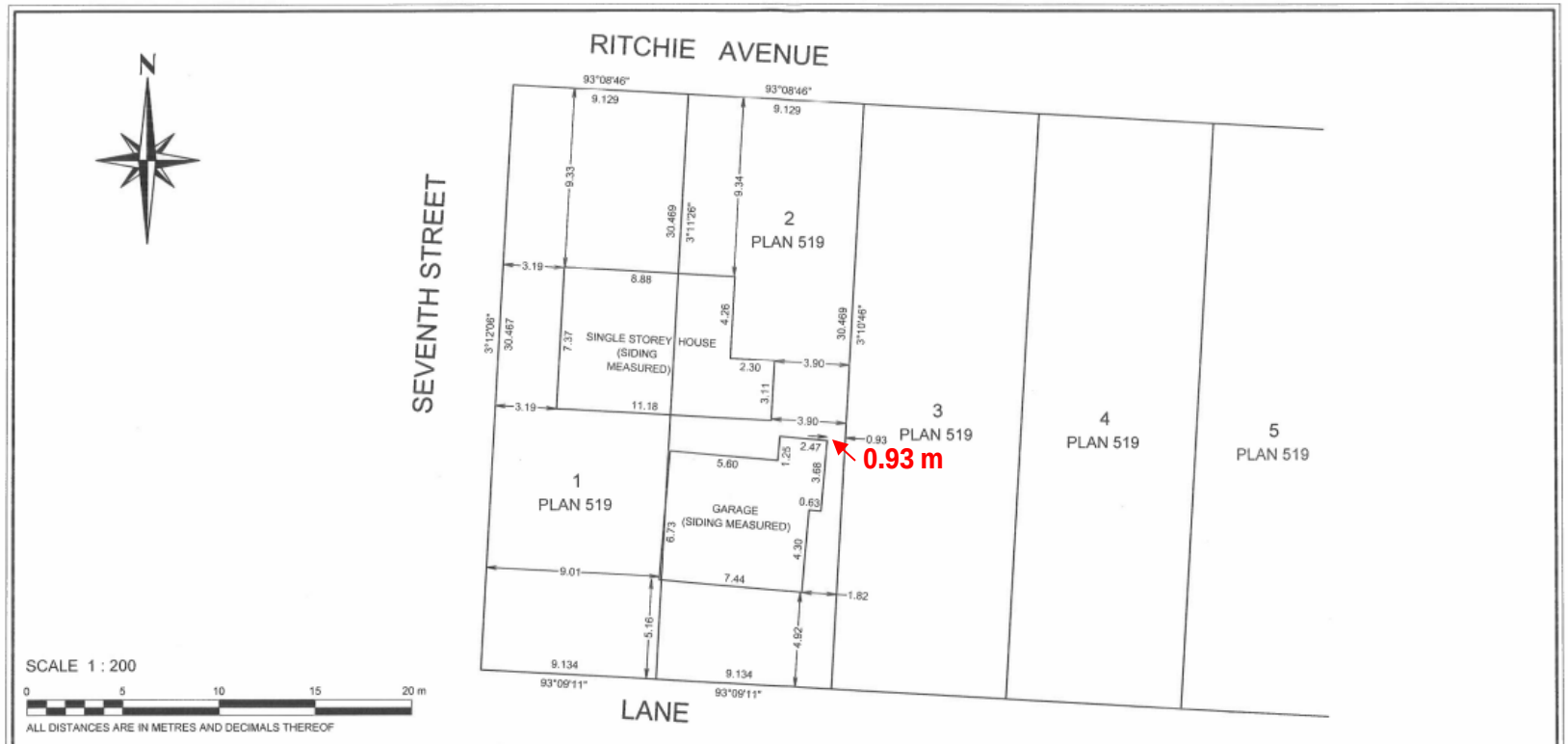
Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Tel: 250-492-0237 Email: planning@rdos.bc.ca

Development Variance Permit File No. E2021.020-DVP

Schedule 'A



Schedule 'B'



BRITISH COLUMBIA LAND SURVEYOR'S CERTIFICATE OF LOCATION OF BUILDINGS ON
LOTS 1 & 2 BLOCK 70 DISTRICT LOT 210 SIMILKAMEEN DIVISION YALE DISTRICT PLAN 519

THIS LOCATION CERTIFICATE HAS BEEN PREPARED IN ACCORDANCE WITH THE PROFESSIONAL REFERENCE MANUAL AND IS CERTIFIED CORRECT THIS 22nd DAY OF APRIL, 2021

David Sereda YJISPN B.C.L.S.

DAVID G. SEREDA (978)

THIS DOCUMENT IS NOT VALID UNLESS DIGITALLY SIGNED

PID NO. 009-490-345 & 009-490-353
DATE OF FIELD SURVEY: APRIL 12, 2021
PARCEL DIMENSIONS ARE FROM FIELD SURVEY.

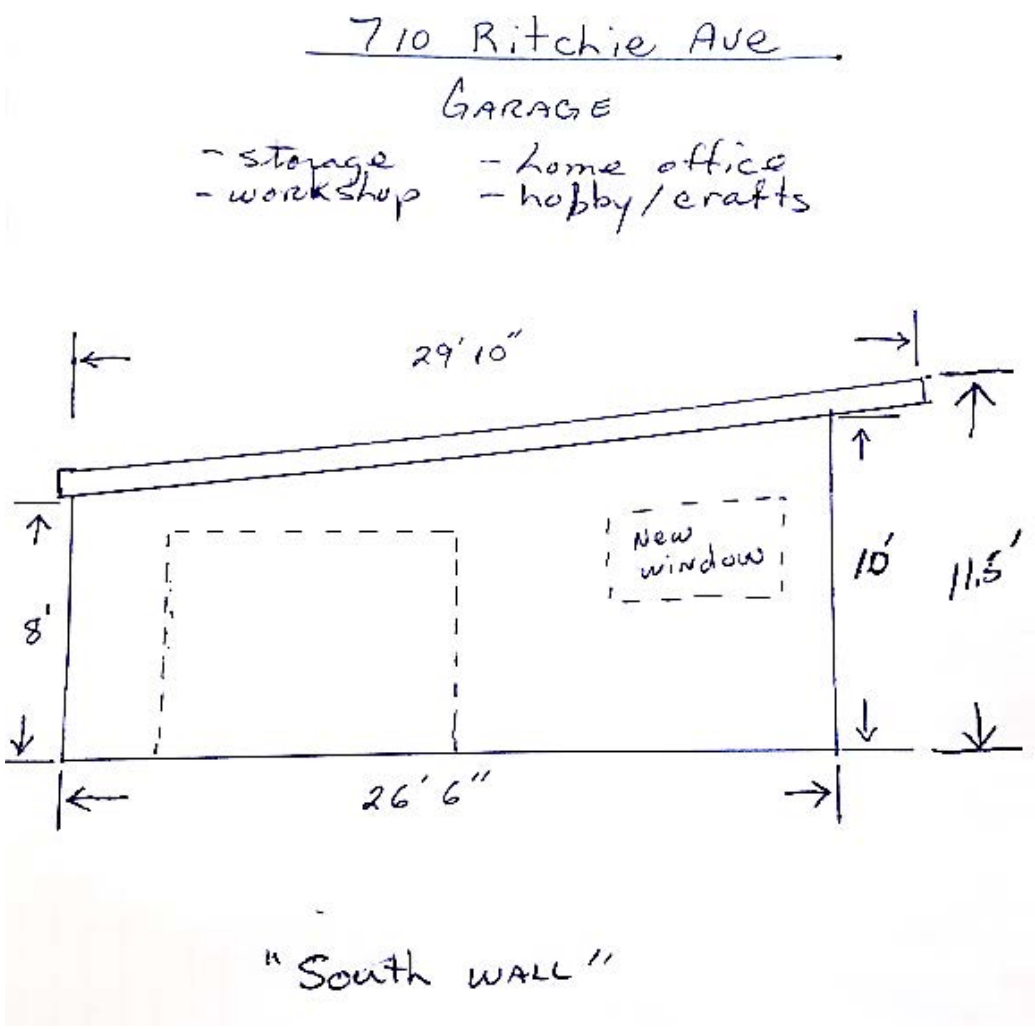
PREPARED FOR: LORNE AND CHRISTINE MARCEAU
CIVIC ADDRESS: 710 RITCHIE AVENUE, NARAMATA, BC

THIS DOCUMENT WAS PREPARED SOLELY FOR A LIMITED CONTRACTUAL USE BETWEEN McELHANNEY ASSOCIATES LAND SURVEYING LTD. AND OUR CLIENT. THIS DOCUMENT IS BASED ON LAND TITLE & SURVEY AUTHORITY RECORDS AND FIELD SURVEY. UNREGISTERED INTERESTS HAVE NOT BEEN INCLUDED OR CONSIDERED. THIS DOCUMENT SHOWS THE RELATIVE LOCATION OF THE SURVEYED STRUCTURES AND FEATURES WITH RESPECT TO THE BOUNDARIES OF THE PARCEL DESCRIBED ABOVE. THIS DOCUMENT SHALL NOT BE USED TO DEFINE PROPERTY LINES OR PROPERTY CORNERS.

McElhanney
McELHANNEY ASSOCIATES LAND SURVEYING LTD.
290 Nanaimo Ave. W
Penticton BC
Canada V2A 1N5
Tel 250 492 7399

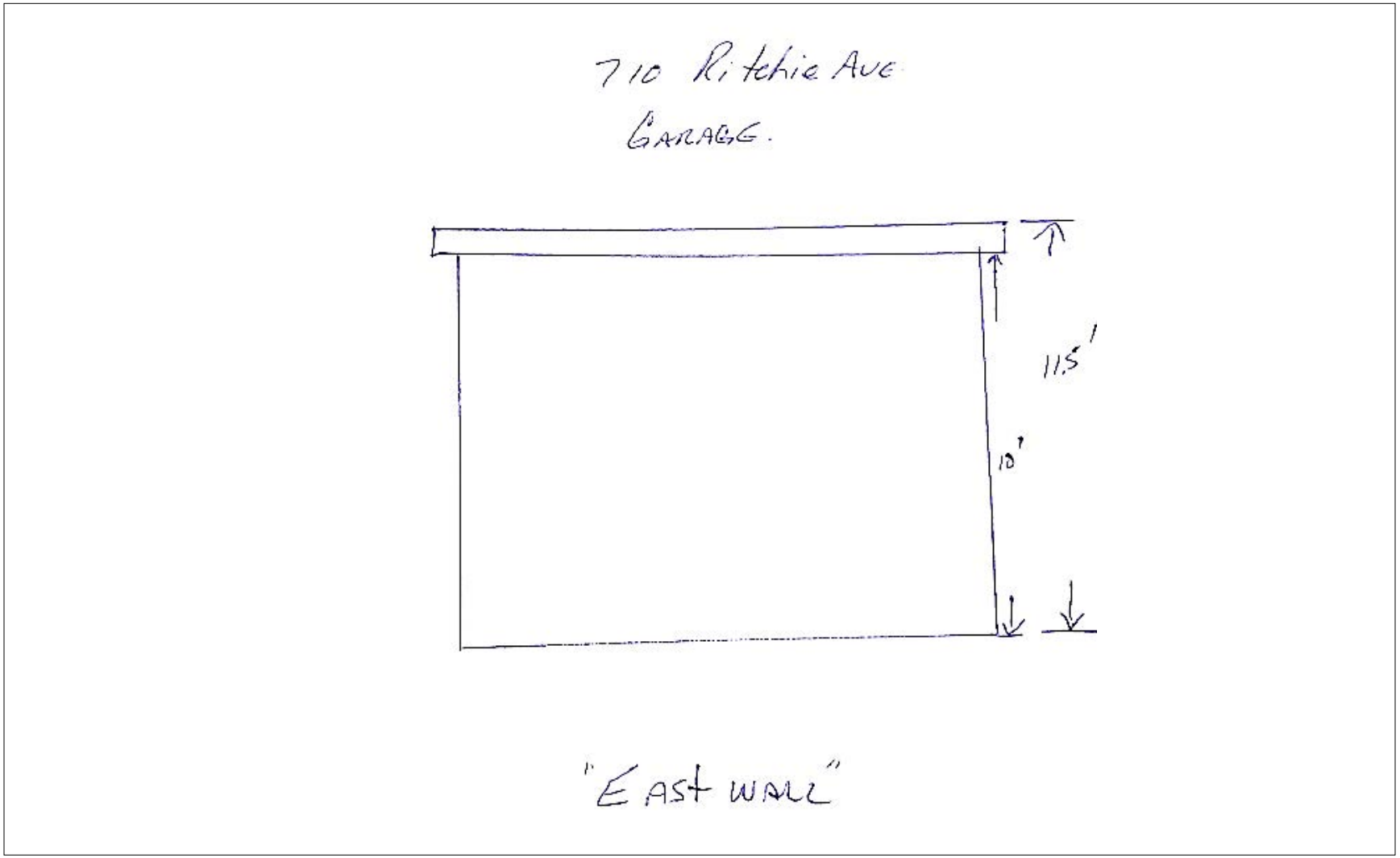
FILE NO. 2422-03859-00
DRAWING NO. 3859-00-V-CERT.DWG

Schedule 'C'


710 Ritchie Ave
GARAGE
- storage
- workshop
- home office
- hobby/crafts
29'10"
New window
10'
11.5'
8'
26'6"
"South WALL"

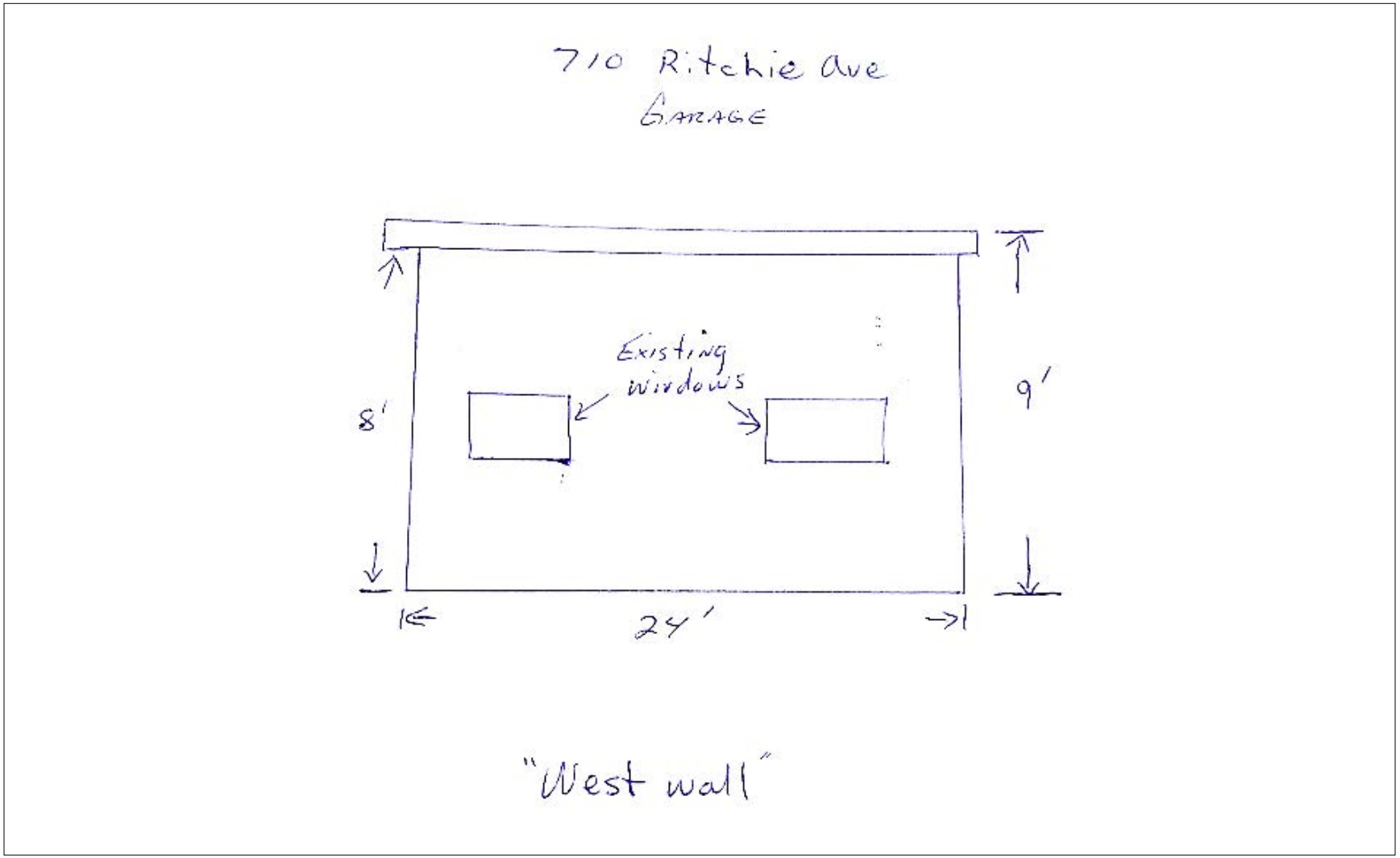
Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Schedule 'D'

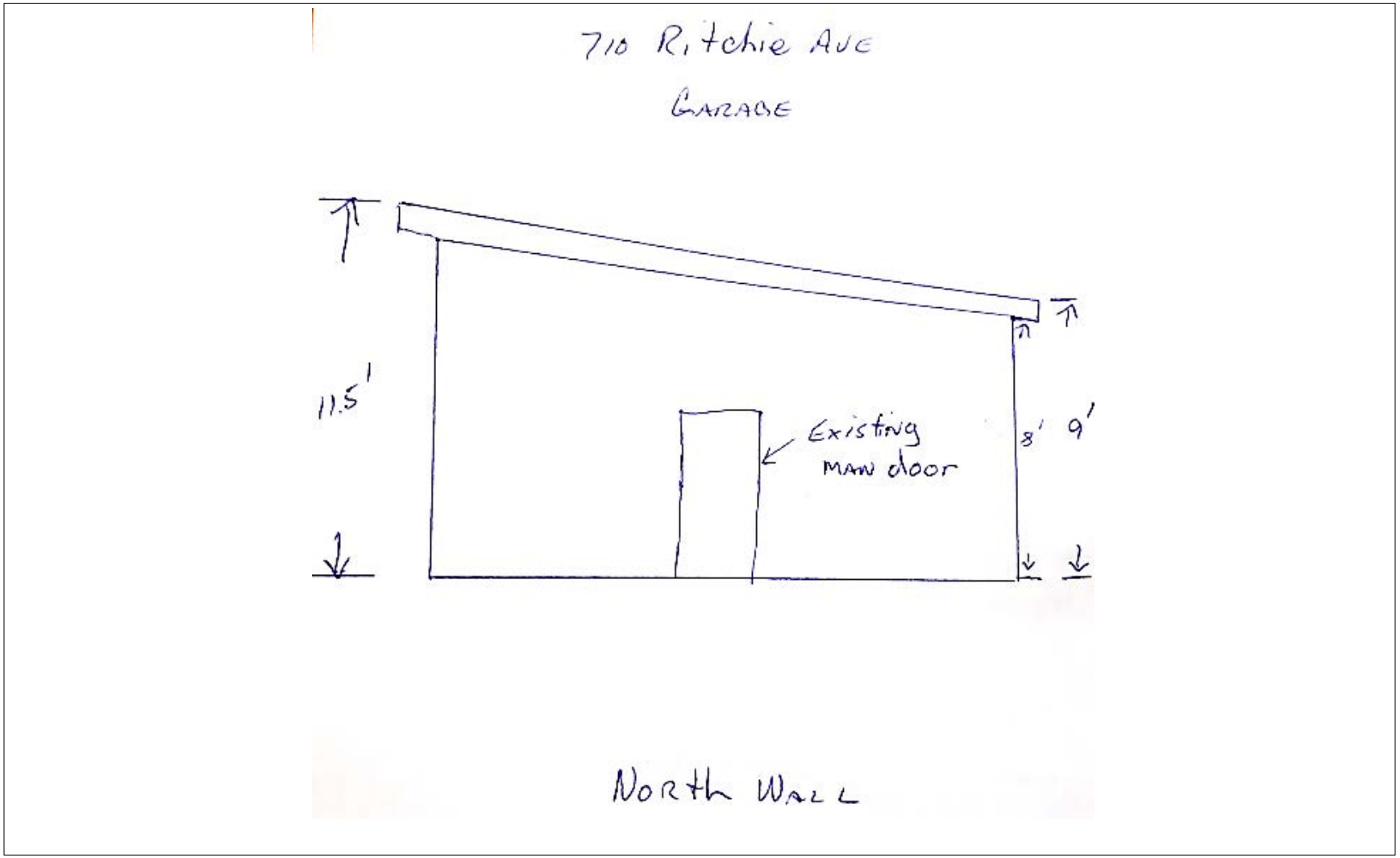


Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Schedule 'E'

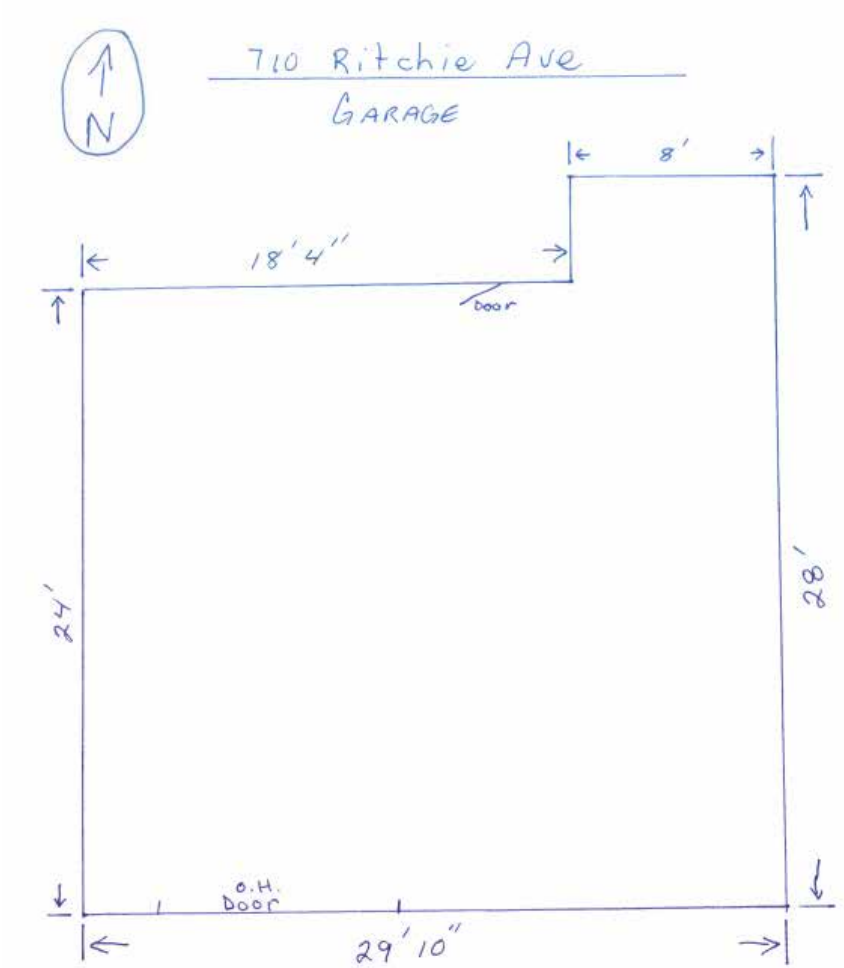


Schedule 'F'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Schedule 'G'



ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Development Variance Permit Application — Electoral Area "E"
210-290 Anna Avenue, Naramata (E-00630.000)

Administrative Recommendation:

THAT Development Variance Permit No. E2021.025-DVP, an application to vary the height of an accessory building at 290 Anna Ave. in Naramata, be approved.

Proposed Development:

This application is seeking a variance to the maximum height for an accessory building or structure that applies to the subject property from 4.5 metres to 6.5 metres in order to facilitate the development of a "parkade" structure.

In support of this request, the applicant has stated that "the [proposed] garage building provides an attractive face to the adjacent 10.0 m blank wall, and creates an internal courtyard which allows for trees, greenery and useable outdoor space on this post-industrial, brownfield site."

Site Context:

The subject property is situated at the south-west corner of the intersection of Anna Avenue and 3rd Street on a lot that is approximately 1.79 ha in area and which is bordered by the First Street to west and Robinson Avenue to south. The property is currently being subdivided from the former BC Tree Fruits fruit packaging facility site and has comprised vacant land for many years.

Surrounding land uses are predominantly residential with single dwellings located to the east, Park (PR) to north and west, and Naramata Village Centre (NVC) to the south.

Background:

The current boundaries of the subject property date to a plan of subdivision that was deposited with the Land Title Office in Kamloops on October 4, 1989. Available Regional District records indicate that building permits have previously been issued for a fruit packaging facility (1981) and additions to it in 2018.

Under the Electoral Area "E" Official Community Plan (OCP) Bylaw No. 2458, 2008, the property is designated Naramata Village Centre (NVC), and is subject to a Naramata Village Centre Development Permit (DP) Area. Under the Electoral Area "E" Zoning Bylaw No. 2459, 2008, the property is zoned Naramata Village Centre (NVC), which lists multi-dwelling units as a permitted principal use.

A two-lot subdivision application was applied with Ministry of Transportation and Infrastructure in February 2020 in order to subdivide existing multi-dwelling strata from the remainder of the parcel.

BC Assessment has classified the property as part "Light Industry" (Class 05) and part "Business and Other" (Class 06).

Public Process:

Adjacent property owners will have received notification of this application with written comments regarding the proposal being accepted until the commencement of the regular Board meeting. Any comments will be on the agenda as separate item.

Analysis:

Regulating the height of accessory structures through the Zoning Bylaw is done to ensure that a building does not impact the shade and outdoor privacy of adjacent properties, or views to significant landmarks, water bodies or other natural features.

Building height is also an important component of the built form of a neighbourhood and, depending upon the location of an accessory structure (i.e. near a street frontage) an excessive height can have an impact upon established streetscape characteristics.

When assessing variance requests a number of factors are taken into account, including the intent of the regulation, the presence of any potential limiting physical features on the subject property, established streetscape characteristics and whether the proposed development would have a detrimental impact upon the amenity of the area and/or adjoining uses.

In this instance, Administration notes that the proposed parkade is to be situated immediately adjacent a larger commercial building ("Wine Vault"), that the other three frontages to the property are roads and, as a result, no adjacent uses should be adversely impacted by the proposed height variance by loss of privacy, overshadoiwing or impact on views.

Similarly, given the height and location of the adjacent "Wine Vault" building, the proposed parkade is unlikely to adversely impact the built form of the neighbourhood given its height and visual impact on the streetscape of 1st & 3rd Streets will be less than the "Wine Vault".

While there are no apparent physical limitations associated with this property that would warrant an increase in height for an accessory structure, Administration also recognizes that it is unusal to have a separate height allowance for accessory structures in such a mixed-use Town/Village Centre zone and will be reviewing this as part of the drafting of a new single zoning bylaw for the South Okanagan Electoral Areas.

Conversely, the applicant could redesign the proposed parkade structure to comply with the prescribed maximum height allowance in the NVC Zone.

Nevertheless, and for these reasons outlined above, Administration supports the requested variance and is recommending approval.

Alternatives:

1. That the Board deny Development Variance Permit No. E2021.025-DVP; OR
2. That the Board defer consideration of the application and it be referred to the Electoral Area "E" Advisory Planning Commission.

Respectfully submitted

Attachments:
No. 1 – Site Photo (Google Streetview)
No. 2 – Aerial Photo (2017)

_____

C. Garrish, Planning Manager

Attachment No. 1 – Site Photo (Google Streetview)

Attachment No. 2 – Aerial Photo (2017)

Development Variance Permit

FILE NO.: E2021.025-DVP

Owner:

Agent: Landform Architecture Ltd.
102 Ellis Street
Penticton, BC, V2A-4L5

GENERAL CONDITIONS

1. This Development Variance Permit is issued subject to compliance with all of the bylaws of the Regional District of Okanagan-Similkameen applicable thereto, except as specifically varied or supplemented by this Permit.

2. The land described shall be developed strictly in accordance with the terms and conditions and provisions of this Permit, and any plans and specifications attached to this Permit that shall form a part thereof.

3. Where there is a conflict between the text of the permit and permit drawings or figures, the drawings or figures shall govern the matter.

4. This Development Variance Permit is not a Building Permit.

APPLICABILITY

5. This Development Variance Permit is substantially in accordance with Schedules 'A', 'B', 'C', 'D', 'E' and 'F', and applies to and only to those lands within the Regional District described below, and any and all buildings, structures and other development thereon:

Legal Description:	Lot 1, Plan 41817, District Lot 210, SDYD	
Civic Address:	210-290 Anna Avenue, Naramata	
Parcel Identifier (PID):	014-873-141	Folio: E-06575.010

CONDITIONS OF DEVELOPMENT

6. The land specified in Section 5 may be developed in accordance with the following variances to the Electoral Area "E" Zoning Bylaw No. 2459, 2008, in the Regional District of Okanagan-Similkameen:

   a) the maximum building height for a accessory building or structure in the Naramata Village Centre (NVC) Zone, as prescribed in Section 13.1.6(b), is varied:

      i) from: 4.5 metres

to: 6.5 metres, as shown on Schedule 'B'.

COVENANT REQUIREMENTS

7. Not Applicable

SECURITY REQUIREMENTS

8. Not applicable

EXPIRY OF PERMIT

9. The development shall be carried out according to the following schedule:

   a) In accordance with Section 504 of the *Local Government Act* and subject to the terms of the permit, if the holder of this permit does not substantially start any construction with respect to which the permit was issued within two (2) years after the date it was issued, the permit lapses.

   b) Lapsed permits cannot be renewed; however, an application for a new development permit can be submitted.

Authorising resolution passed by the Regional Board on _____, 2021.

_____

B. Newell, Chief Administrative Officer

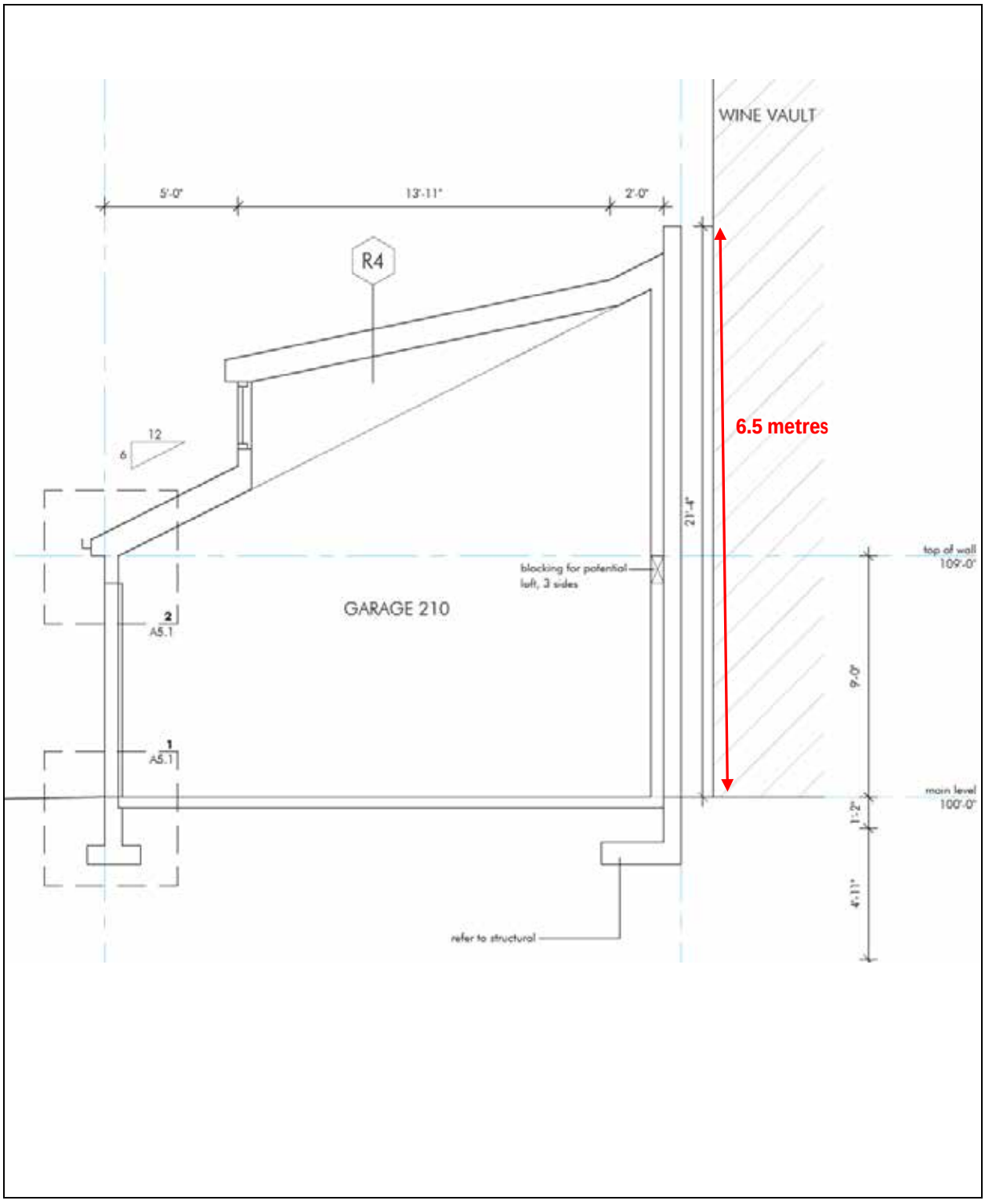
Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Tel: 250-492-0237 Email: planning@rdos.bc.ca

Development Variance Permit File No. E2021.025-DVP

Schedule 'A'

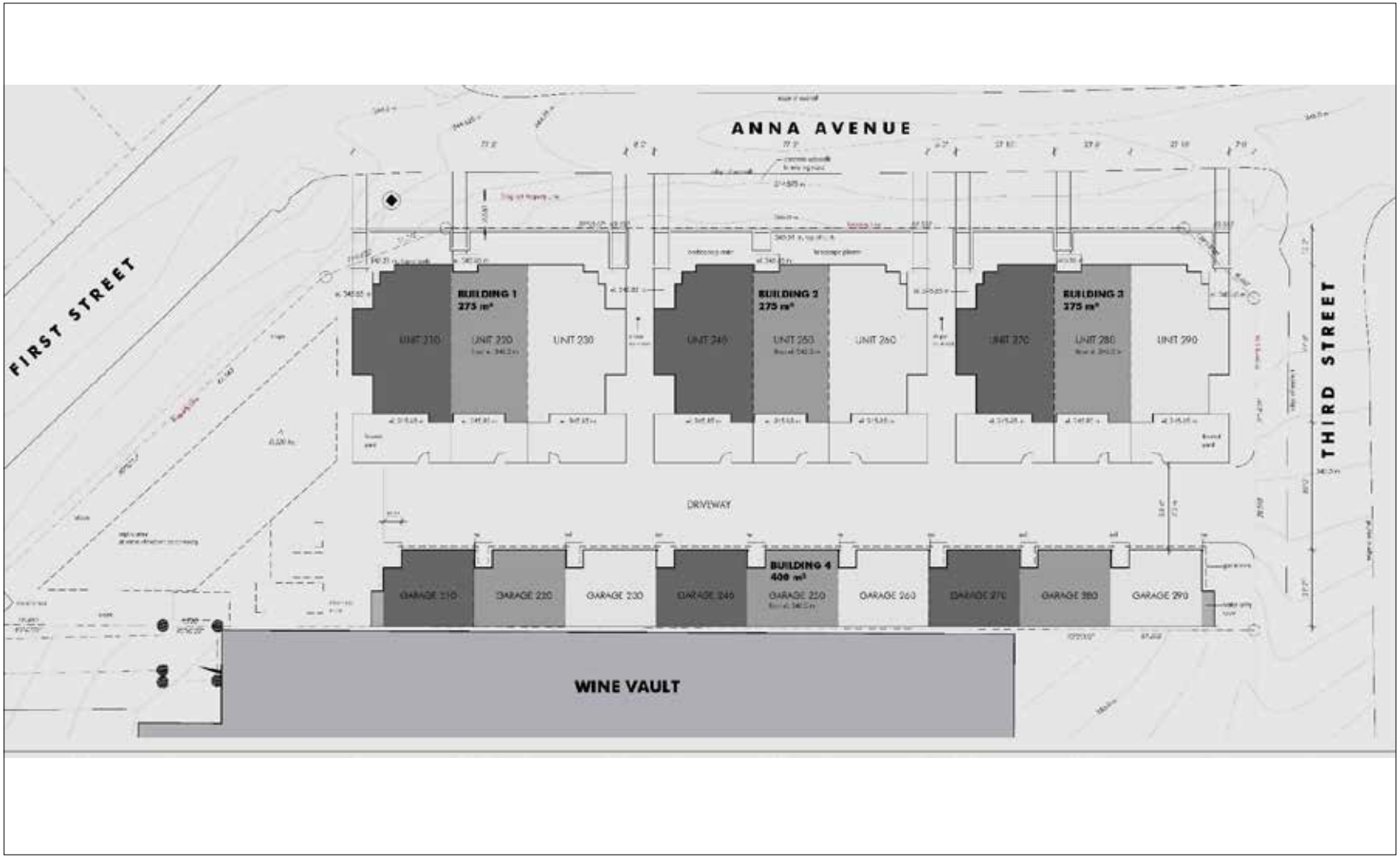
Development Variance Permit File No. E2021.005-DVP

Schedule 'B'



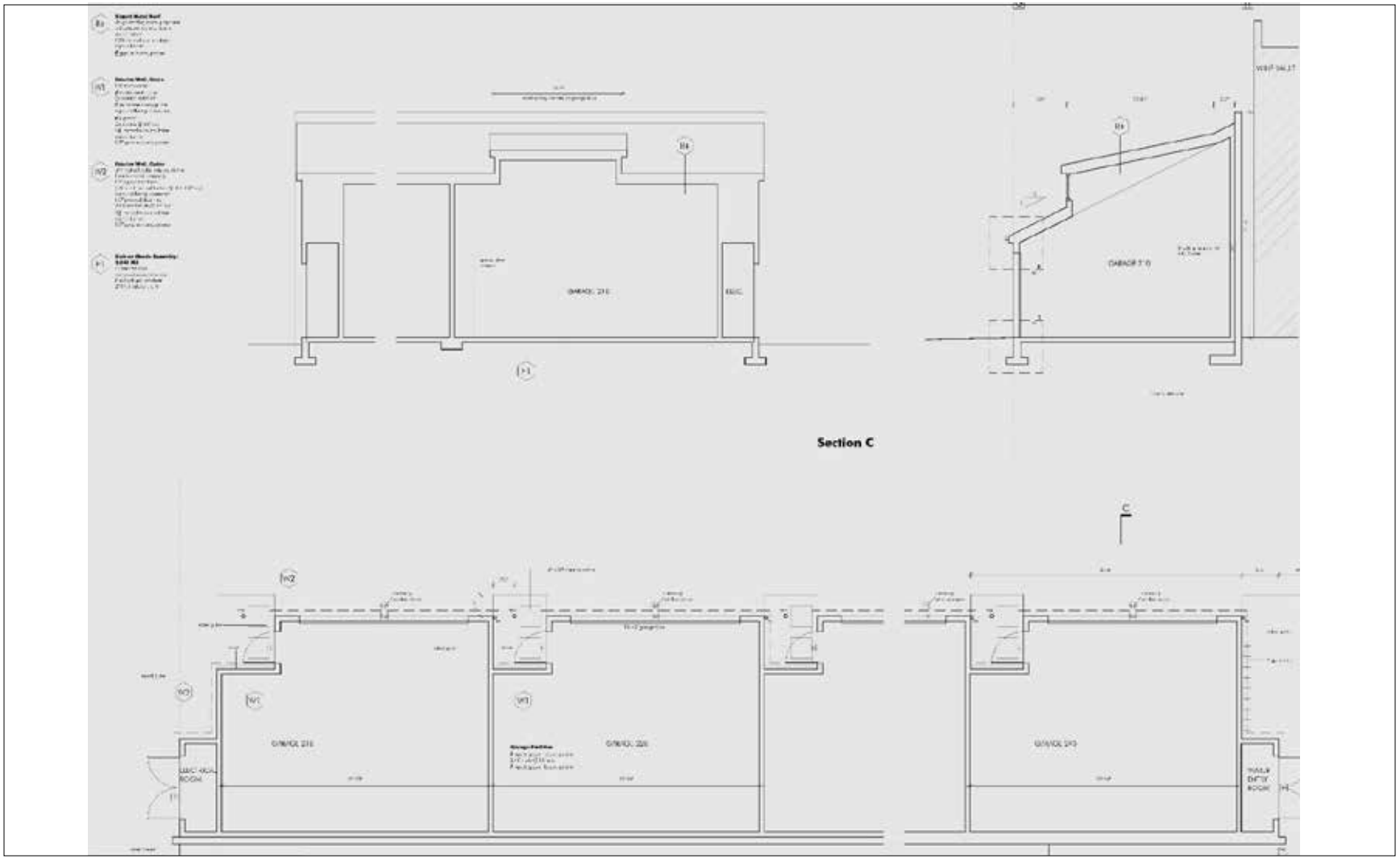
Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Schedule 'C'



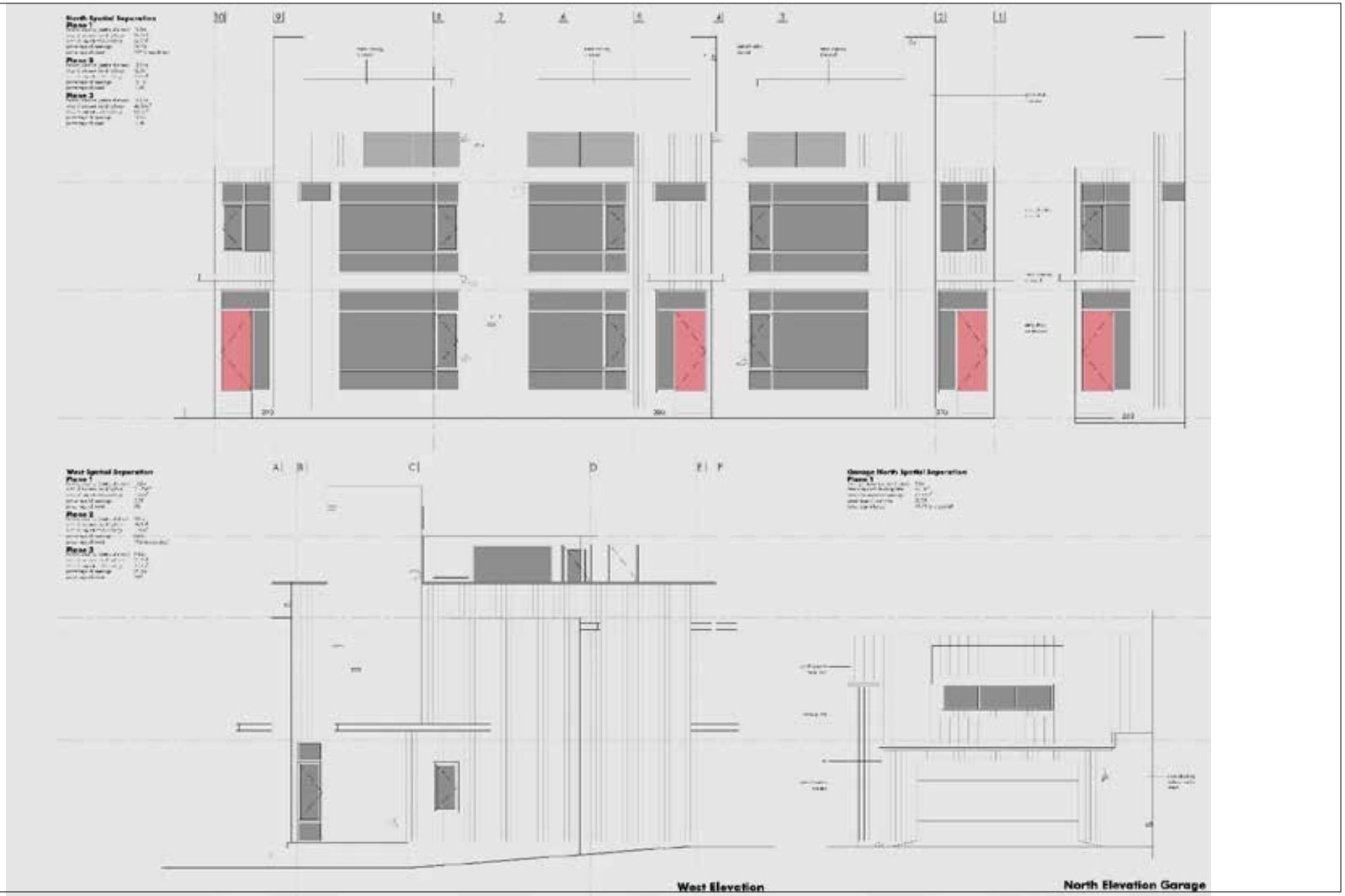
Development Variace Permit File No. E2021.025-DVP

Schedule 'D'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Schedule 'E'



Schedule 'F'

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Temporary Use Permit Application – Electoral Area "I"
251 Alder Avenue, Kaleden (I-01523.540)

Administrative Recommendation:

THAT Temporary Use Permit No. I2021.007-TUP, an application for a Vacation Rental at 251 Alder Ave. in Kaleden, be approved.

Proposed Development:

This application is seeking a temporary use permit to authorize the operation of a short-term vacation rental use of a single detached dwelling, from May 1st to October 31st and which is to be comprised of three (3) bedrooms and a maximum occupancy of 6 people within the existing single detached dwelling with accommodation for three (3) parking stalls.

Site Context:

The subject property is approximately 1,320 m^2 in area and is situated on the southeast side of Alder Avenue directly opposite of a public lake access to Skaha Lake. It is understood that the parcel is comprised of a single detached dwelling.

The surrounding pattern of development is generally characterised by similarly sized residential parcels that have been development with single detached dwellings along Alder Avenue and larger residential parcels behind.

Background:

The current boundaries of the subject property were created by a Plan of Subdivision deposited with the Land Titles Office in Kamloops on October 2, 2017, while available Regional District records indicate that a building permit for a single detached dwelling (2019) has previously been issued for this property.

Under the Electoral Area "I" Official Community Plan (OCP) Bylaw No. 2683, 2015, the subject property is currently designated Low Density Residential (LR), and is the subject of a Environmentally Sensitive Development Permit (ESDP) Area designations on a portion of the parcel.

Section 23 of the Electoral Area "I" OCP Bylaw contains the objective to consider allowing on-going short-term vacation rental uses on properties designated Residential through the issuance of Temporary Use Permits.

Under the Electoral Area "I" Zoning Bylaw No. 2457, 2008, the property is currently zoned Residential Single Family (RS1) which permits single detached dwellings as a principal use.

Under Section 8.0 (Floodplain Regulations) of the Zoning Bylaw, the subject property is partially within the floodplain associated with Skaha Lake.

BC Assessment has classified the property as "Residential" (Class 01).

Public Process:

On May 12, 2021, a Public Information Meeting (PIM) was held electronically and was attended by approximately 10 members of the public.

At its meeting of May 19, 2021, the Electoral Area "I" Advisory Planning Commission (APC) resolved to recommend to the RDOS Board that the subject development application be approved.

Adjacent property owners will have received notification of this application with written comments regarding the proposal being accepted until the commencement of the regular Board meeting. Any comments will be on the agenda as separate item.

All comments received to date in relation to this application are included as a separate item on the Board Agenda.

Analysis:

In considering this proposal, Administration notes that the Electoral Area "I" OCP Bylaw includes supportive policy for vacation rental uses in residential areas and outlines a number of criteria against which the Board will consider such a use.

In response to the criteria outlined in Section 11.7.2, the applicant has provided a letter from a Professional Engineer stating that a septic system was installed in November 2020 for a 3 bedroom home and "current septic system design is adequate for this use".

On-site domestic water is provided by a community water system operated by the Kaleden Irrigation District (KID).

In terms of off-street parking, the applicant has provide a site plan which shows provision of 7 parking stalls, three within a garage and four tandem parking stalls in the driveway, which exceeds the minimum 3-stall parking requirement.

Further, a health and safety inspection was completed on May 21, 2021 and did not identify any deficiencies.

Conversely, Administration recognises that operation of a vacation rental will attract non-residents to the area, which is busy due to the public lake access across the road.

The intent of the Regional District's "Vacation Rental Temporary Use Permit Policy", and supportive OCP policies is to allow for a new vacation rental use to operate for one "season" in order to determine if such a use is inappropriate, incompatible or unviable at a particular location and, if so, to allow for the permit to lapse or not be renewed within a relatively short period.

Given the Electoral Area "I" OCP Bylaw generally supports vacation rentals in residential areas, and the applicant has satisfied or will satisfy criteria requirements for a three-bedroom vacation rental, it is recommended that the vacation rental be approved, with conditions. It is recommended that the following conditions are included in the TUP:

- Term of Permit (To Expire December 17, 2022, to provide for one "full season");

- Vacation rental operator and guests adhere to provincial health orders during the Provincial State of Emergency for COVID-19;
- Period of use (May –October);
- Posting of information within vacation rental;
- Maximum number of bedrooms (3);
- Maximum occupancy (6);
- Minimum number of on-site parking stalls (3);
- Prohibition of camping or use of RVs or accessory buildings for vacation rental occupancy; and
- Providing TUP and contact information to neighbours.

Alternatives:

1. THAT the Board of Directors deny Temporary Use Permit No. I2021.007-TUP; or
2. THAT the Board of Directors defer consideration of Temporary Use Permit No. I2021.007-TUP for the following reasons:

   i) TBD

Respectfully submitted:

JoAnn Peachey, Planner I

Endorsed By:

C. Garrish, Planning Manager

Attachments: No. 1 – Agency Referral List
No. 2 – Site Photo

Attachment No. 1 – Agency Referral List

Referrals have been sent to the following agencies as highlighted with a þ, regarding I2021.007-TUP:

o	Agricultural Land Commission (ALC)	þ	Fortis
þ	Interior Health Authority (IHA)	o	City of Penticton
o	Ministry of Agriculture	o	District of Summerland
o	Ministry of Energy, Mines & Petroleum Resources	o	Town of Oliver
o	Ministry of Municipal Affairs & Housing	o	Town of Osoyoos
o	Ministry of Environment & Climate Change Strategy	o	Town of Princeton
o	Ministry of Forest, Lands, Natural Resource Operations & Rural Development (Archaeology Branch)	o	Village of Keremeos
o	Ministry of Jobs, Trade & Technology	o	Okanagan Nation Alliance (ONA)
o	Ministry of Transportation and Infrastructure	o	Penticton Indian Band (PIB)
o	Integrated Land Management Bureau	o	Osoyoos Indian Band (OIB)
o	BC Parks	o	Upper Similkameen Indian Band (USIB)
o	School District #53 (Areas A, B, C, D & G)	o	Lower Similkameen Indian Band (LSIB)
o	School District #58 (Area H)	o	Environment Canada
o	School District #67 (Areas D, E, F, I)	o	Fisheries and Oceans Canada
o	Central Okanagan Regional District	o	Canadian Wildlife Services
o	Kootenay Boundary Regional District	o	OK Falls Irrigation District
o	Thompson Nicola Regional District	þ	Kaleden Irrigation District
o	Fraser Valley Regional District	o	Irrigation District / improvement Districts / etc.
þ	Kaleden Fire Department		

Attachment No. 2 – Site Photo

TEMPORARY USE PERMIT

FILE NO.: I2021.007-TUP

Owner: Agent:

GENERAL CONDITIONS

1. This Temporary Use Permit is issued subject to compliance with all of the bylaws of the Regional District of Okanagan-Similkameen applicable thereto, except as specifically varied or supplemented by this Permit.
2. The land described shall be developed strictly in accordance with the terms and conditions of this Permit, and any plans and specifications attached to this Permit which shall form a part thereof.
3. Where there is a conflict between the text of the permit and permit drawings or figures, the drawings or figures shall govern the matter.
4. This Temporary Use Permit is not a Building Permit.

APPLICABILITY

5. This Temporary Use Permit applies to, and only to, those lands, including any and all buildings, structures and other development thereon, within the Regional District as shown on Schedules 'A', 'B', and 'C' and described below:

Legal Description:	Lot 3, Plan EPP74523, District Lot 105s, SDYD	
Civic Address:	251 Alder Avenue, Kaleden	
Parcel Identifier (PID):	030-270-260	Folio: I-01523.540

TEMPORARY USE

6. In accordance with Section 23.0 of the Electoral Area "I" Official Community Plan Bylaw No. 2683, 2016, the land specified in Section 5 may be used for a "vacation rental" use as defined in the Electoral Area "I" Zoning Bylaw, being the use of a residential dwelling unit for the temporary commercial accommodation of paying guests for a period of less than one month.

CONDITIONS OF TEMPORARY USE

7. The vacation rental use of the land is subject to the following conditions:

   a) the vacation rental use shall occur only between May 1st and October 31st;

   b) the following information must be posted within the dwelling unit while the vacation rental use is occurring:

      i) the location of property lines by way of a map;

      ii) a copy of the Regional District's Electoral Area "I" Noise Regulation and Prohibition Bylaw;

      iii) measures to address water conservation;

      iv) instructions on the use of appliances that could cause fires, and for evacuation of the building in the event of fire;

      v) instructions on the storage and management of garbage;

      vi) instructions on septic system care; and

      vii) instructions on the control of pets (if pets are permitted by the operator) in accordance with the Regional District's Animal Control Bylaw.

   c) the maximum number of bedrooms that may be occupied by paying guests shall be three (3);

   d) the number of paying guests that may be accommodated at any time shall not exceed six (6);

   e) a minimum of three (3) on-site vehicle parking spaces shall be provided for paying guests;

   f) camping and the use of recreational vehicles, accessory buildings and accessory structures on the property for vacation rental occupancy are not permitted; and

   g) current telephone contact information for a site manager or the property owner, updated from time to time as necessary, as well as a copy of this Temporary Use Permit shall be provided to the owner of each property situated within 100 metres of the land and to each occupant of such property if the occupier is not the owner.

   h) vacation rental operation must follow the Ministry of Health's COVID-19 Guidance for the Hotel Sector during the Provincial State of Emergency, including environmental cleaning, staff health and communication, and any subsequent provincial health orders for hotel operators.

   i) information shall be posted within the dwelling unit during the Provincial State of Emergency for COVID-19 following Provincial recommended communication, signage and posters for the Hotel Sector on the following topics:

      i) Symptoms of COVID-19

      ii) B.C.'s COVID-19 Self-Assessment Tool

iii) Handwashing

iv) Respiratory/cough etiquette

v) Self-isolation and self-monitoring

j) a sign must be posted on the front entrance telling staff not to enter the premises if they are feeling ill.

k) all guests must follow Provincial guidelines during the Provincial State of Emergency for COVID-19, including avoiding non-essential travel as a measure to protect vulnerable people in communities from COVID-19.

COVENANT REQUIREMENTS

8. Not applicable.

SECURITY REQUIREMENTS

9. Not applicable.

EXPIRY OF PERMIT

10. This Permit shall expire on December 17, 2022.

Authorising resolution passed by Regional Board on _____ day of _____, 2021.

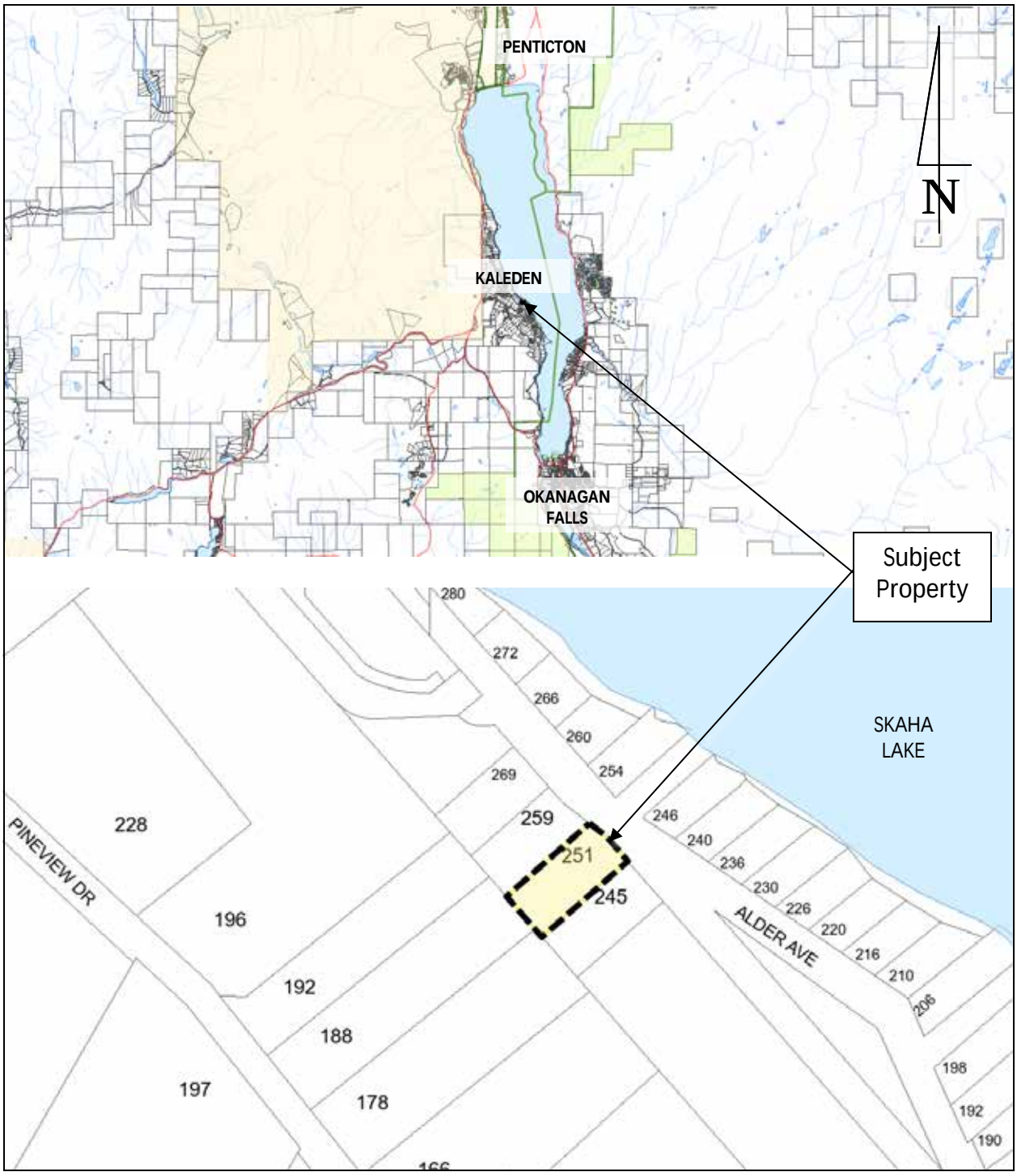
_____

B. Newell, Chief Administrative Officer

Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: planning@rdos.bc.ca

Temporary Use Permit File No. I2021.007-TUP

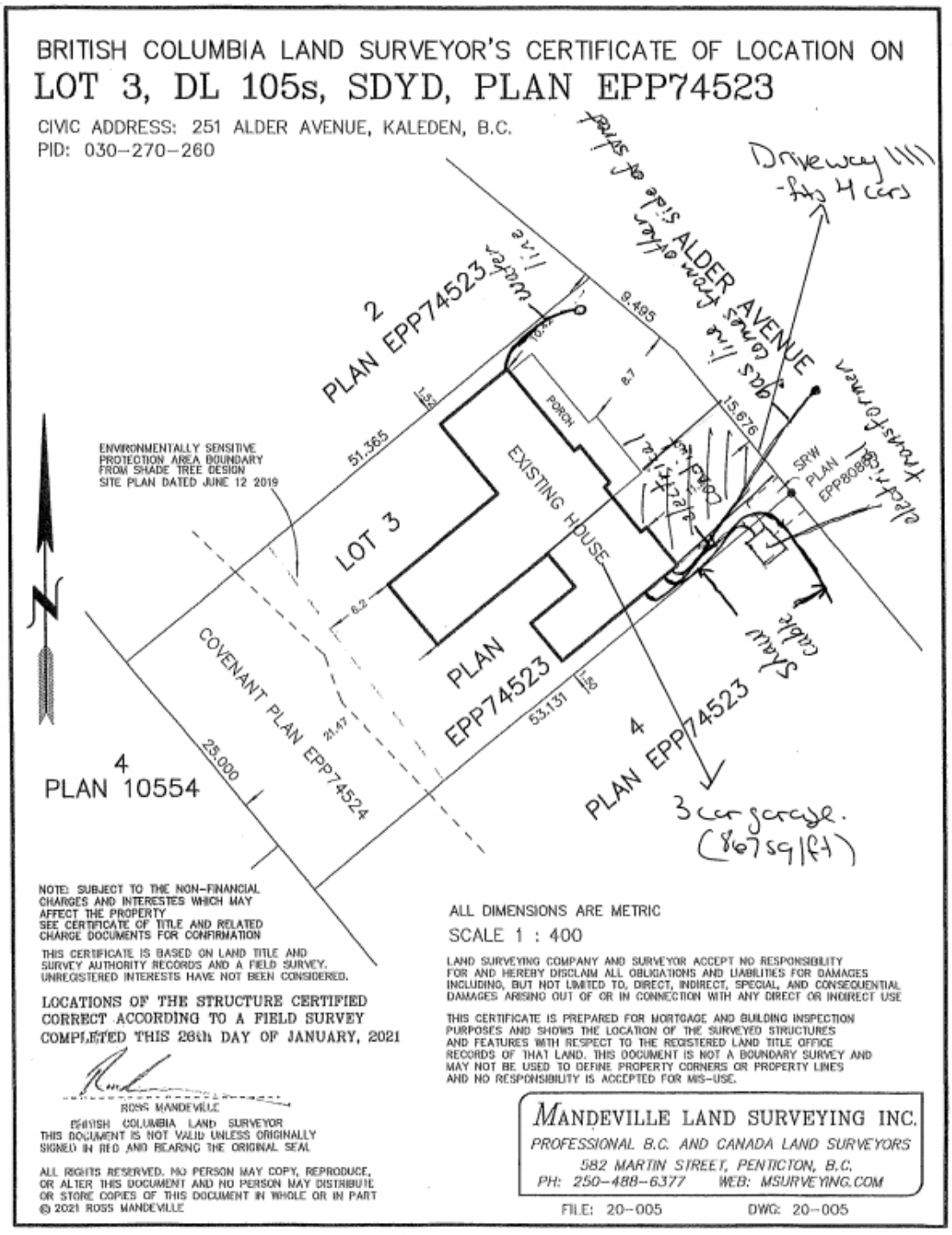
Schedule 'A'



Regional District of Okanagan-Similkameen

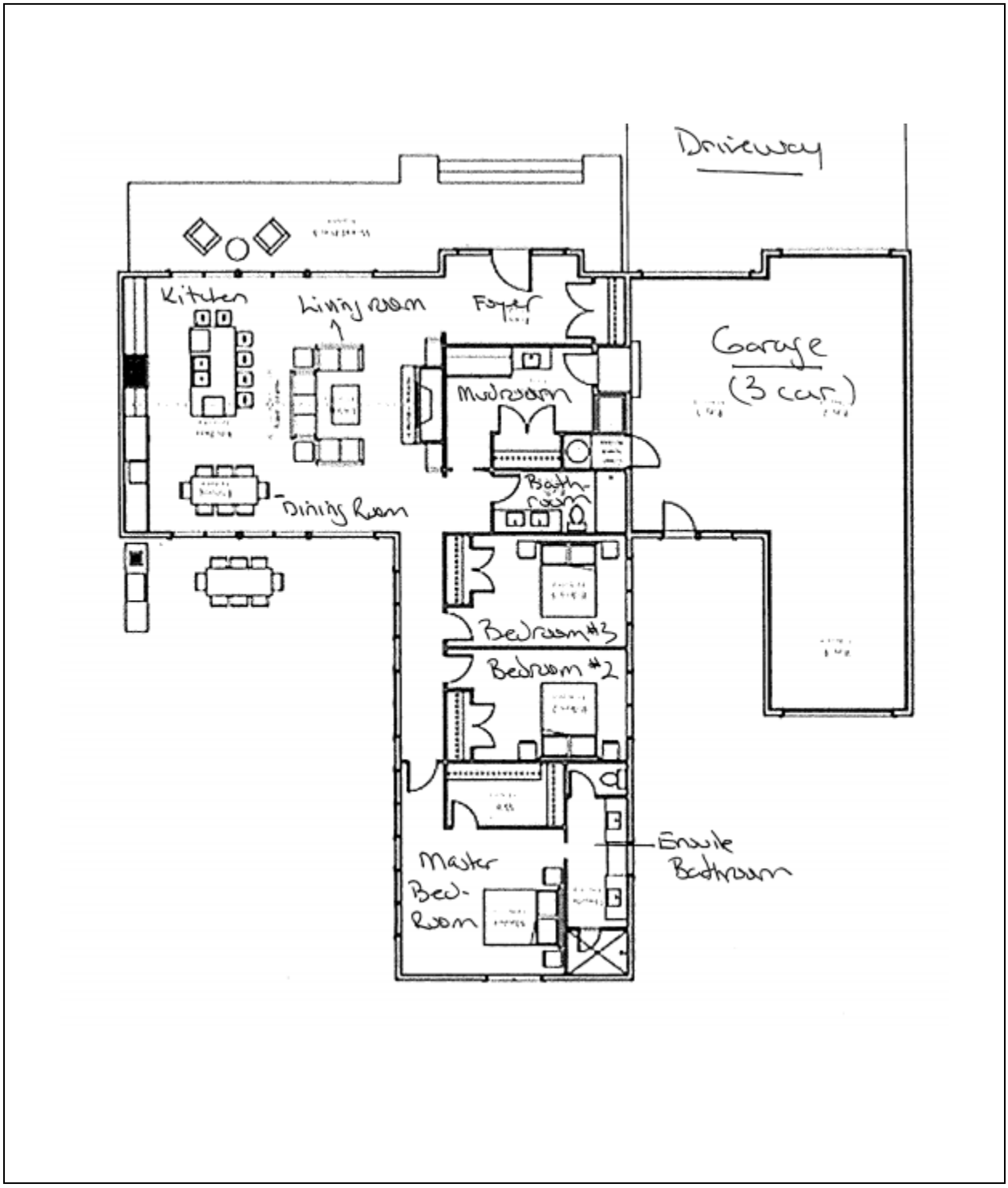
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: planning@rdos.bc.ca

Schedule 'B'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: planning@rdos.bc.ca

Schedule 'C'



RESPONSE SUMMARY

TEMPORARY USE PERMIT NO. I2021.007-TUP

☐ Approval Recommended for Reasons Outlined Below

☐ Interests Unaffected

☑ Approval Recommended Subject to Conditions Below

☐ Approval Not Recommended Due to Reasons Outlined Below

The Kaleden Irrigation District Board of Trustees recommends approval of Temporary Use Permit No. I202021.007 TUP subject to the following condition:

Provide assurance that operation of this vacation rental under this TUP will not adversely affect the water quality of Skaha Lake. This would include proper disposal of septic effluent and continuing regular maintenance of their septic systems.

Signature: Cheryl E. Dalla **Signed By:** CHERYL E. DALLA

Agency: Kaleden Irrigation District **Title:** Administrator

Date: May 15/21

JoAnn Peachey

From: Susan Kelly
Sent: May 17, 2021 8:11 PM
To: Planning
Subject: Feedback Form 251 Alder Ave Vacation Rental

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Directors

I have already submitted a Feedback form but I'm asking you to read the story of Alder Avenue.

Until 2009 Alder Ave was a quiet dead end street, with houses on the lake side and the KVR on the other.

The CP Railway put the property on the market in 2008. At that time, I was Chair of Kaleden Parks and Recreation and put together a plan for the community to purchase it. I felt it was very important that we maintain the trail, as it is such a huge local and tourist draw. Director Bill Schwartz assured me that under no circumstances would the RDOS allow the trail to be removed. Unfortunately, after the property was sold, that is exactly what happened as the KVR Trail was closed and it was bumped onto Alder Avenue. Director Schwartz had no answers for me.

Traffic on the KVR Trail is huge, increasing every year, which is wonderful! I think you would be amazed at the number of cyclists. Alder residents have to be much more careful pulling out of our driveways, but no one minds.

At the same time, Alder Ave had three road ends that used to be Fire Access Lanes to the lake, with No Parking signs. They now have been converted to public lake accesses. Many days of the week, when the wind blows, you will find both accesses taken over with kite sailors. No complaints, just more traffic added to the street.

So now we have a new homeowner who has built a house on one of the many new lots on the previous CP property, and wants to rent out their home as an AirBnB. We have learned that another lot owner plans to do the same. Several more houses are to be built on our street. Can you understand our concern? We are told by RDOS that if one house is approved, it makes it much easier for future houses. Our sleepy street has turned into a major conduit, with ten times the traffic - including cyclists, kite sailors and soon Sickle Point visitors. Can you blame us for not wanting additional traffic? This would cause additional congestion and pressure on the various properties. Please give consideration to our concerns.

Respectfully submitted,
Susan Kelly

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Susan + Thomas Kelly
(please print)

Street Address: Ave Kaleden

Date:

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

- ☐ I do support the proposed use at 251 Alder Avenue, Kaleden.
- ☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- ☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Alder Ave is a dead end street that runs along the lake. We have lived here for forty years. During that time there has been only one house rented out as a vacation rental, for a 2 year period. We were very happy when they stopped. Despite good intentions of "no late night parking" permitted, this is very difficult to enforce. The RDOS is not going to come out at midnight to fill them. to be quiet. You can easily wait 2 hours for police. The MOST of the owners on this street are seniors. We want peaceful sleep.

This new house is a vacation rental - There are several more houses to be built on this street, meaning the potential for more

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

vacation rentals. The Planning Department told me that if one house is approved, it makes it more favorable for other houses to get approval.

People on holiday at a lake like to bring a boat. Skaha Lake has turned into a crowded "parking lot". People have dropped anchors wherever they choose. Boats are everywhere. This issue needs to be addressed first, before adding more tourists to the problem.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: ANGUS LESLIE
(please print)

Street Address: [illegible] AVE

Date: MAY 17 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

- ☐ I do support the proposed use at 251 Alder Avenue, Kaleden.
- ☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- ☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

ALDER AVE HAS BECOME A MAJOR ROADWAY FOR BIKERS & HIKERS USING THE KVR TRAIL. INCREASING THE TRAFFIC MORE IS NOT THE ANSWER. VACATION RENTALS BRING INCREASED TRAFFIC AS MANY PLACES GET SHARED BY 2 FAMILIES. THIS WILL INCREASE PRESSURE ON THE BEACH ACCESSES WHICH ARE ALREADY WELL USED BY LOCALS AND CONFLICTS ARE ARISING. THE CHARM OF THIS NEIGHBOURHOOD IS IT IS COUNTRY QUIET AND VACATION RENTALS BRING PARTIERS AND NOISE. PEOPLE THAT KNOW THEIR NEIGHBORS RESPECT THEIR NEIGHBORS.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Linda Prueggen + Larry Gerelus
(please print)

Street Address: Ave, Kaleden

Date: May 17/21

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☑ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Alder Ave is a small narrow deadend street that has become much busier due to:
1) increased traffic on KVR from bike users parking at the end of street to walk the KVR & from increased bike traffic - With the huge increase in E-bikes it is making it difficult to pull out of our driveway.
2) increased visitors to public lake access areas - ie kite surfers, families
To open up vacation rental traffic to an already busy small residential street does not seem in the best interest of the community or the residents in the area.
Rental properties in the S. Okanagan are at a premium. Perhaps the owner should consider a long-term rental (1yr or longer) - this would not impact traffic or neighbourhood the same way & may be a better fit for the community.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: AUDLEY KELSEY
(please print)

Street Address: ____ AVE

Date: MAY 17, 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

1. At the last meeting, RDOS used the example of 3 homes on Ponderosa that have Airbnb's. Afterwards I realized, that none of these homes have houses across from them, as they face the Park or crown land. If you look at a map you will see our situation is different. We have houses all along the lake, so the noise is directed at us.

2.Last year, with the Airbnb on Pineview, the neighbours had to call the RDOS 5 times. The Bylaw officer came out once. The three neighbours I spoke to this morning were quite exasperated with RDOS.

3. Contributing to the issue is that in the summer, people party outdoors, hence more noise.

4. Alder is also the KVR Trail, with a tremendous amount of cyclists. (Try backing out a driveway these days.) Do we really need to add more traffic?

5.None of the current owners on the water rent their home out. We respect our neighbours peace and quiet, and most are retirees.
Thanks

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: RUDI BREIER
(please print)

Street Address: KALEDEN

Date: May 17/21

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

it's bad enough traffic already !

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: TRENT LENNOX
(please print)

Street Address: ____ KALEDEN, B.C

Date: MAY 17, 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

- ☐ I do support the proposed use at 251 Alder Avenue, Kaleden.
- ☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- ☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

My parents are elderly and are quite distressed by this.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Deanna & John Thomson
(please print)

Street Address: Kaleden

Date: May 12, 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

- Owners are not local.
- This is a quiet neighbourhood
- Lack of owner presence would potentially allow late night or un welcome guests
-

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

RDOS
OKANAGAN-SIMILKAMEEN

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: LEONARD (PAUL) STAPLES
(please print)

Street Address: [redacted] AVE

Date: MAY 11, 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☑ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Hi, I do not support the introduction present or future of short term vacation rentals on Alder. We are a collection of long term retired and semi-retired residents and this would have a significant negative impact on our enjoyment of our properties due to high likelyhood of noise and other issues w/ vacation rentals

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: DEBBIE STAPLES
(please print)

Street Address: [redacted], KALEDEN BC V0H1K0

Date: 11 MAY 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Hinchliffe family
(please print)

Street Address: aleden B.C.

Date: Wednesday, May 12 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

We believe that approving this short term rental could lead to more applications and subsequent disruptions to the neighbourhood. Most of us in the neighbourhood are seniors and it is unlikely that late night parties, more boats on the lakeshore and general misuse of properties, will be controlled by absentee owners.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

JoAnn Peachey

From:
Sent: May 11, 2021 3:01 PM
To: Planning
Subject: Feedback form

Feedback Form
Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen FILE NO.: I2021.007-TUP

FROM: Name: (please print) Allan Affleck
Street Address
Date: May 11, 2021
RE: Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use 251 Alder Avenue, Kaleden

My comments / concerns are:

I do support the proposed use at 251 Alder Avenue, Kaleden.

I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

X I do not support the proposed use at 251 Alder Avenue, Kaleden.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered. Protecting your personal information is an obligation the Regional District of Okanagan-Similkameen takes seriously. Our practices have been designed to ensure compliance with the privacy provisions of the Freedom of Information and Protection of Privacy Act (British Columbia) ("FIPPA"). Any personal or proprietary information you provide to us is collected, used and disclosed in accordance with FIPPA. Should you have any questions about the collection, use or disclosure of this information please contact: Manager of Legislative Services, RDOS, 101 Martin Street, Penticton, BC V2A 5J9, 250-492-0237. Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Richard Skauge
(please print)

Street Address: Ave. Kaleden

Date: May 6/21

RE: Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Feedback Forms must be completed and returned to the Regional District

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: MARJORIE LYNN WEYMARK
(please print)

Street Address: [redacted] KALEDEN

Date: MAY 7, 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☒ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Our concerns are:

1. Extra traffic in lake & more boats near the public access. The access by 251 Alder is already full of boats at anchor.
2. Loud parties - the RCMP do not respond quickly to Kaleden. This is a quiet neighbourhood.
3. More traffic on a dead end road
4. If this goes ahead, there will be others.
5. Public access is already overwhelmed & busy with swimmers, dogs, kite boarders & boaters. There are no washrooms available & it can get very noisy. It takes away from property owners ability to enjoy their yards.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Kevin Sherwin
(please print)

Street Address: [redacted] Ave.

Date: May 8/2021.

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

- [x] I do support the proposed use at 251 Alder Avenue, Kaleden.
- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- [ ] I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Rocky + Martine are responsible neighbors and respect the new community. I feel very confident that they will manage this properly.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: GU LBranson
(please print)

Street Address: - Ave.

Date: May 6/21

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

☐ I do support the proposed use at 251 Alder Avenue, Kaleden.

☐ I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.

☑ I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

OKANAGAN-SIMILKAMEEN

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Kathryn + David Hobbs.
(please print)

Street Address: , Kaleden.

Date: May 6 / 2021

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden.
- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- [x] I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

We are opposed to short term rentals on Alder St, especially in the case of owners that are not living nearby to supervise their property. Please refer to the AirBNB posting /48774203. We would hate this to become a trend that others on the street may follow.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: DEBRA McGINN
(please print)

Street Address: KALEDEN BC

Date: MAY 3, 2021

RE: Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use
251 Alder Avenue, Kaleden

My comments / concerns are:

- [x] I do support the proposed use at 251 Alder Avenue, Kaleden.
- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- [ ] I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Tyler McGinn
(please print)

LEGAL: BLOCK A, DL 1045 & 4264 FOLIO 01521.120

Street Address: NO CIVIC ASSIGNED - APPROX 100 M NORTH.

Date: MAY 5, 2021

RE: Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use
251 Alder Avenue, Kaleden

My comments / concerns are:

- [x] I do support the proposed use at 251 Alder Avenue, Kaleden.
- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- [ ] I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: 0893178 BC LTD.
(please print)
LEGAL: LOT 5, PLAN EPP74523
Street Address: NO CIVIC ASSIGNED - 25 M SOUTH OF 251 ALDER AVE
Date: MAY 3, 2021

RE: Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use
251 Alder Avenue, Kaleden

My comments / concerns are:

- [x] I do support the proposed use at 251 Alder Avenue, Kaleden.
- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- [ ] I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

THIS COMPANY DID THE SUBDIVISION ALONG THIS SIDE OF THE STREET. THERE ARE NO OTHER HOUSES ON THIS SIDE OF THE STREET AT THIS TIME. THIS TEMPORARY USE SHOULD NOT THEREFORE CAUSE ANY ISSUES IN THE NEIGHBORHOOD. THE HOUSE'S OUTDOOR ENTERTAINMENT AREA FACES WEST. THE LAKESHORE HOMES ACROSS THE STREET HAVE THEIR OUTDOOR ENTERTAINMENT AREAS ON THE LAKESIDE FACING EAST. THE USE OF THE PUBLIC LAKE ACCESS ACROSS THE STREET SHOULD BE SUPPORTED BY THE BOARD AND NOT OBJECTIONABLE.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Fax: 250-492-0063 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.007-TUP

FROM: Name: Andrea Price
(please print)

Street Address: 50m North

Date: May 6/21

RE: **Temporary Use Permit (TUP) Renewal – "Vacation Rental" Use**
251 Alder Avenue, Kaleden

My comments / concerns are:

- [x] I do support the proposed use at 251 Alder Avenue, Kaleden.
- [ ] I do support the proposed use at 251 Alder Avenue, Kaleden, subject to the comments listed below.
- [ ] I do not support the proposed use at 251 Alder Avenue, Kaleden.

Written submissions received from this information meeting will be considered by the Regional District Board prior to a decision being made on this TUP application.

Feedback Forms must be completed and returned to the Regional District prior to the Board meeting where the TUP will be considered.

RESPONSE SUMMARY

TEMPORARY USE PERMIT NO. I2021.007-TUP

☐ Approval Recommended for Reasons Outlined Below

☐ Interests Unaffected

☑ Approval Recommended Subject to Conditions Below

☑ Approval Not Recommended Due to Reasons Outlined Below

Thank you for the opportunity to provide comments on this application. It is our understanding that the applicant is requesting a temporary use permit to operate a short-term vacation rental on the subject property. This referral has been reviewed from a Healthy Communities Development perspective. The following is for your consideration:

Housing is a key determinant of health. It has a significant influence on our physical and mental health, social well-being, and indirectly influences many other determinants of health such as income, early childhood development, educational opportunities, and access to health services. Healthy housing is affordable, high quality, and in a location and community that meets our needs and supports health and well-being.

Living in affordable, safe, and stable housing is associated with positive physical and mental health outcomes. Access to affordable housing can reduce stress as well as allow residents to have adequate financial and personal resources available to live a healthy life.

Though there is no evidence yet for the long term implication of short term rentals on the health of our communities, the PHSA Healthy Built Environment Linkages Toolkit does identify that:
- Housing instability disproportionately affects low income people and vulnerable groups and can cause financial and psychological stress.
- Lack of affordable housing can lead to overcrowding.
- Higher housing costs can lead a decrease in disposable income making it more difficult to afford medication, healthy food, etc.
- Differences in housing (i.e. quality, accessibility, and affordability) all have impacts on health over in both the short term and long term.

Interior Health recommends that the Board considers the local need for long term rentals in the community while balancing the creation of short term vacation rentals.

Interior Health is committed to improving the health and wellness of all by working collaboratively with local governments and community partners to create policies and environments that support good health. Please do not hesitate to reach out to if you require clarification or have questions.

Signature: _____ **Signed By:** Tanya Osborne, BAHS

Agency: Interior Health **Title:** Community Health Facilitator

Date: March 30, 2021

JoAnn Peachey

From: Colleen Pennington
Sent: March 31, 2021 4:29 PM
To: Planning
Subject: Vacation Rentals - Kaleden

Follow Up Flag: Follow up
Flag Status: Flagged

I live within a kilometer of the proposed vacation rental at 251 Alder Avenue in Kaleden. The proliferation of vacation rentals that are both conforming and non conformng in Area I is of concern. We have 3 within a kilometer of our home.

For this particular application, I note that the sign for the development permit has been removed (for at least 2 days now). I believed the owners had to keep it up until the public hearing was completed. Is there a decision that has been made already?

If the issue is undecided, I have concerns and questions about this vacation rental as well as the number of non conforming vacation rentals in the area specifically relative to the peaceful enjoyment of my property. I am above the site and noise travels upwards. What hours will the owner be available to address noise issues? What information will be available to enable neighbours to raise issues to the owners? What hours will bylaw be available to respond on a timely basis (within one hour)?

I use vacation rentals and they can be good for the community. However, in Area I, TUP properties need more bylaw and enforcement.

Acccording to the RDOS website
"The TUP which contains provisions and conditions under which the vacation rental must operate, should allow neighbors to enjoy peaceful use of their properties and support the local economy at the same time".

Based on the rentals in the 100 block of Pineview, this objective has not been achieved. Bylaw is not available when the noise from vacation renters causes disturbances after 9 pm at night or on the weekends. Unless this is remedied, there will continue to be issues.

Based on rentals within the 100 block of Pineview Avenue, peaceful operations is not achieved. Bylaw has not been available to address noise issues when they occur after 9 pm and especially on weekends. Bylaw violation fines are inadequate to incent owners to ensure proper permitting nor compliance with peaceful use objectives.

While I commend this owner for applying for a permit and paying the prohibitive $700 fee (and perhaps the costs of a public hearing) to do so, the fines need adjusting prior to approving any further TUP.

The 2 Pineview properties consistently have ignored the TUP process. Those owners rent for over $1000 per night and to date have received only minimal fines for non compliance. These violation

fees have done nothing to encourage them to comply with peaceful use nor with the TUP authorization.

Unfortunately, the poor behaviour of these other owners affects my perspective on this TUP application. Prior to allowing any more TUPs within Kaleden, a change to the bylaw is needed. The RDOS needs to ensure adequate bylaw enforcement in Area I for enforcing evenings and weekend peaceful use. The costs of the extra hours should be covered by the fines for non compliance. There should be a prohibition of outdoor speakers also with a substantive penalty. The fines need to be more than the per night rental to get compliance. Perhaps the bylaw can be amended to cover the cost of providing overtime and callout of bylaw enforcement for evenings and weekends and multiple fines can be levied per incident. This approach would ensure that issues are immediately addressed.

The RDOS should temporarily halt all vacation rental TUPs until remedies in bylaw enforcement and the corresponding fines are sufficient to reward owners for applying for and getting a permit and then having good tenants and quiet nights.

Until the changes are made, I would hope you deny this application.

Colleen Pennington

JoAnn Peachey

From: Frits and Hanneke Dijk
Sent: March 29, 2021 1:19 PM
To: Planning
Subject: 251 Alder Ave, Kaleden; Application 12021.007-TUP

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Sir/Madam:

In regards to Application 12021.007-TUP for a 3 Bedroom Seasonal Vacation Rental Permit for 251 Alder Ave, Kaleden, we would like to hereby express our concerns.

We live on 166 Pineview Drive, Kaleden which is above the property in question.

Our concerns are two-fold:

1.) First there is potential noise from vacationers that will travel uphill and may be disturbing.

2.) Secondly and more concerning is that, because the area behind the 251 Alder Ave property is steep and covered with dry grasses, an out of control fire will move uphill quickly, threatening our and other properties in the neighbourhood.

We have a real fear that a fire could be set by guests who smoke outdoors (as most likely smoking will not be allowed indoors) or by guests who make an outdoor fire (outdoor fires frequently create sparks).

It is therefore our request that the permit will place limits as follows:

1.) No excessive noise or music at any time. Quiet hours between 10 pm and 7 am.

2.) Guests must be non-smokers. Guests are not allowed to create outdoor fires. There will not be any fire pits on the property. A fire extinguisher and a water hose is ready at all times to put out any fire.

Thank you for your attention to this matter.

Sincerely,

Frits and Johanna Dijk
166 P

Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.027-DVP

FROM: Name: Larry Richardson
(please print)

Street Address: 361 Oak Ave Kaleden, BC.

RE: **Development Variance Permit (DVP) Application**
206 Maple Avenue, Kaleden (Electoral Area "I")

My comments / concerns are:

X I do support the proposed variances at **206 Maple Avenue, Kaleden.**

I do support the proposed variances at **206 Maple Avenue, Kaleden**, subject to the comments listed below.

I do not support the proposed variances at **206 Maple Avenue, Kaleden**.

All written submissions will be considered by the Regional District Board

I do support the proposed variances at 206 Maple Avenue, Kaleden.

June 11, 2021

Feedback Forms must be be submitted to the RDOS office prior to the Board meeting upon which this DVP application is considered. All representations will be made public when they are included in the Board Agenda.

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Development Variance Permit Application - Electoral Area "I"
206 Maple Avenue, Kaleden (I-01445.000)

Administrative Recommendation:

THAT Development Variance Permit No. I2021.027-DVP, an application for rear and sideyard setbacks for a new garage, be approved.

Proposed Development:

This application is seeking a number of variances in order to undertake the development of a new accessory building (i.e. garage) on the subject property.

Specifically, it is being proposed to vary the following parcel line setbacks that apply to the Agriculture One (AG1) Zone:

- the rear parcel line setback for a building or structure on a parcel 0.2 ha or greater from 7.5 metres to 0.7 metres, as measured to the outermost projection; and
- the interior side parcel line setback for a building or structure on a parcel 0.2 ha or greater from 4.5 metres to 2.2 metres, as measured to the outermost projection.

In support of this request, the applicant has stated that "nearest neighbour is 40 metres away. A closer setback actually has less impact because not in view by neighbour."

Site Context:

The subject property is approximately 2,023 m^2 in area and is situated on the north-west side of the intersection of Maple Avenue and Oak Avenue in Kaleden. The property is currently developed to a single detached dwelling, while a previous accessory structure (i.e. garage) was recently demolished.

The surrounding pattern of development is characterised by a mix of rural-residential and agricultural parcels.

Background:

The current boundaries of the subject property were created by a Plan of Subdivision deposited with the Land Titles Office in Kamloops on February 16, 1967, while available Regional District records indicate that building permits have not previously been issued for this property.

Under the Electoral Area "I" Official Community Plan (OCP) Bylaw No. 2683, 2021, the subject property is currently designated Agriculture (AG), and is the subject of a Watercourse Development Permit (WDP) designation along its boundary with Oak Avenue.

Under the Electoral Area "I" Zoning Bylaw No. 2457, 2021, the property is currently zoned Agriculture One (AG1), which permits for single detached dwellings and accessory buildings and structures as permitted uses.

While the subject property is located within the Agricultural Land Reserve (ALR), Section 23(1) (Exceptions) of the *Agricultural Land Commission Act*, states that restrictions on the use of agricultural land do not apply to land that, on December 21, 1972, was, by separate certificate of title issued under the *Land Registry Act* (1960), less than 2.0 acres (8,080 m^2) in area. In this instance, the subject property is 0.5 acres (2,023 m^2) in area and was created by subdivision in 1967.

BC Assessment has classified the property as "Residential" (Class 01).

Public Process:

Adjacent property owners will have received notification of this application with written comments regarding the proposal being accepted until the commencement of the regular Board meeting. Any comments will be on the agenda as separate item.

Analysis:

The Zoning Bylaw's use of setback regulations is generally to provide physical separation between neighbouring properties in order to protect privacy and prevent the appearance of overcrowding. When a parcel is also adjacent a roadway, setbacks are further employed to maintain adequate sightlines for vehicle traffic movements.

Minimum setbacks from parcel lines are used to maintain a minimum space between houses in a residential neighbourhood to allow access to sunlight, to provide separation for fire safety or to mitigate nuisances (like noise) that might come from an adjacent building.

In the agricultural zones, setbacks are further used to mitigate the potential for conflict between land uses with the Ministry of Agriculture recommending that setbacks be used to "avoid farming right up to the back wall of [a] residence."

In this instance, Administration notes that, due to local topography, the reduced setback for the proposed garage is unlikely to impact the privacy or residential use of adjacent properties (i.e. by overshadowing). This is due adjacent dwellings to the north and west being at a much higher elevations and generally separated by 40 metres in distance (as the crow flies).

Due to the location of the garage at the north-west corner of the property, it will generally not be visible from either the Maple Avenue or Oak Avenue road frontage and will not adversely impact streetscape characteristics or sight-lines for vehicles travelling on these roads.

The Kaleden Volunteer Fire Department has advised that they have no concerns with the proposed variances, while the nature of the structure being a garage (i.e. non-habitable) is unlikely to result in conflict with adjacent agricultural uses (NOTE: while the property at 202 Maple Avenue is partially cultivated with fruit trees, the parcel has been classed as "Residential" by BC Assessment).

Finally, it is noted that the proposed new garage is to replace a recently demolished garage that was generally in the same location, that this previous garage does not appear to have been the subject of any previous complaints and that the requested setbacks are consistent with those granted to parcels less than 2,000 m^2 in area. The subject property is 2,023 m^2 in area and does not appear to be a

viable agricultural unit, is not currently in agricultural production and appears to have not history of farming use.

Conversely, Administration recognises that there may be other options available to the applicant, such as constructing the proposed garage outside of prescribed setback areas. It is recognized, however, that due to the location of the dwelling as well as local topography that these options are limited and would likely require the garage being placed in front of the dwelling (potentially blocking views from the dwelling).

Nevertheless, and for these reasons outlined above, Administration supports the requested variances and is recommending approval.

Alternatives:

1. That the Board deny Development Variance Permit No. I2021.027-DVP.
2. That the Board defer consideration of the application and it be referred to the Electoral Area "I" Advisory Planning Commission.

Respectfully submitted

C. Garrish, Planning Manager

Attachments: No. 1 – Aerial Photo

No. 2 – Site Photo

No. 3 - Site Photo (Google Streetview)

Attachment No. 1 – Aerial Photo

Attachment No. 2 – Site Photo

Attachment No. 3 – Site Photo (Google Streetview)

Development Variance Permit

FILE NO.: I2021.027-DVP

Owner: Agent:

GENERAL CONDITIONS

1. This Development Variance Permit is issued subject to compliance with all of the bylaws of the Regional District of Okanagan-Similkameen applicable thereto, except as specifically varied or supplemented by this Permit.

2. The land described shall be developed strictly in accordance with the terms and conditions and provisions of this Permit, and any plans and specifications attached to this Permit that shall form a part thereof.

3. Where there is a conflict between the text of the permit and permit drawings or figures, the drawings or figures shall govern the matter.

4. This Development Variance Permit is not a Building Permit.

APPLICABILITY

5. This Development Variance Permit is substantially in accordance with Schedules 'A', 'B', 'C', 'D', 'E' and 'F', and applies to and only to those lands within the Regional District described below, and any and all buildings, structures and other development thereon:

Legal Description:	Lot 1, Plan KAP16957, District Lot 105S, SDYD	
Civic Address:	206 Maple Avenue, Kaleden	
Parcel Identifier (PID):	008-488-061	Folio: I-01445.000

CONDITIONS OF DEVELOPMENT

6. The land specified in Section 5 may be developed in accordance with the following variances to the Electoral Area "I" Zoning Bylaw No. 2457, 2008, in the Regional District of Okanagan-Similkameen:

   a) the minimum rear parcel line setback for a building or structure on a parcel 0.2 ha or greater in the Agriculture One (AG1) Zone, as prescribed in Section 10.2.6(a)(ii), is varied:

      i) from: 7.5 metres

to: 0.7 metres to the outermost projection as shown on Schedule 'B'.

b) the minimum interior side parcel line setback for a building or structure on a parcel 0.2 ha or greater in the Agriculture One (AG1) Zone, as prescribed in Section 10.2.6(a)(iii), is varied:

i) from: 4.5 metres

to: 2.2 metres to the outermost projection as shown on Schedule 'B'.

COVENANT REQUIREMENTS

7. Not Applicable

SECURITY REQUIREMENTS

8. Not applicable

EXPIRY OF PERMIT

9. The development shall be carried out according to the following schedule:

a) In accordance with Section 504 of the *Local Government Act* and subject to the terms of the permit, if the holder of this permit does not substantially start any construction with respect to which the permit was issued within two (2) years after the date it was issued, the permit lapses.

b) Lapsed permits cannot be renewed; however, an application for a new development permit can be submitted.

Authorising resolution passed by the Regional Board on _____, 2021.

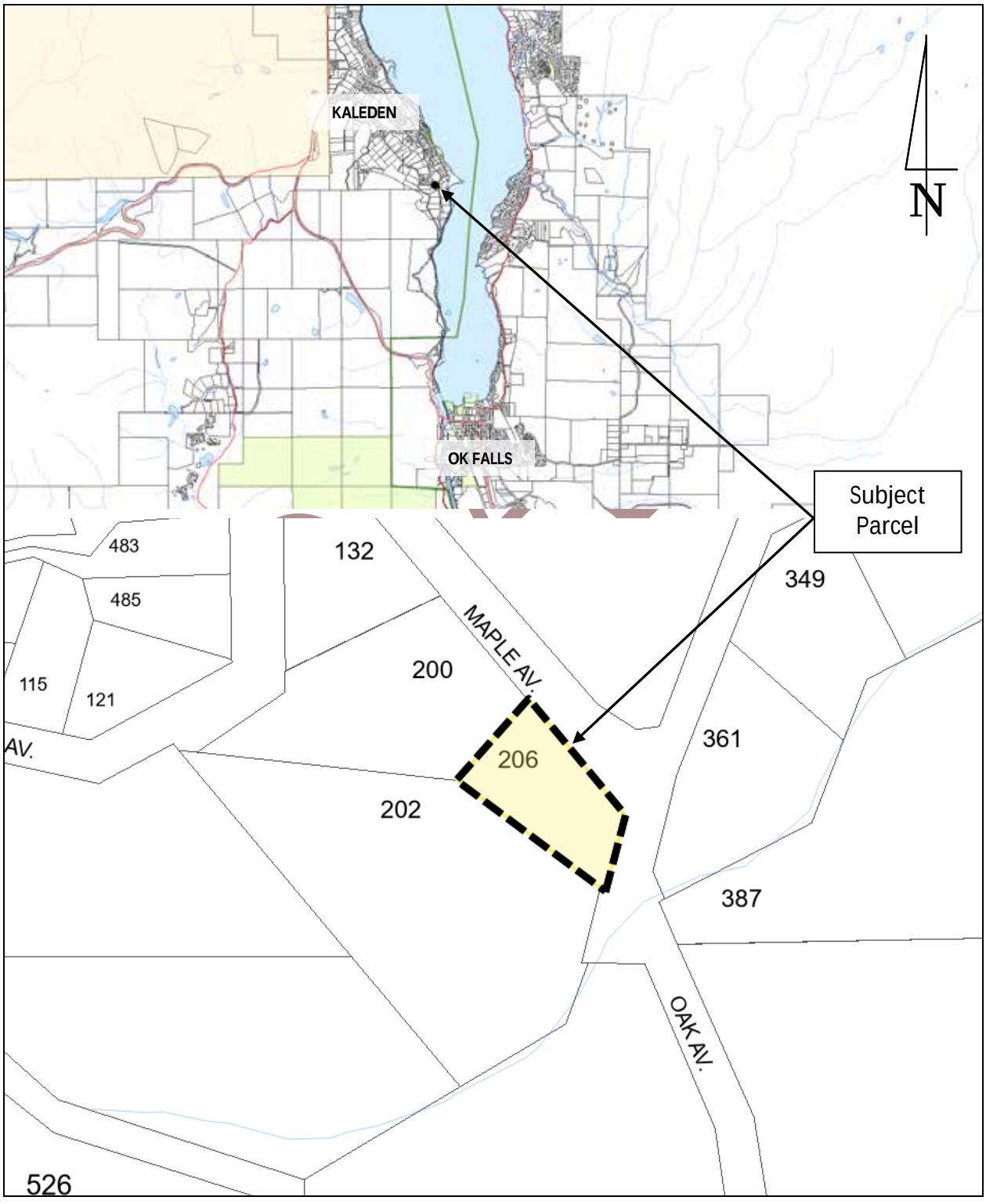
_____

B. Newell, Chief Administrative Officer

Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Tel: 250-492-0237 Email: planning@rdos.bc.ca

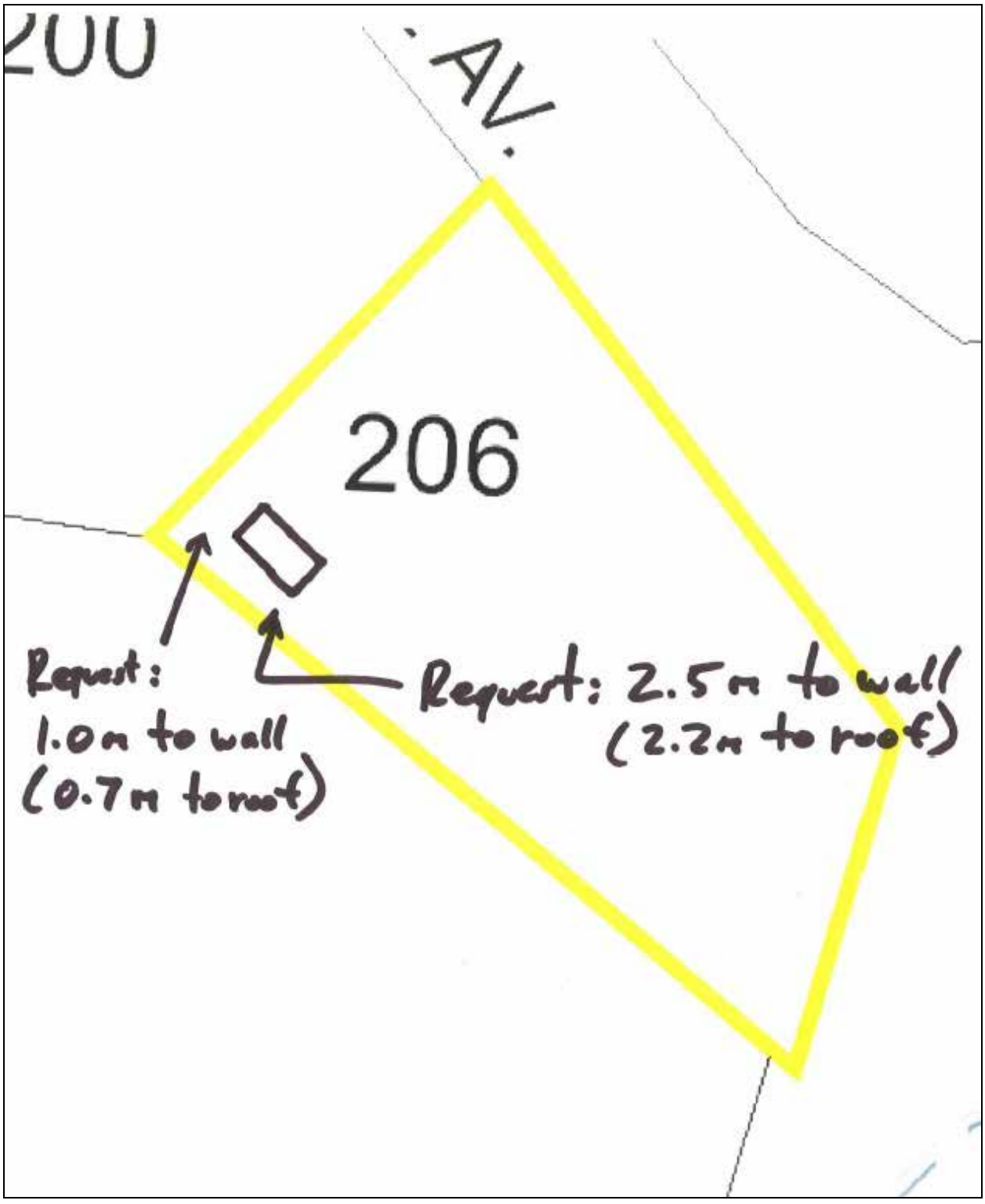
Development Variance Permit File No. I2021.027-DVP

Schedule 'A'



Development Variance Permit File No. I2021.027-DVP

Schedule 'B'

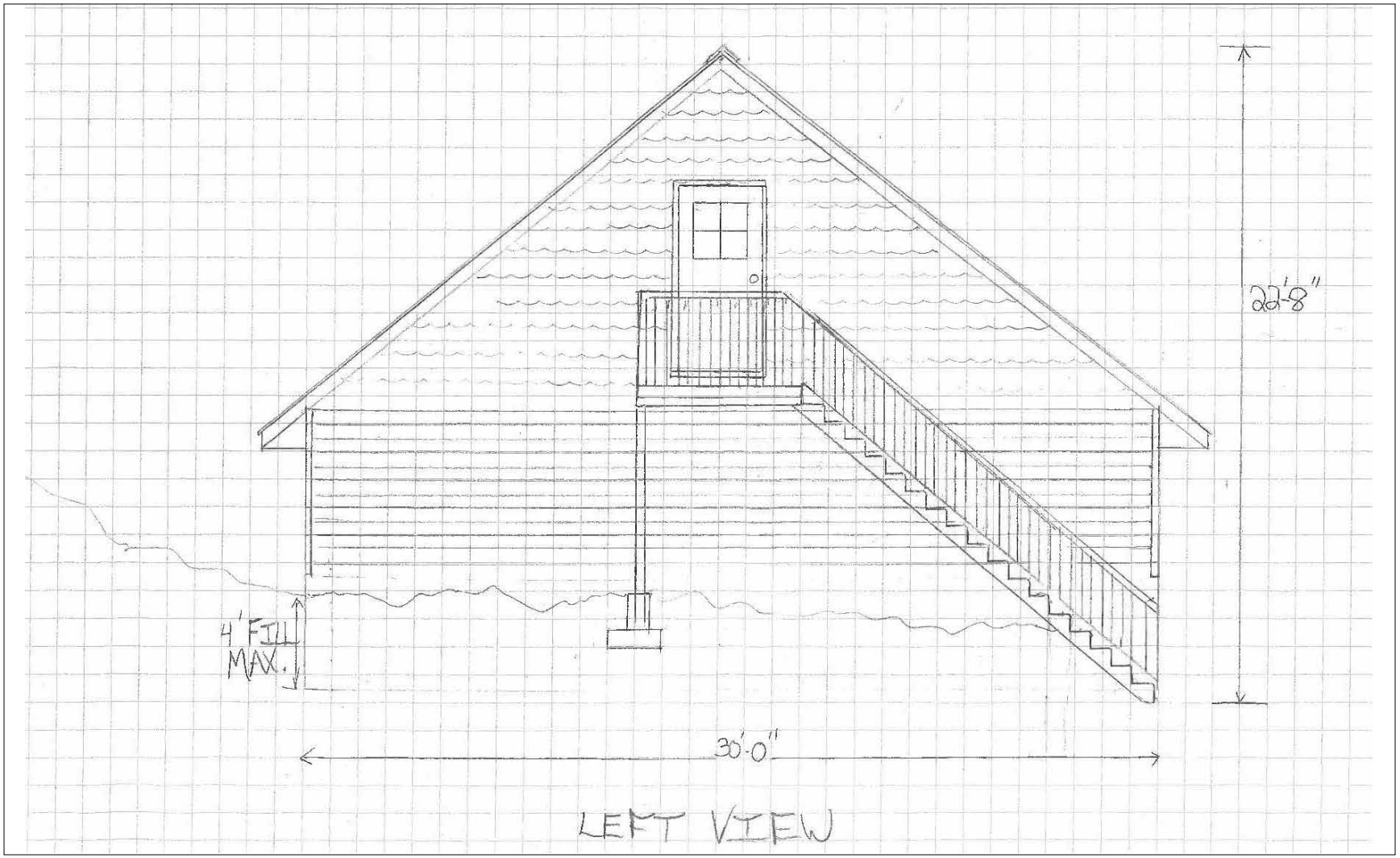


Development Variace Permit File No. I2021.027-DVP

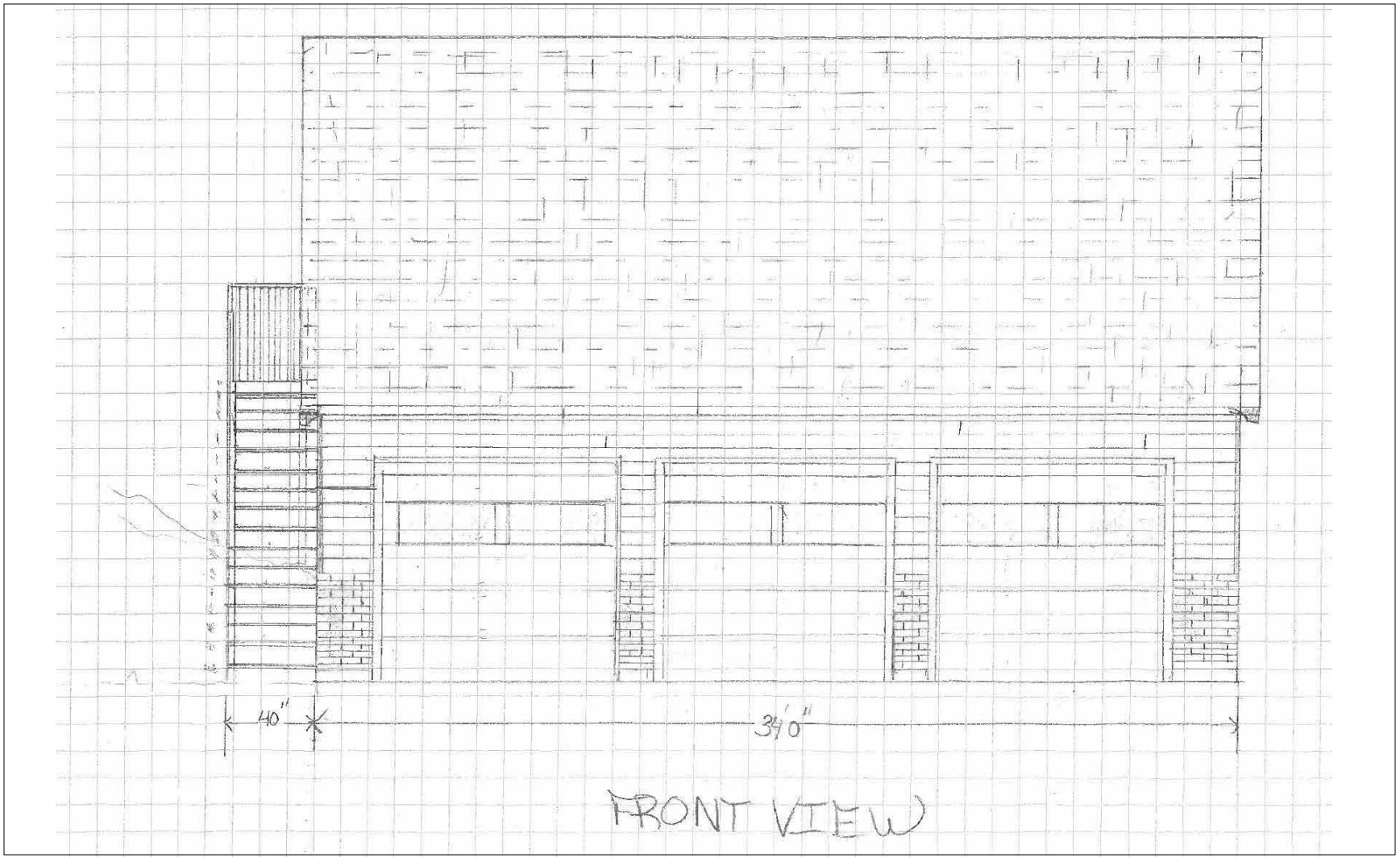
Schedule 'C'

Development Variace Permit File No. I2021.027-DVP

Schedule 'D'

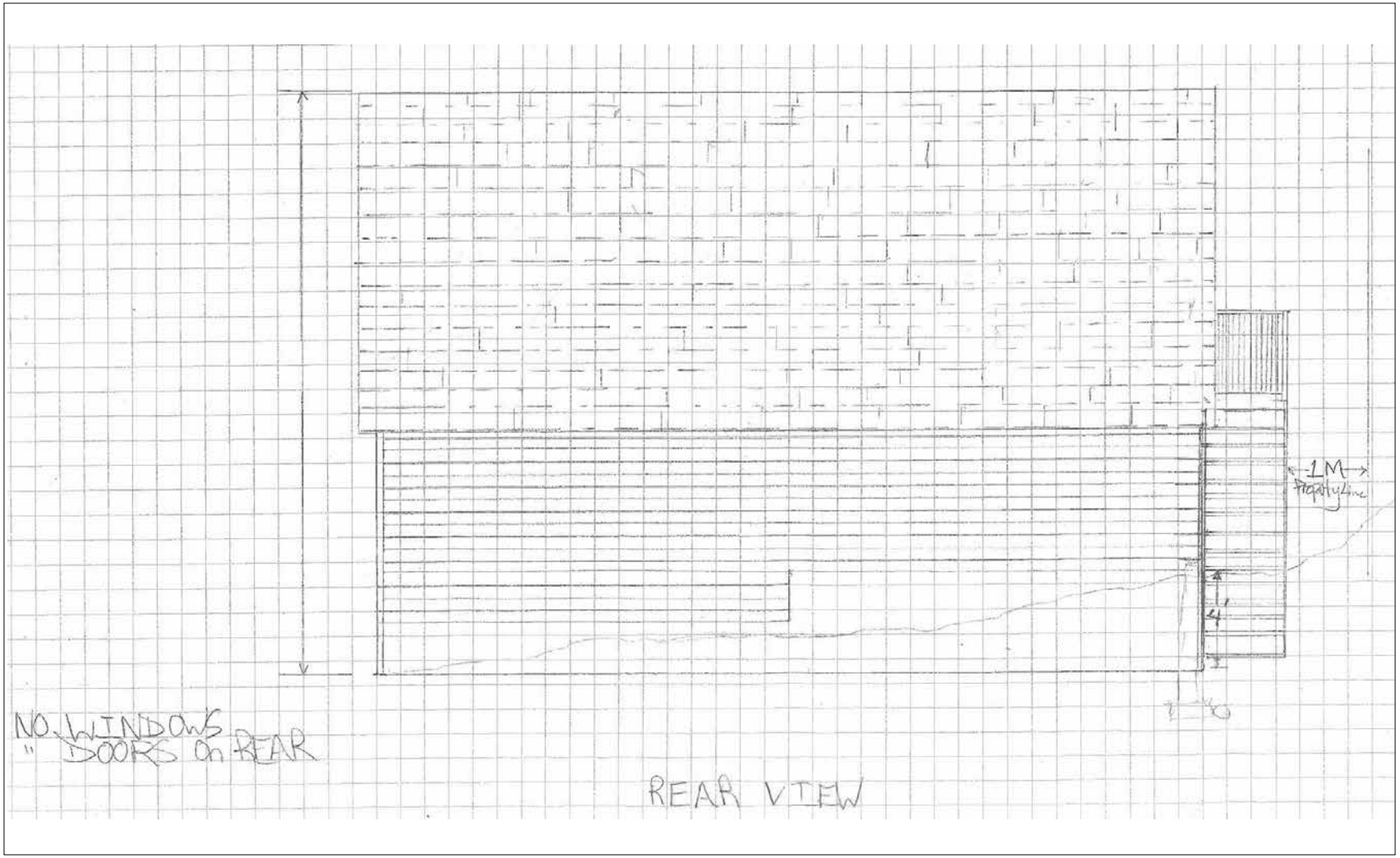


Schedule 'E'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Schedule 'F'



Feedback Form

Regional District of Okanagan Similkameen
101 Martin Street, Penticton, BC, V2A-5J9
Tel: 250-492-0237 / Email: planning@rdos.bc.ca

TO: Regional District of Okanagan Similkameen **FILE NO.:** I2021.027-DVP

FROM: Name: Michael and Christine Gane

Street Address:

RE: **Development Variance Permit (DVP) Application**
206 Maple Avenue, Kaleden (Electoral Area "I")

My comments / concerns are:

☒ I do support the proposed variances at **206 Maple Avenue, Kaleden.**

☐ ~~I do support the proposed variances at **206 Maple Avenue, Kaleden**, subject to the comments listed below.~~

☐ ~~I do not support the proposed variances at **206 Maple Avenue, Kaleden**.~~

All written submissions will be considered by the Regional District Board

The property in question shares one property line with us that is impacted by this variance request.

The section of property that the proposed garage would be going onto is in our opinion the best location.

We are fully in favour of the variance application as noted in file I2021.027-DVP.

Mike & Chris Gane

Feedback Forms must be be submitted to the RDOS office prior to the Board meeting upon which this DVP application is considered. All representations will be made public when they are included in the Board Agenda.

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Petition to Enter Service Area – Electoral Area "H"

Administrative Recommendation:

THAT Bylaw No. 2934, 2021, being a bylaw to amend "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to include 260 Bonlin Road in the fire prevention and suppression service within a portion of Electoral Area 'H', be read a first, second and third time.

Purpose:

The applicant has submitted a petition request to the Regional District that seeks to include the property at 260 Bonlin Road (being Lot A, Plan KAP78387, District Lot 1006, YDYD) in the fire prevention and suppression local service Area.

In order to facilitate this, it is being proposed to amend Schedule 'A' of the "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to establish and operate within a portion of Electoral Area 'H', a local service, being a fire prevention and suppression service", to include the property within the service area boundary.

Site Context:

The subject property is approximately 2.72 ha in area and is situated on the north side of Bonlin Road and is accessed directly from Bonlin Road. It is understood that the parcel is comprised of a single detached dwelling and accessory buildings.

The surrounding pattern of development is generally characterised by rural residential with large, undeveloped parcels further to the west and north.

Background:

The current boundaries of the subject property were created by a Plan of Subdivision deposited with the Land Titles Office in Kamloops on June 23, 2005, while available Regional District records indicate that a building permit for a single detached dwelling with attached garage (2016) has previously been issued for this property.

Under the Electoral Area "H" Official Community Plan (OCP) Bylaw No. 2497, 2012, the subject property is currently split designated Large Holdings (LH) and Small Holdings (SH).

Under the Electoral Area "H" Zoning Bylaw No. 2498, 2012, the property is currently split zoned Large Holdings Two (LH2) and Small Holdings Two (SH2).

The subject parcel is currently outside of the Electoral Area "H" Fire Protection Local Service Area, and would promote a contiguous service area as the parcels in this area are currently within with the exception of 242 Bonlin Road (which declined inclusion).

Analysis:

In considering this proposal, Administration notes that Town of Princeton Fire Department has confirmed that fire service can be provided at the same level as other addresses within the local service area and supported expanding the service area to include the subject parcel.

The subject parcel is considered adequately contiguous with the existing service area boundary, as it immediately abuts the existing service area boundary and helps to fill in the service gap between 280 Bonlin Road to the west and 228 Bonlin Road to the east

In summary, the proposed bylaw are being put forward to extend the service area to include a parcel that was previously "leap frogged" and this is seen as supporting fire protection measures to abutting parcels already within the service area.

Alternatives:

1. THAT Bylaw No. 2934, 2021 "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to establish and operate within a portion of Electoral Area 'H', a local service, being a fire prevention and suppression service" Amendment Bylaw be denied;
2. That consideration of Bylaw No. 2934, 2021 "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to establish and operate within a portion of Electoral Area 'H', a local service, being a fire prevention and suppression service" Amendment Bylaw be deferred pending:
   a) *TBD*.

Respectfully submitted:

_____

JoAnn Peachey, Planner I

Endorsed By:

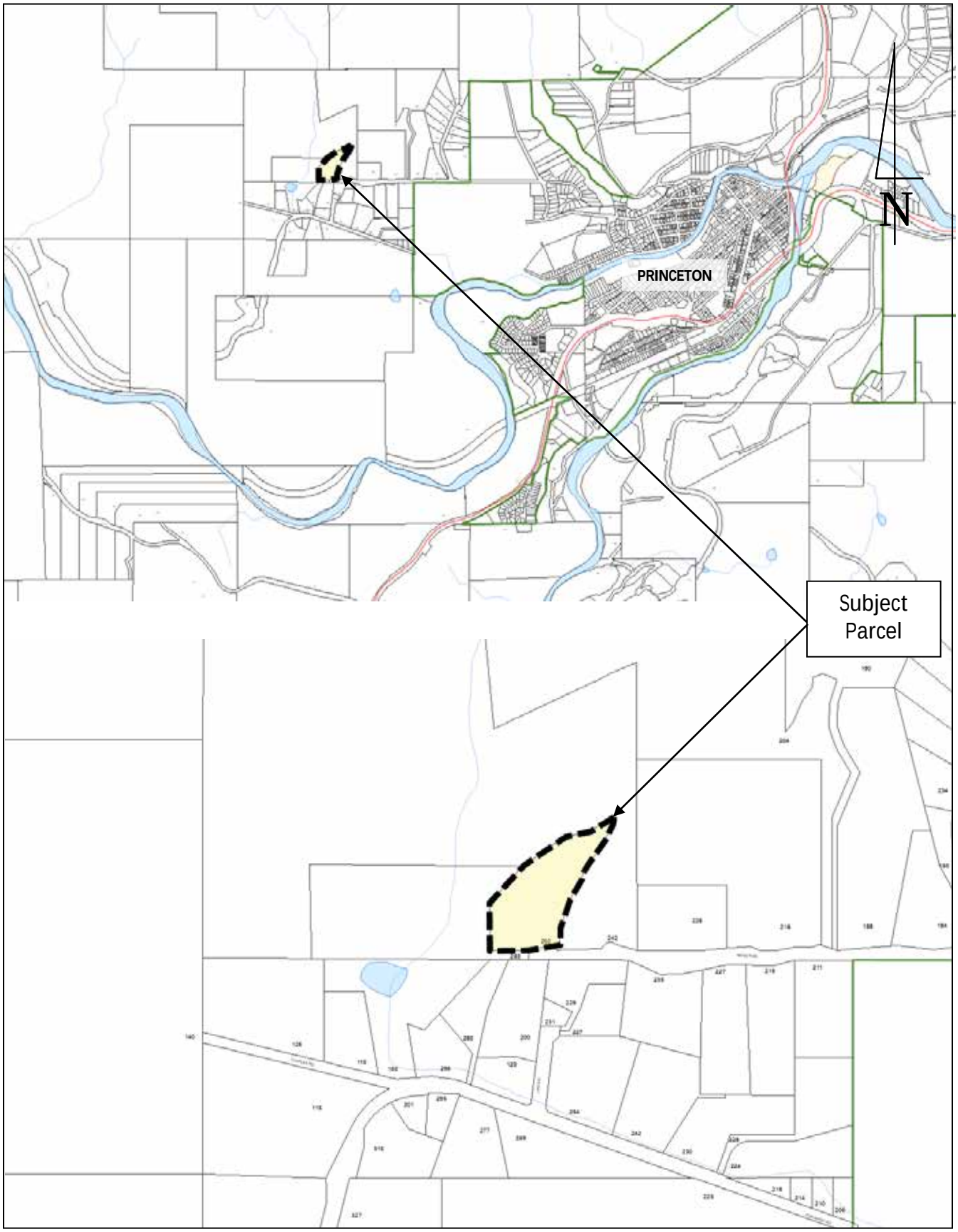
_____

C. Garrish, Planning Manager

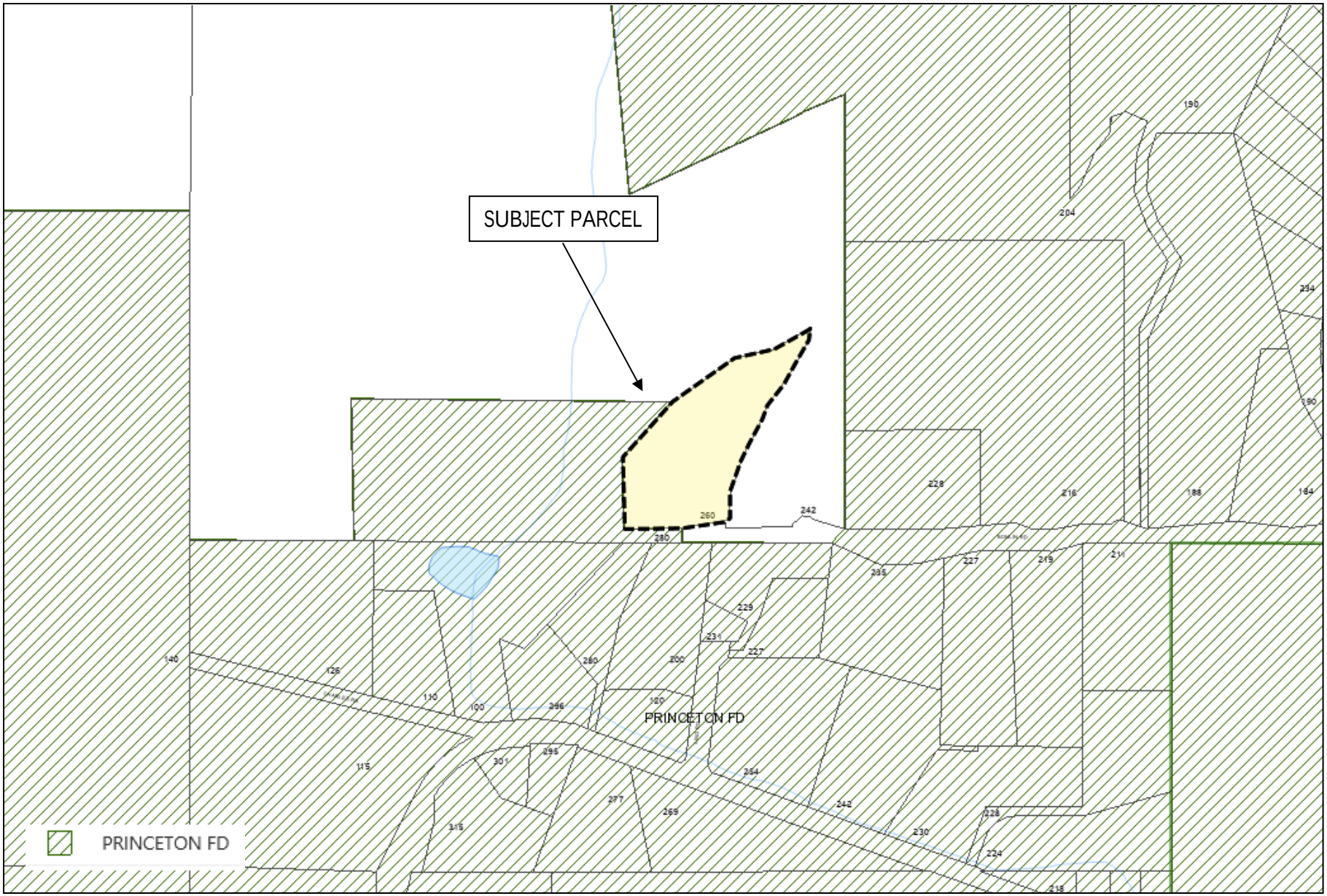
Attachments: No. 1 – Context Maps

No. 2 – Existing Boundary of service area

Attachment No. 1 – Context Maps



Attachment No. 2 – Existing Boundary of service area



BYLAW NO. 2934, 2021

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

BYLAW NO. 2934, 2021

A Bylaw to amend "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to establish and operate within a portion of Electoral Area 'H', a local service, being a fire prevention and suppression service"

The REGIONAL BOARD of the Regional District of Okanagan-Similkameen in open meeting assembled, ENACTS as follows:

1. This Bylaw may be cited for all purposes as the "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to establish and operate within a portion of Electoral Area 'H', a local service, being a fire prevention and suppression service" Amendment Bylaw No. 2934, 2021."

2. The boundaries of the local service area, being Schedule 'A' of the "Regional District of Okanagan-Similkameen Bylaw No. 1197, 1991 to establish and operate within a portion of Electoral Area 'H', a local service, being a fire prevention and suppression service", is amended by incorporating the land described as Lot A, Plan KAP78387, District Lot 1006, YDYD (260 Bonlin Road), and shown shaded yellow on Schedule 'A', which forms part of this Bylaw.

READ A FIRST, SECOND AND THIRD TIME this _____ day of _____, 2021.

ADOPTED this _____ day of _____, 2021.

_____ _____

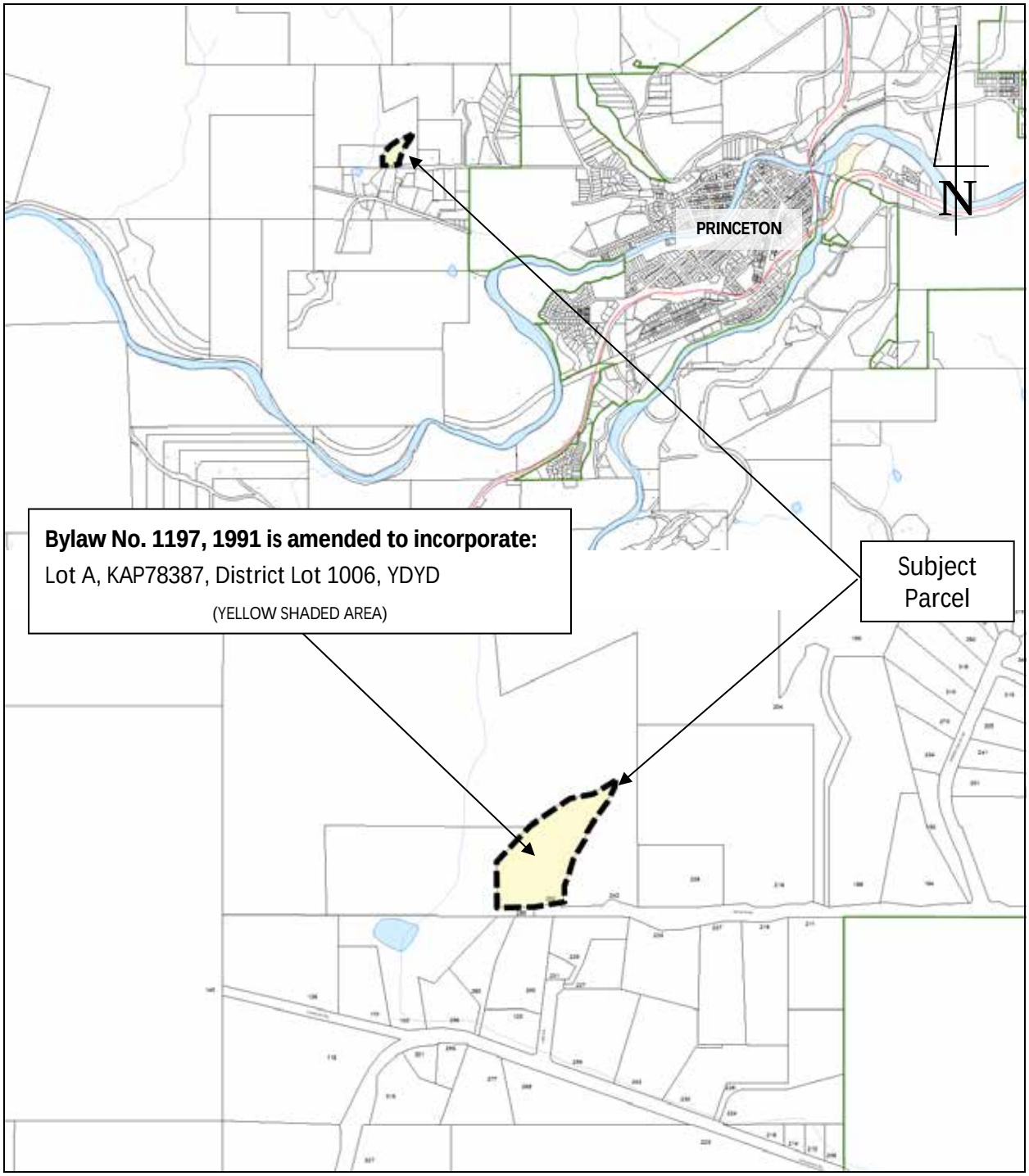
Board Chair Corporate Officer

FILED WITH THE INSPECTOR OF MUNICIPALITIES this _____ day of _____, 2021.

Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Tel: 250-492-0237 Email: info@rdos.bc.ca

Amendment Bylaw No. 2934, 2021 File No. H2021.003-SAP

Schedule 'A'



ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Agricultural Land Commission Referral (Subdivision) – Electoral Area "D"
4301 McLean Creek Road, Okanagan Falls (D-03460.000)

Administrative Recommendation:

THAT the application to subdivide the parcel located at 4301 McLean Creek Road (Lot 1, Plan KAP26887, District Lots 551, 2701 & 3090, SDYD) "be authorized" to proceed to the Agricultural Land Commission.

Proposed Development:

An application has been lodged with the Agricultural Land Commission (ALC) under Section 21(2) of the *Agricultural Land Commission Act* (the Act) in order to permit a subdivision to occur within the Agricultural Land Reserve (ALR).

Specifically, the applicant is seeking the Commission's approval to create two new parcels, one of which is to be approximately 4.0 ha in area with a remainder approximately 4.8 ha in area.

In support of this proposal, the applicant has stated the following:

1. *It meets the requirements of the official Community Plan and zoning bylaws of the RDOS.*
2. *It meets the purposes of the Agricultural Land Commission to preserve farm land and to encourage the farming of lands within the ALR.*
3. *It presents the highest and best use for the undeveloped portion of the land.*
4. *It subdivides off the horse boarding and rearing operations from the property, leaving approximately 10 acres of undeveloped land usable for other agricultural uses.*

Statutory Requirements:

Under Section 34(4) of the *Agricultural Land Commission Act,* the Regional District of Okanagan-Similkameen (RDOS) must "review the application, and … forward to the commission the application together with [its] comments and recommendations", unless Section 25(3) applies wherein the Board has the ability to refuse to "authorise" an application.

In this instance, Section 25(3) is seen to apply as the property "is zoned by bylaw to permit [an] agricultural or farm use".

Section 30(4) of the Act grants the Board the authority to not "authorise" an application to proceed to the ALC if the land is zoned by bylaw to permit an agricultural or farm use, or an amendment to an Official Community Plan (OCP) Bylaw or Zoning Bylaw would be required for the proposal to proceed.

Site Context:

The subject property is approximately 8.8 ha in area and is situated on the south side of McLean Creek Road and is bisected by Shuttleworth Creek near its southern boundary with the creek bed and associated riparian areas constituting approximately 25% of the parcel area.

It is understood that the parcel is comprised of a single detached dwelling and various accessory structures related to agricultural and equestrian centre uses.

The surrounding pattern of development is generally characterised by a mobile home development to the west, agricultural operations to the north and east and the former Weyerhaeuser industrial site to the south.

Background:

The current boundaries of the subject property were created by a Plan of Subdivision deposited with the Land Titles Office in Kamloops on June 16, 2006, while available Regional District records indicate that a building permit for an addition to a single family dwelling was previously issued in 1990.

Under the Electoral Area "D" Official Community Plan (OCP) Bylaw No. 2603, 2013, the subject property is currently designated Agriculture (AG), and is the subject of a Watercourse Development Permit (WDP) and Environmentally Sensitive Development Permit (ESDP) Area) designations.

Under the Electoral Area "D" Zoning Bylaw No. 2455, 2008, the property is currently zoned Agriculture One (AG1) which establishes a minimum parcel size for subdivision of 4.0 ha.

Under Section 8.0 (Floodplain Regulations) of the Zoning Bylaw, the subject property is within the floodplain associated with Shuttleworth Creek.

Under the Regional Growth Strategy (RGS) Bylaw No. 2770, 2017, the property is not within the Okanagan Falls Primary Growth Area boundary.

While the property is within the Agricultural Land Reserve (ALR), the Agricultural Land Commission (ALC) previously approved the exclusion of an approximately 2.4 ha part of the property on November 25, 2004, in order to allow for the expansion of the Peach Cliff Estates Mobile Home Park, which is situated to the west. This expansion has subsequently been completed.

BC Assessment has classified the property as part "Residential" (Class 01) and part "Farm" (Class 09)).

Analysis:

In considering this proposal, Administration notes that the OCP seeks to discourage subdivision by supporting the consolidation of legal parcels that support more efficient agricultural operations and encourage the protection of agricultural lands and maximizing productive farm activity.

It is further noted, however, that the proposed new parcels comply with the 4.0 ha minimum parcel size requirement of the AG1 Zone and, on this basis, Administration is recommending the application be formally "authorized" to proceed to the ALC.

Conversely, Administration considers the proposed subdivision to not be in the spirit of the policy directions contained within the OCP Bylaw to "maintain the integrity of land suitable for agriculture", that subdivision may adversely impact the agricultural opportunities available on this parcel in the long-term and that the property has more agricultural potential as single unit.

Should this proposal be "authorised" and ALC approval obtained, the applicant will be required to submit a subdivision application with the Ministry of Transportation and Infrastructure (MoTI) to facilitate the subdivision.

Alternatives:

1. THAT the RDOS Board not "authorize" the application to subdivide the parcel located at 4301 McLean Creek Road (Lot 1, Plan KAP26887, District Lots 551, 2701 & 3090, SDYD) to proceed to the Agricultural Land Commission; OR
2. THAT the Board of Directors defers making a decision and directs that the proposal be considered by the Electoral Area "D" Advisory Planning Commission (APC).

Respectfully submitted:

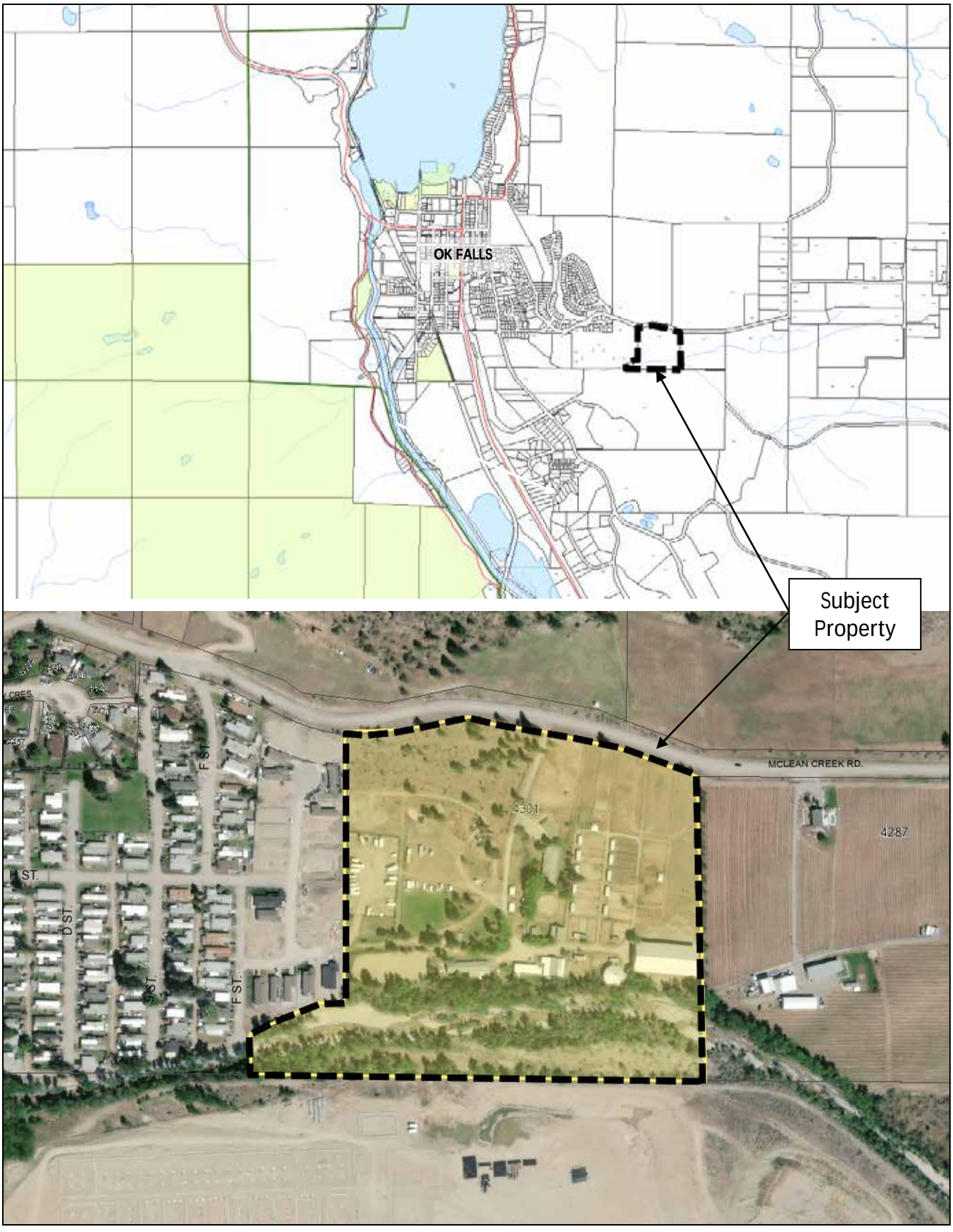
C. Garrish, Planning Manager

Attachments: No. 1 – Context Maps

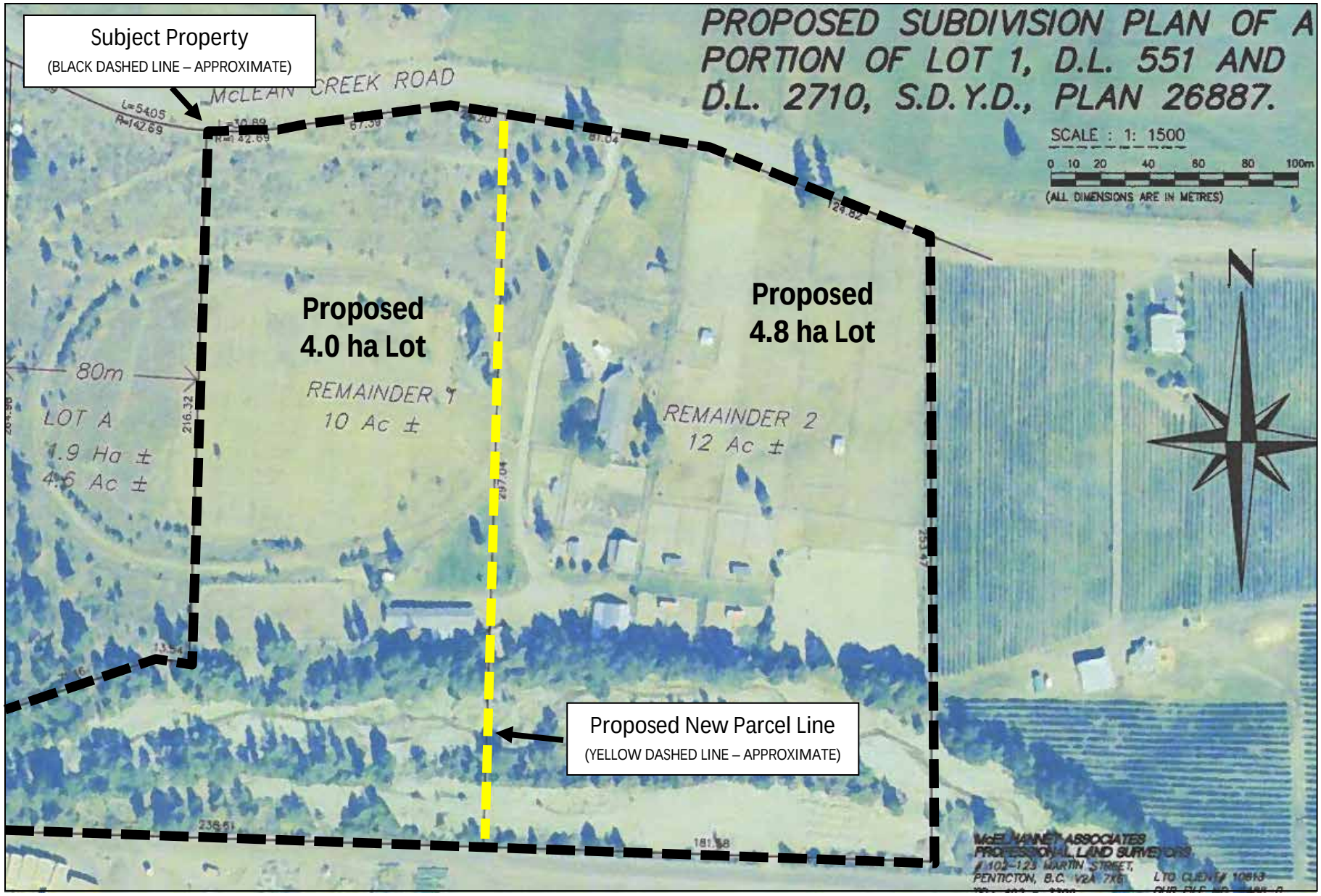
No. 2 – Applicant's Site Plan

No. 3 – Site Photo (2014)

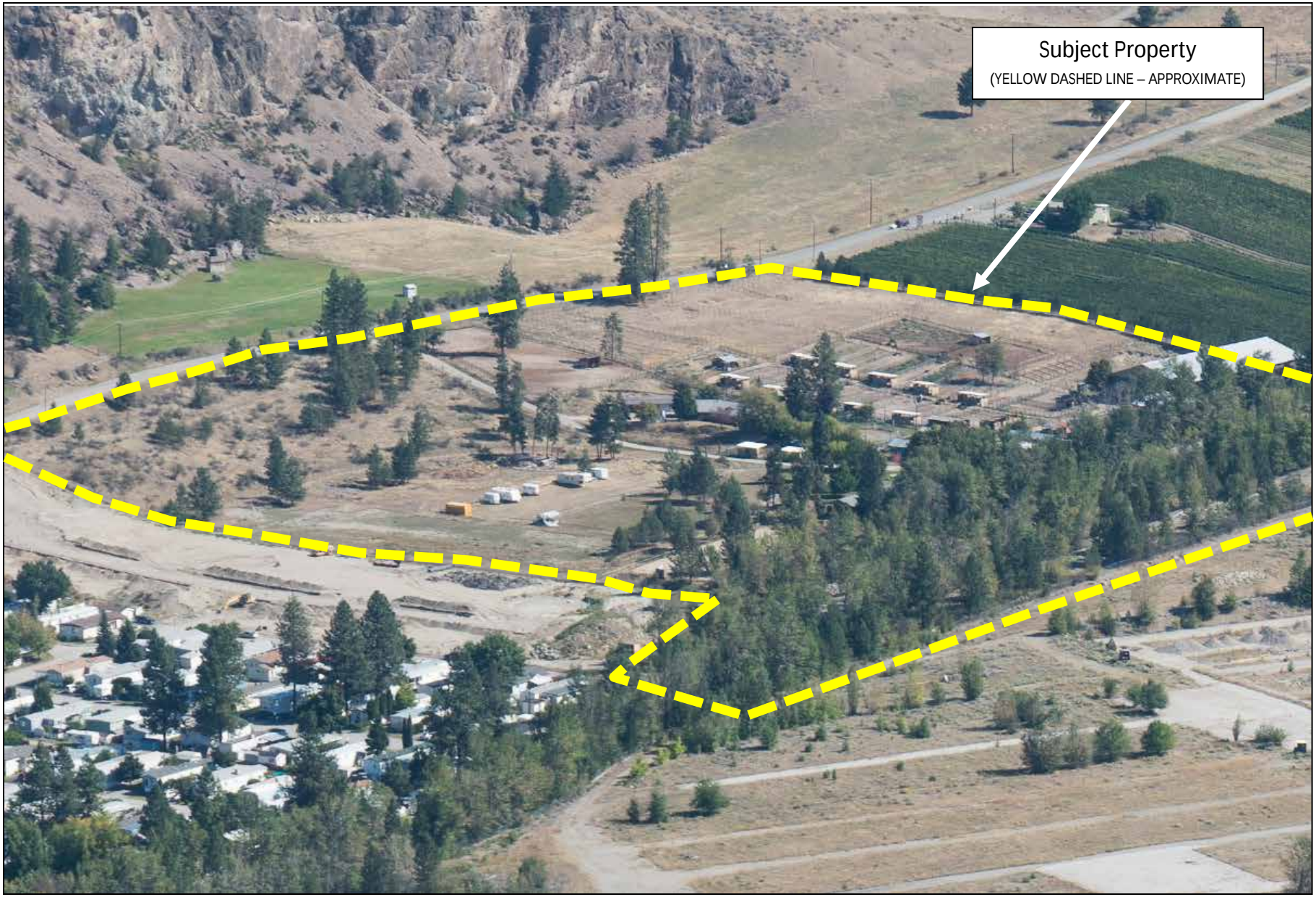
Attachment No. 1 – Context Maps



Attachment No. 2 – Applicant's Site Plan



Attachment No. 3 – Site Photo (2014)



ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Zoning Bylaw Amendment – Electoral Area "I"
79 Twin Lakes Road (I-02342.001/.005)

Administrative Recommendation:

THAT Bylaw No. 2457.20, 2018, a bylaw to amend the Electoral Area "I" Zoning Bylaw to rezone parts of two legal parcels to facilitate the development of the Twin Lakes Golf Resort for residential development, be adopted.

Background:

August 3, 2018, first reading.

March 21, 2019, second reading and delegated the convening of a public hearing to Director Monteith.

December 7, 2020, an electronic Public Hearing was held and was attended by the agent, the property owner and approximately 25 members of the public.

March 18, 2021, third reading; and, prior to adoption, that a "no-build" statutory covenant be registered on title. The purpose of the covenant is to ensure that the area identified as "Phase 2" cannot proceed until groundwater sustainability and availability is proven to warrant further development and that 36 dwelling units in "Phase 1" have been constructed and issued occupancy permits.

June 3, 2021, the statutory covenant was registered on the title.

March 25, 2021, approval from the Ministry of Transportation and Infrastructure (MoTI).

Alternatives:

1. THAT adoption of Electoral Area "I" Zoning Amendment Bylaw No. 2457.20, 2018, be deferred; or
2. THAT first, second and third readings of Electoral Area "I" Zoning Amendment Bylaw No. 2457.20, 2018, be rescinded and the bylaw abandoned.

Respectfully submitted:

Cory Labrecque

Cory Labrecque, Planner II

Endorsed By:

C. Garrish, Planning Manager

BYLAW NO. 2457.20

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

BYLAW NO. 2457.20, 2018

A Bylaw to amend the Electoral Area "I" Zoning Bylaw No. 2457, 2008

The REGIONAL BOARD of the Regional District of Okanagan-Similkameen in open meeting assembled ENACTS as follows:

1. This Bylaw may be cited for all purposes as the "Electoral Area "I" Zoning Amendment Bylaw No. 2457.20, 2018."

2. The Electoral Area "I" Zoning Bylaw No. 2457, 2008, is amended by:

   i) adding a new reference to "Twin Lakes Village Zone TLV" under "Village Centre Zones" at Section 5.1 (Zoning Districts) of Section 5.0 (Creation of Zones).

   ii) adding a new Section 13.2 (Twin Lakes Village Zone (TLV) under Section 13.0 (Village Centre) to read as follows:

13.2 TWIN LAKES VILLAGE ZONE (TLV)

13.2.1 Permitted Uses:

Principal uses:

a) apartment building, subject to Section 13.2.10;

b) art galleries, libraries, museums;

c) campground, subject to Section 13.1.10;

d) community hall;

e) duplex;

f) eating and drinking establishment;

g) indoor recreational facilities;

h) office;

i) personal service establishment;

j) retail store, general;

k) townhouse, subject to Section 13.2.10;

l) tourist accommodation;

m) vacation rentals, subject to Section 7.28;

Secondary uses:

n) home occupation, subject to Section 7.17; and

o) accessory buildings and structures, subject to Section 7.13.

13.2.2 Site Specific Twin Lakes Village (TLVs) Provisions:

a) see Section 19.29

13.2.3 Minimum Parcel Size for Subdivision:

a) 225.0 m^2 for the purpose of subdividing a duplex under the *Strata Property Act*, when connected to a community sewer and water system;

b) 550.0 m^2, when connected to a community sewer and water system;

c) 0.5 ha, when connected to community sewer system and serviced by well; or

d) 1.0 ha, when serviced by well and approved septic system.

13.2.4 Minimum Parcel Width for Subdivision:

a) Not less than 25% of the parcel depth.

13.2.5 Maximum Density:

a) 60 dwelling units per ha for apartment buildings and townhouses, subject to servicing requirements; and

b) two (2) dwelling units per parcel for duplexes, provided that both dwellings are located in one (1) residential building.

13.2.7 Minimum Setbacks:

a) Buildings and Structures:

i)	Front parcel line:	4.5 metres
ii)	Rear parcel line:	3.0 metres
iii)	Interior side parcel line:	3.0 metres
iv)	Exterior side parcel line:	4.5 metres

b) Accessory Buildings or Structures:

i)	Front parcel line:	4.5 metres
ii)	Rear parcel line:	1.5 metres
iii)	Interior side parcel line:	1.5 metres
iv)	Exterior side parcel line:	4.5 metres

13.2.8 Maximum Height:

a) No building or structure shall exceed a height of 15.0 metres;

b) No accessory building or structure shall exceed a height of 5.5 metres.

13.2.9 Maximum Parcel Coverage:

a) 75% for apartment buildings or townhouses;

b) 45% for duplexes.

13.2.10 Conditions of Use:

a) the minimum land area on which an apartment building or townhouse use may be undertaken shall be 1,000.0 m^2.

b) dwelling units located in the same building as a commercial use shall have separate entrances from the exterior of the building and shall not share a common hallway with a commercial use.

c) a minimum area of 10.0 m^2 of amenity space shall be provided per dwelling unit.

d) the maximum number of campground units per hectare shall not exceed 75; and

e) all provisions in the Regional District's *Campground Regulations Bylaw No. 2779, 2018*, as amended from time to time that have not been specified in this particular bylaw shall be met for any campground use.

iii) adding a new Section 19.29 (Spite Specific Twin Lakes Village Provisions) under Section 19.0 (Site Specific Regulations) to read as follows:

19.29 Site Specific Twin Lakes Village (TLVs) Provisions:

.1 Not applicable

3. The Zoning Map, being Schedule '2' of the Electoral Area "I" Zoning Bylaw No. 2457, 2008, is amended by:

i) changing the land use designation of an approximately 3.12 ha part of the land described as Lot 2, Plan KAP26332, District Lots 228S 2169, SDYD, Except Plan

H15455, and as shown shaded purple on Schedule 'B', which forms part of this Bylaw, from Medium Density Residential One Site Specific (RM1s) to Resource Area (RA);

ii) changing the land use designation of an approximately 18.15 ha part of the land described as Lot 2, Plan KAP26332, District Lots 228S 2169, SDYD, Except Plan H15455, and as shown shaded yellow on Schedule 'B', which forms part of this Bylaw, from Residential Single Family One (RS1) to Resource Area (RA);

iii) changing the land use designation of an approximately 1.1 ha part of the land described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded red on Schedule 'C', which forms part of this Bylaw, from Medium Density Residential One Site Specific (RM1s) to Golf Course Commercial (CT3);

iv) changing the land use designation of an approximately 1.43 ha part of the lands described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded purple on Schedule 'C', which forms part of this Bylaw, from Residential Single Family One (RS1) to Golf Course Commercial (CT3);

v) changing the land use designation of an approximately 7.32 ha part of the lands described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded yellow on Schedule 'C', which forms part of this Bylaw, from Resource Area (RA) to Golf Course Commercial (CT3);

vi) changing the land use designation of an approximately 1,500 m^2 part of the lands described as District Lot 4098S, SDYD, Portion EX BLK A, Except Plan KAP53180, and as shown shaded purple on Schedule 'D', which forms part of this Bylaw, from Medium Density Residential One Site Specific (RM1s) to Resource Area (RA);

vii) changing the land use designation of an approximately 8.00 ha part of the lands described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded yellow on Schedule 'E', which forms part of this Bylaw, from General Commercial (C1) to Twin Lakes Village (TLV);

viii) changing the land use designation of an approximately 1.2 ha part of the lands described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded blue on Schedule 'E', which forms part of this Bylaw, from Medium Density Residential One Site Specific (RM1s) to Twin Lakes Village (TLV);

ix) changing the land use designation of an approximately 4,315 m^2 part of the lands described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded red on Schedule 'E', which forms part of this Bylaw, from Resource Area (RA) to Twin Lakes Village (TLV); and

x) changing the land use designation of an approximately 7,250 m^2 part of the lands described as Lot A, Plan KAP46761, District Lots 228S, 2169 & 4098S, SDYD, Except Plan KAP53180 (79 Twin Lakes Road), and as shown shaded purple on Schedule 'E', which forms part of this Bylaw, from Residential Single Family Two (RS2) to Twin Lakes Village (TLV).

READ A FIRST TIME this 2nd day of August, 2018.

READ A SECOND TIME this 21st day of March, 2019.

PUBLIC HEARING held on this 7th day of December, 2020.

READ A THIRD TIME, AS AMENDED, this 18th day of March, 2021.

Approved pursuant to Section 52(3) of the *Transportation Act* this 25th day of March, 2021.

ADOPTED this ___day of ___, 2021.

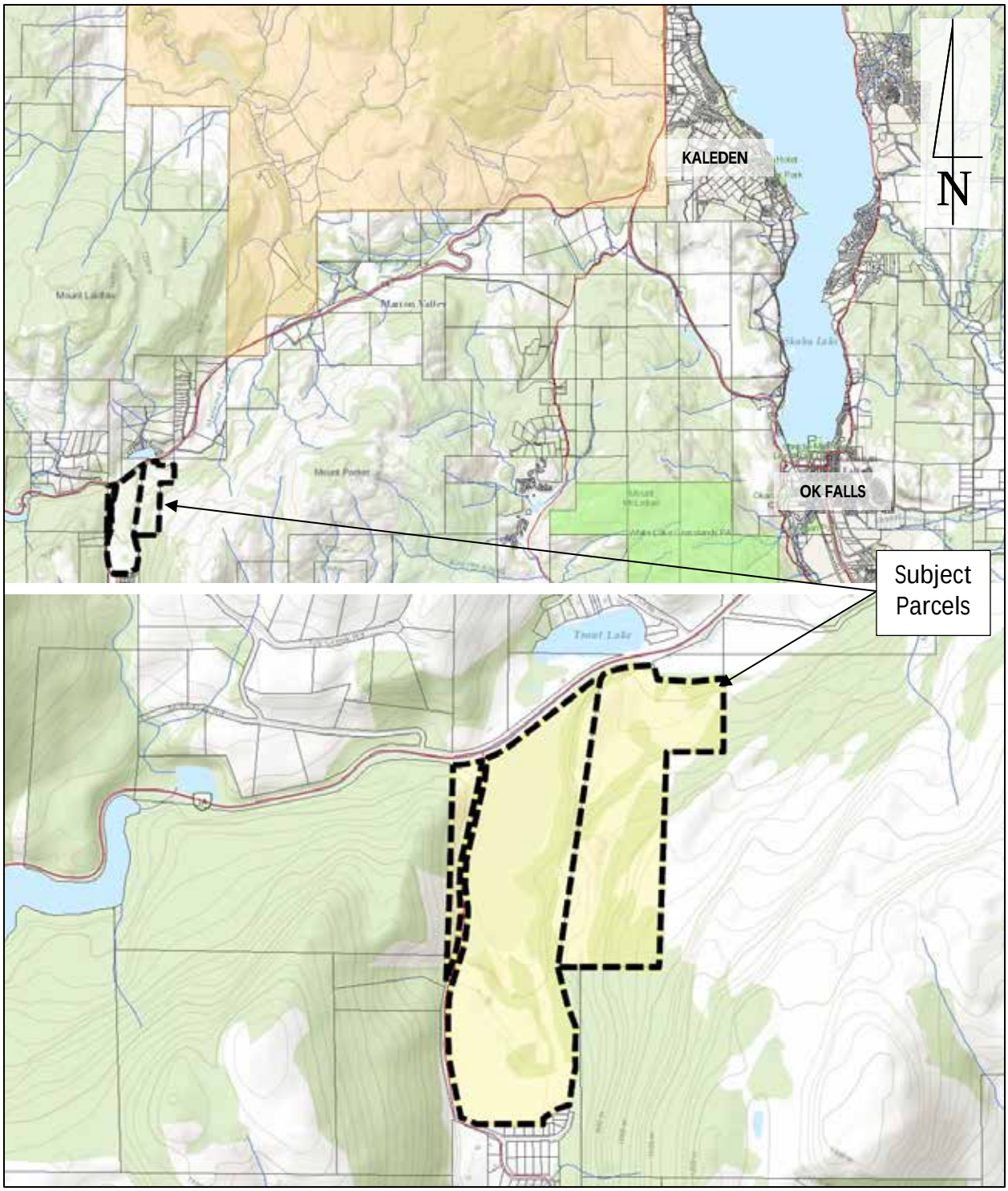
_____ _____

Board Chair Corporate Officer

Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Tel: 250-492-0237 Email: info@rdos.bc.ca

Amendment Bylaw No. 2457.20, 2018 Project No: D2017.069-ZONE

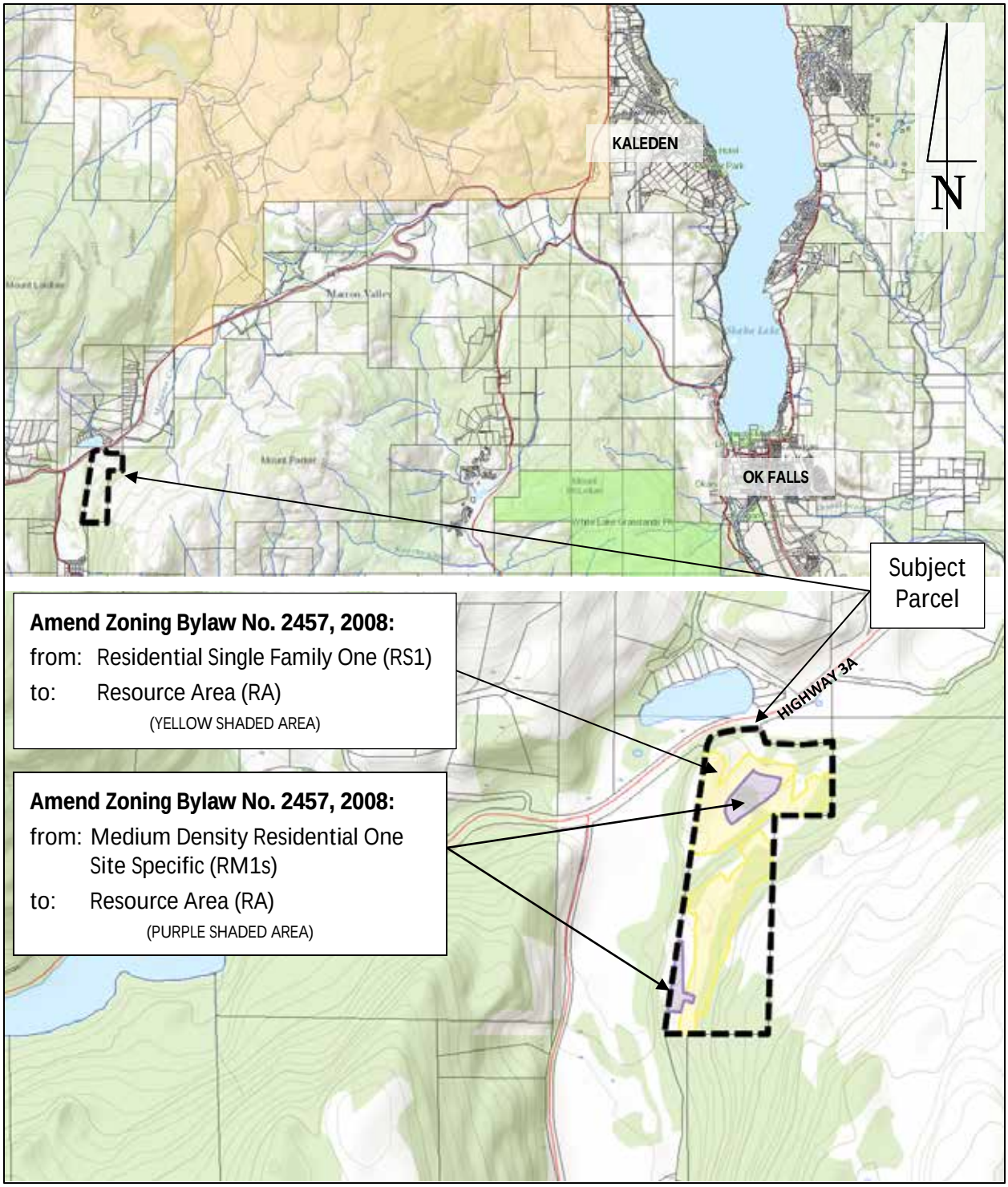
Schedule 'A'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Amendment Bylaw No. 2457.20, 2018 Project No: D2017.069-ZONE

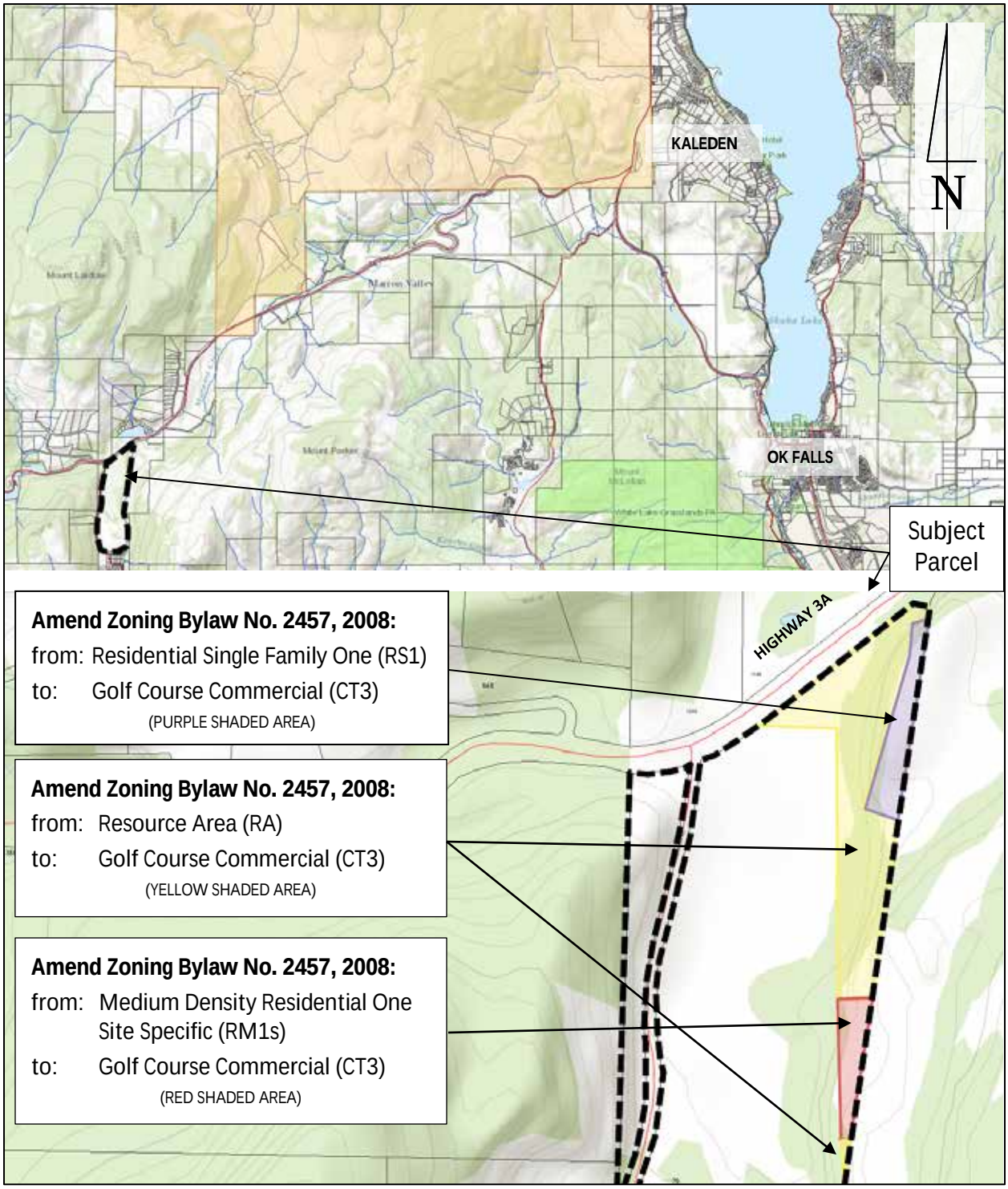
Schedule 'B'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Amendment Bylaw No. 2457.20, 2018 Project No: D2017.069-ZONE

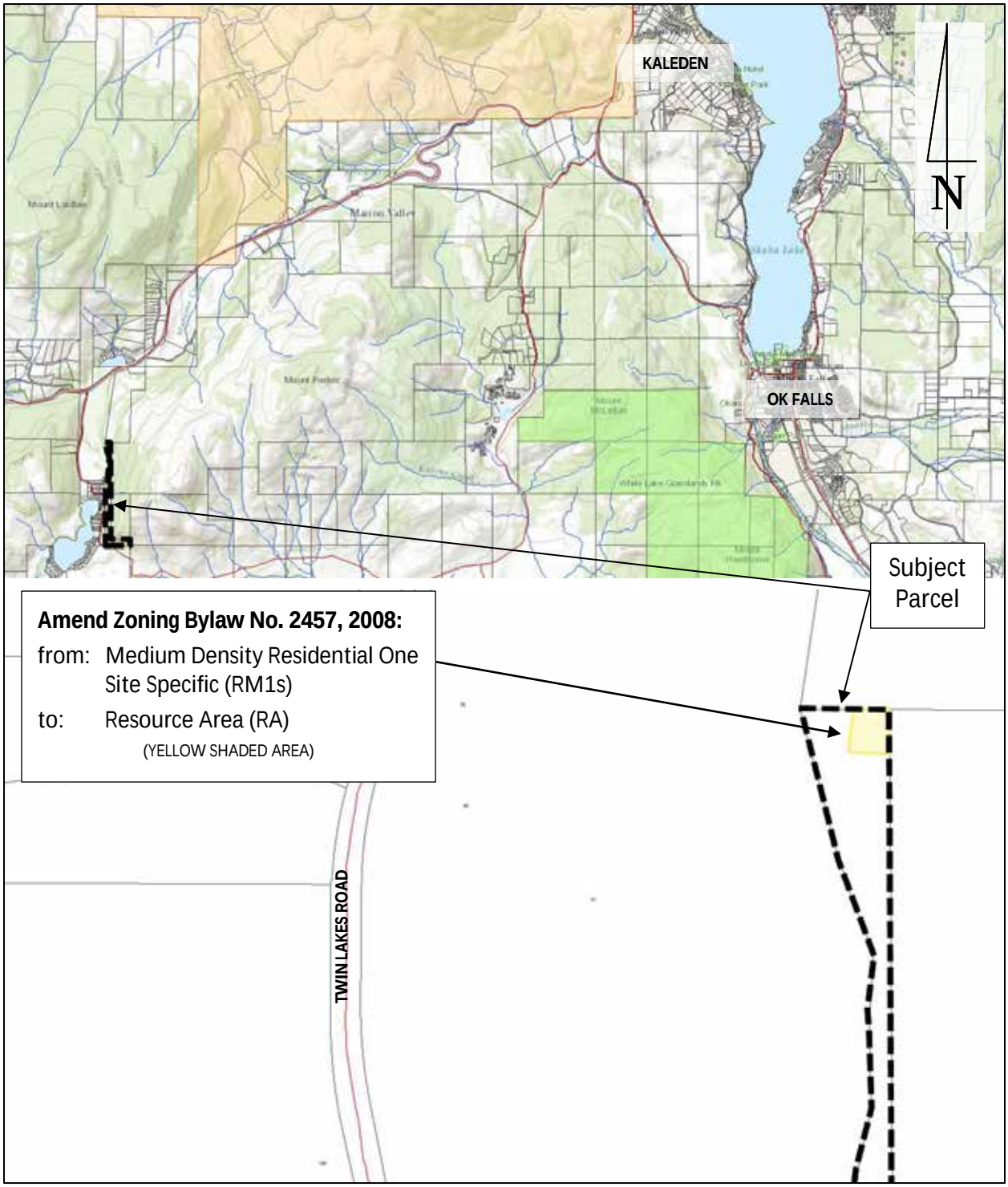
Schedule 'C'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Amendment Bylaw No. 2457.20, 2018 Project No: D2017.069-ZONE

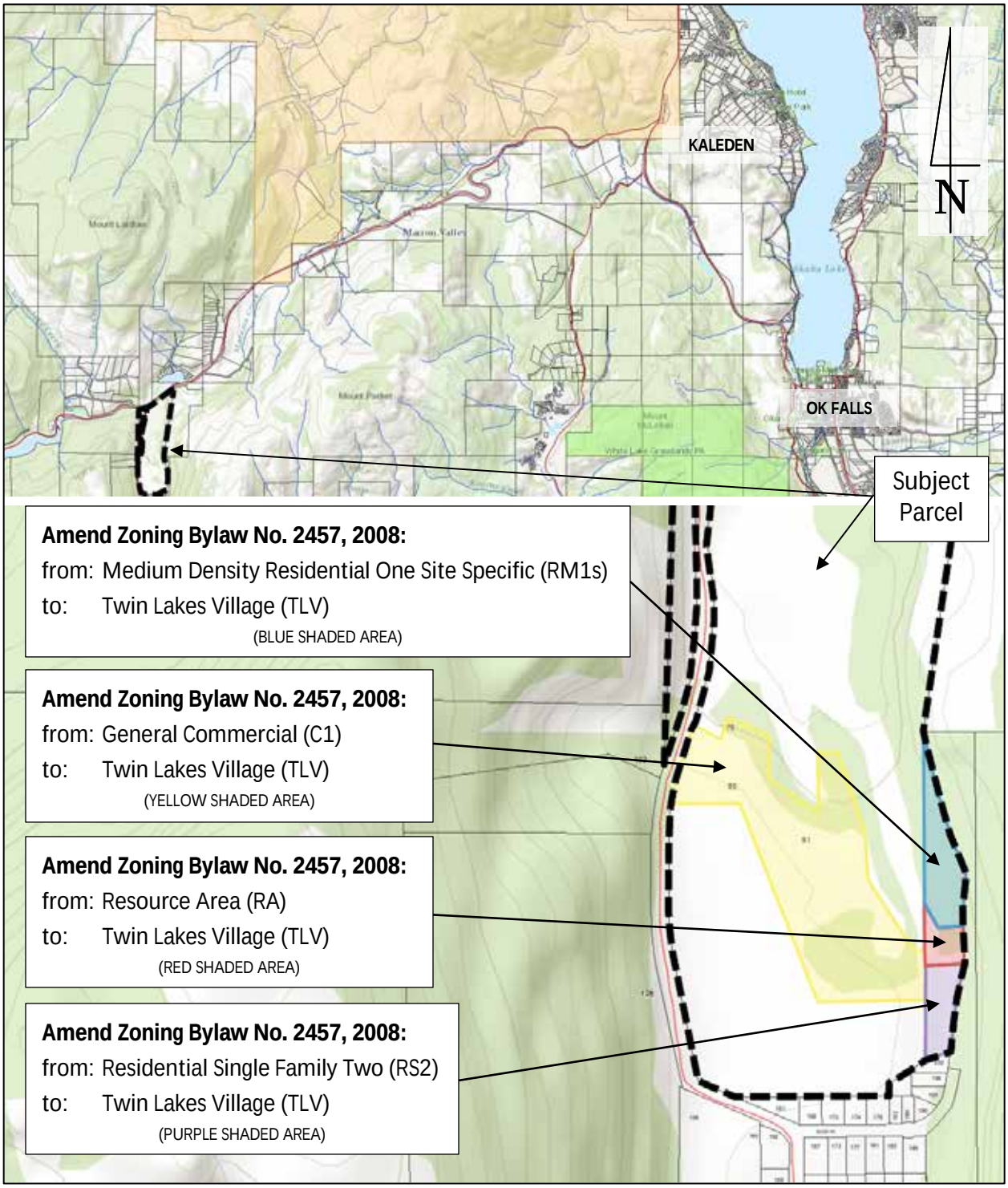
Schedule 'D'



Regional District of Okanagan-Similkameen
101 Martin St, Penticton, BC, V2A-5J9
Telephone: 250-492-0237 Email: info@rdos.bc.ca

Amendment Bylaw No. 2457.20, 2018 Project No: D2017.069-ZONE

Schedule 'E'



ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: May 20, 2021

RE: Town of Oliver Request to Provide Road Rescue Service in RDOS

Administrative Recommendation:
THAT the Regional District grant authority to the Town of Oliver to provide a Road Rescue Service within the geographic boundary of the Regional District of Okanagan Similkameen along the eastern portion of Fairview Road starting from Willowbrook Road and continuing westerly to the summit at a visual road widening.

Reference:

Letter 27 April 2021 - Johansen to Kozakevich
Letter 1 June 2021 – Gaudry to Johansen

Background:

(Community Charter) Services outside municipality

13 (1) A municipality may provide a service in an area outside the municipality, but it must first obtain consent as follows:

(a) if the area is in another municipality, the council must obtain the consent of the council of the other municipality;

(b) if the area is not in another municipality and is not treaty lands, the council must obtain the consent of the regional district board for the area.

(2) In giving consent under subsection (1), the other local government may establish terms and conditions, including terms and conditions respecting

(a) limits on the service to be provided in its area, and

(b) the process for terminating provision of the service in its area.

(3) If consent is given as referred to in subsection (1), the municipal powers, duties and functions provided under this or any other Act in relation to the service may be exercised in the area referred to in that subsection, subject to any applicable terms and conditions established under subsection (2).

Analysis:

The Town of Oliver has requested permission to provide a service outside of their geographic boundary, triggering S. 13 of the Community Charter.

A significant section of Fairview Road west of Oliver is not serviced by the Regional District for road rescue.

Town of Oliver

CANADA'S WINE CAPITAL

Office of the Mayor

April 27, 2021

Chair Karla Kozakevich
RDOS Board Members
Regional District of Okanagan Similkameen (RDOS)
101 Martin Street
Penticton, BC V2A 5J9

Dear Chair Kozakevich and Board Members:

Re: Oliver Fire Department Road Rescue in RDOS Boundary

I am writing to you today to seek your approval to permit the Oliver Fire Department to provide Emergency Management BC, On-Call Road Rescue services within a jurisdictional area of the Regional District of Okanagan Similkameen.

The Oliver Fire Department now undertakes Road Rescue as part of their Services, however the Road Rescue services they are able to provide are limited by the boundary set out in our current Fire Control Bylaw 1369.

The Oliver Fire Department could provide this service along Fairview Road within RDOS jurisdiction. The *Community Charter outlines* that the Town of Oliver must seek approval from the respective local government to allow the Oliver Fire Department to provide On-Call Road Rescue services.

The Road Rescue services the Oliver Fire Department are proposing to respond to along this section of Fairview Road include any situation where an incident may impede traffic, has occurred on or in the vicinity of a recognized roadway, but is not limited to a motor vehicle accident.

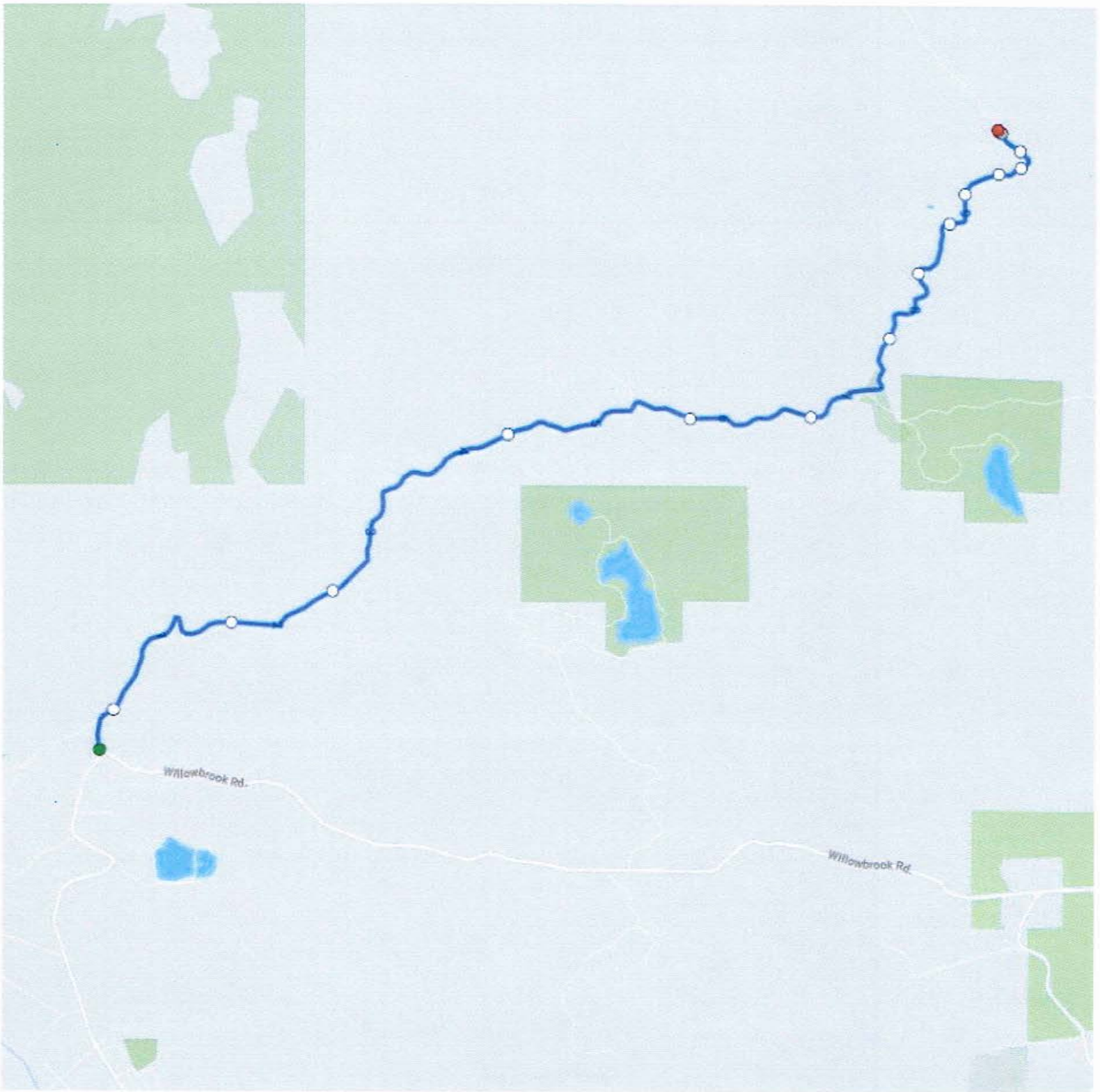
The Town of Oliver respectfully asks that this request be considered by the RDOS Board.

Yours truly,

Martin Johansen
Mayor

Attachment

cc Council


Willowbrook Rd.
Willowbrook Rd.


Fairview Road
Fairview Road
Fairview Road
Fairview Road

South Okanagan Similkameen Fire Chiefs Association

June 1,2021

Office of the Mayor
Town of Oliver
PO Box 638,
6150 Main Street
Oliver, BC V0H1T0

RE: Road Rescue Response:

Dear Mayor Johansen,

We received a letter dated May 21, 2021, from the Regional District of Okanagan-Similkameen (RDOS) requesting a consultation and clarification of the physical boundaries for Road Rescue Response as it pertains to Fairview Road in Area C/B of the RDOS. The eastern portion of Fairview Road is currently unserved while the western portion is currently serviced by the Keremeos and District Volunteer Fire Department.

In keeping with the fundamental EMBC principals of all major traveled roadways in BC being cover by a Road Rescue Response agency, the SOSFCA considers there being no issues with the Oliver Fire Department responding on the eastern portion of Fairview Road starting from Willowbrook Road and continuing westerly to the summit at a visual road widening. The Keremeos and District Volunteer Fire Departments response boundaries will continue to be from the bottom of the hill (Cawston area) up to the same widening calling it the "Summit."

I trust this provides a satisfactory conclusion for the RDOS Board of Directors to continue with your request.

Respectfully,

Denis G Gaudry

SOSFCA President

Copy:	Cathy Cowan, CAO Town of Oliver	ccowan@oliver.ca
	Bob Graham – Oliver Fire Chief	ofdchief@oliver.ca
	Jordy Bosscha – Keremeos Fire Chief	fc@stn151.ca
	Dale Kronebusch – SOSFCA Administrator	kmg365@live.ca

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: 2020 Statement of Financial Information

Administrative Recommendation:

THAT the Board of Directors approve the Regional District of Okanagan-Similkameen Statement of Financial Information for the year ended December 31, 2020 pursuant to the *Financial Information Act* Financial Information Regulation Schedule 1, subsection 9(2).

Reference:
2020 Statement of Financial Information (SOFI)

Business Plan Objective:
Objective 1.1.1: By providing the Board with accurate, timely financial information.

Background:
Local governments are required to file the Statement of Financial Information (SOFI) annually. The SOFI must be made available for public viewing by June 30, 2021 and be accessible for the following three years.

Analysis:
The SOFI consists of the following four core financial statements and schedules:

1. Schedule of Guarantee and Indemnity Agreements – There were no agreements of this nature for the RDOS in 2020.

2. Schedule of Remuneration and Expenses – The threshold for reporting remuneration individually is $75,000 per year. Expenses include travel, memberships, tuition, relocation, vehicle reimbursements, and registration fees paid directly to an employee or to a third party on behalf of an employee.
   Note: The 2020 remuneration figures include $69,125 in overtime wages attributed to Emergency Operations which are recoverable from the Province.

3. Statement of Severance Agreements – There were three severance agreements between the RDOS and non-unionized staff in 2020.

4. Schedule of Payments to Suppliers of Goods and Services – The threshold for reporting these payments individually is $25,000.
   Note: The payments to suppliers figures include approximately $278,750 in expenses attributed to Emergency Operations which are recoverable from the Province.

Communication Strategy:
The Statement of Financial Information will be available on the Regional District of Okanagan-Similkameen website.

Respectfully submitted:

Noelle Evans-MacEwan

_____
N. Evans-MacEwan, Finance Supervisor

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

STATEMENT OF FINANCIAL INFORMATION
(SOFI)

FOR THE YEAR ENDED DECEMBER 31, 2020

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

SCHEDULE OF GUARANTEE AND INDEMNITY AGREEMENTS

A Schedule of Guarantees and Indemnity payments has not been prepared because the Regional District of Okanagan-Similkameen has not given any guarantees or indemnities under the Guarantees and Indemnities Regulation.

Approved by:

Finance Officer

Prepared under the Financial Information Regulation, Schedule 1, subsection 5(1)

REGIONAL DISTRICT OKANAGAN-SIMILKAMEEN

SCHEDULE SHOWING THE REMUNERATION AND EXPENSES PAID TO OR ON BEHALF OF EACH EMPLOYEE FOR THE YEAR ENDED DECEMBER 31, 2020

1. Elected Officials, Employees appointed by Cabinet and Members of Board of Directors

NAME	POSITION	REMUNERATION	EXPENSE
ALLEN, HEATHER	Alternate Director	1,093	-
ALLISON, LINDA	Alternate Director	1,093	-
BARKWILL, RICHARD	Alternate Director	567	6
BAUER, MANFRED	Director	16,610	453
BLOOMFIELD, JULIUS*	Director/Alternate	12,659	-
BOOT, TONI*	Director	12,861	56
BUSH, GEORGE	Director	35,005	756
COTTRILL, TIMOTHY	Alternate Director	1,507	51
COYNE, ROBERT	Director	34,641	872
COYNE, SPENCER*	Director/Vice-Chair	18,176	1,424
D'ANDREA, JAMES	Alternate Director	911	-
DAVIES, VICTOR	Alternate Director	911	-
GETTENS, RILEY	Director	35,484	1,637
HOLLEY, ARDEN	Alternate Director	414	54
HOLMES, DOUGLAS*	Vice-Chair/Director	22,785	384
JOHANSEN, MARTIN*	Alternate/Director	5,137	257
KIMBERLEY, GERALD*	Director	9,245	-
KNODEL, RICK	Director	34,226	1,209
KOZAKEVICH, KARLA	Chair	76,278	1,868
MANNING, VIRGINIA	Alternate Director	1,093	24
MARVEN, CAMERON	Alternate Director	1,093	-
MCKORTOFF, SUZAN	Director	15,781	396
MONTEITH, SUBRINA	Director	35,005	632
OBIREK, RONALD	Director	34,641	1,768
PENDERGRAFT, MARK	Director	35,005	1,044
REGEHR, FRANK*	Director/Alternate	13,640	-
RHODES, CECIL	Alternate Director	1,243	151
ROBERTS, TIMOTHY	Director	34,591	1,017
ROBINSON, KATHLEEN*	Alternate/Director	8,265	-
ROWLAND, BRENT*	Alternate Director	182	-
SCHAFER, TERRY	Alternate Director	2,949	142
SENTES, JUDITH*	Alternate/Director	4,763	-
TRAINER, ERIN*	Alternate/Director	3,596	60
VASSILAKI, JOHN	Director	15,679	-
VEINTIMILLA, PETRA*	Director/Alternate	14,587	236
WATT, CAMPBELL*	Alternate/Director	3,182	-
TOTAL: Elected Officials		**$ 544,898**	**$ 14,497**

* Position changed during the year

REGIONAL DISTRICT OKANAGAN-SIMILKAMEEN

SCHEDULE SHOWING THE REMUNERATION AND EXPENSES PAID TO OR ON BEHALF OF EACH EMPLOYEE FOR THE YEAR ENDED DECEMBER 31, 2020

2. Other Employees (excluding those listed in Part 1 above)

NAME	POSITION	REGULAR REMUNERATION	EXPENSE
ANDERSON, STEPHEN	System Operator IV	89,575	95
BENN, ADAM*	Systems Administrator	87,408	-
BENN, ANNE*	Emergency Program Coordinator	97,426	817
BENNETT, WENDY	Solid Waste Facilities Coordinator	85,361	302
BLOOMFIELD, LIISA*	Manager of Engineering	109,592	2,627
CARLSON, DAVID J.	Utilities Foreman - Water	98,478	95
CUNNINGHAM, ADAM	System Operator III	75,895	95
EVANS-MACEWAN, NOELLE	Finance Supervisor	91,609	1,413
FOSTER, ROBERT ANDY	Similkameen Recreation Manager	80,241	933
FRANCISCO, DANIEL	Information Services Manager	90,442	-
GARRISH, CHRISTOPHER	Manager of Planning	108,698	3,217
HAMILTON, DONALD	Solid Waste Facilities Supervisor	78,767	883
HILLMAN, JONATHAN	Systems Operator II	84,304	162
HOUGH, AARON	Building Official	87,182	1,808
JMIOFF, WES	Building Official	90,140	642
JUCH, STEPHEN*	Development Engineering Supervisor	85,707	1,631
KURVINK, JOHN*	Manager of Finance	101,235	3,762
LOGAN, DEREK	System Operator II	77,154	1,092
MALDEN, CHRISTY	Manager of Legislative Services	113,095	-
MELO, JAMIE	System Operation III	87,127	338
MILLER, LAURA*	Manager of Building and Enforcement Services	109,660	762
MOORE, KAREN	Laboratory Technician	78,492	313
MORGAN, KARMEN*	Manager of Human Resources	115,069	1,033
NEWELL, WILLIAM	Chief Administrative Officer	170,755	712
PALMER, ROBERT	Environmental Technologist	87,629	95
PETRY, MARK	Building Official	89,437	50
PHILIPPS, LAURA*	Payroll & Benefits Coordinator	79,590	261
REEDER, ANDREW*	Manager of Operations	108,817	1,003
ROMERO, AUGUSTO*	Recreation Manager	90,457	1,960
SEPPEN, RINA	Utilities Foreman - Wastewater	101,596	704
SHUTTLEWORTH, JUSTIN*	Manager of Parks and Facilities	93,272	1,295
VAISLER, SEAN*	Manager of Emergency Services	122,567	-
WOLF, ANTON*	Building Official	91,496	768
WOODS, MARK*	Manager of Community Services	134,824	-
		$ 3,293,097	$ 28,868
Consolidated totals of other employees with remuneration and expenses of $75,000 or less*		4,726,134	39,617
TOTAL: Other Employees		**$ 8,019,231**	**$ 68,485**

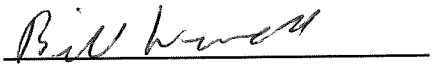
* The remuneration figures shown above include $69,125 in overtime wages attributed to Emergency Operations

3. Reconciliation

Total remuneration - Elected Officials, Employees appointed by Cabinet and Members of Board of Directors	$ 544,898
Total Remuneration - Other Employees	$ 8,019,231
Subtotal	$ 8,564,129
Employer's cost of benefits	$ 1,460,070
Taxable benefits included in remuneration and in employer cost	$ (15,675)
Payroll expensed but not paid by RDOS	$ 380,628
Payroll related to OSRHD	$ (38,897)
Taxable benefits included in suppliers & vendors	$ (22,174)
Reconciling Items*	$ 229,193
Total Wages and Benefits per Statement of Consolidated Revenues and Expenditures	$ 10,557,274

*The Financial Statements are prepared on a consolidated basis using the accrual method of accounting, whereas the employee remuneration schedule is prepared on a calendar cash payment basis.

Approved by:



Finance Officer

Prepared under the Financial Information Regulation, Schedule 1, subsection 6(2), (3), (4), (5) and (6)

REGIONAL DISTRICT OKANAGAN-SIMILKAMEEN

STATEMENT OF SEVERANCE AGREEMENTS

There were three severance agreements under which payment was made between RDOS and its non-unionized employees during fiscal year 2020.

These agreements represent between 2 and 4 months of compensation.

Approved by:

Chief Administrative Officer

Prepared under the Financial Information Regulation, Schedule 1, subsection 6(8)

REGIONAL DISTRICT OKANAGAN SIMILKAMEEN

SCHEDULE SHOWING PAYMENTS MADE FOR THE PROVISION OF GOODS OR SERVICES FOR 2020

1. Alphabetical list of suppliers who received aggregate payments exceeding $25,000

SUPPLIER NAME	AGGREGATE AMOUNT PAID TO SUPPLIER
1053033 BC LTD	93,012.46
447857 BC LTD	30,125.47
AECOM CANADA LTD.	311,318.13
ANDREW SHERET LTD.	50,729.59
ARCHER SEPARATION INC	94,802.40
AVOCETTE TECHNOLOGIES INC.	43,792.87
B&B WOOD GRINDING INC.	368,351.36
BAR 5 LEADERSHIP	44,936.16
BARRY BEECROFT FUEL DIST. LTD.	58,443.60
BC GRAPEGROWERS' ASSOCIATION	25,000.00
BC TRANSIT	456,949.98
BCGEU CONTROLLER	87,058.31
BDO CANADA LLP	32,963.99
BEARFOOT RESOURCES LTD.	32,127.78
BETTS ELECTRIC LTD.	101,770.52
BLACK PRESS GROUP LTD.	48,177.20
BLISTER MANAGEMENT INC	29,132.25
BRANDT ENTERPRISES LTD.	47,781.16
CANADA SAFETY EQUIPMENT LTD.	32,357.47
CAPRI INSURANCE	280,330.00
CARO ANALYTICAL SERVICES	83,273.28
CDW CANADA INC.	31,244.06
CENTRALSQUARE CANADA SOFTWARE INC.	38,775.96
CENTRIX CONTROL SOLUTIONS LP - KELOWNA	63,654.78
CHAPARRAL	43,644.57
CITY OF KELOWNA	246,966.55
CITY OF PENTICTON	851,745.24
CITY OF PENTICTON	29,147.02
CLARITI CLOUD INC.	37,012.42
COMMUNITY FOUNDATION SOUTH OKANAGAN	30,000.00
CORPORATE EXPRESS	39,346.66
DIGITAL POSTAGE ON CALL	40,000.00
DOLDEN WALLACE FOLICK LLP	33,928.16
DRIVING FORCE LANGLEY	62,875.68
DUCKS UNLIMITED CANADA	145,268.13
DUKA ENVIRONMENTAL SERVICES LTD.	48,361.60
DUTCHIES TRANSFER LTD.	34,468.87
ECLIPSE HELICOPTERS LTD	31,124.87
ECOPLAN INTERNATIONAL INC.	166,365.64
ECORA ENGINEERING & RESOURCE GROUP LTD.	211,117.03
ESRI CANADA LIMITED	59,619.35
ET2MEDIA	59,521.94
EUROPEAN TIMBERFRAME CORPORATION	52,566.87
EZ BINS (2018) LTD	54,715.46
FIRSTLIGHT TECHNOLOGIES	32,231.15
FORTIS BC - ELECTRICITY (PAPs)	400,358.92
FORTIS BC - NATURAL GAS (PAPs)	30,664.26

1. Alphabetical list of suppliers who received aggregate payments exceeding $25,000 (continued)

SUPPLIER NAME	AGGREGATE AMOUNT PAID TO SUPPLIER
FRED SURRIDGE LTD	42,312.22
FRONTLINE OPERATIONS GROUP LTD.	83,540.46
GILCHRIST & COMPANY	76,356.88
GILCHRIST & COMPANY "IN TRUST"	1,710,050.00
GREEN FOR LIFE ENVIRONMENTAL INC.	941,232.17
GREEN MOUNTAIN HEALTH ALLIANCE LTD	88,398.24
GREENSCAPE LANDSCAPING LTD	107,190.02
GREENSTEP SOLUTIONS INC.	34,578.87
GREYBACK CONSTRUCTION LTD	299,706.81
GRIZZLY EXCAVATING LTD.	135,232.02
GROUP SOURCE	49,565.14
GUILLEVIN INTERNATIONAL CO.	145,173.13
H & M EXCAVATING LTD.	163,801.83
HATCH LTD	146,208.84
HOULE ELECTRIC LIMITED	118,773.14
HUB FIRE ENGINES & EQUIPMENT LTD.	28,683.59
HUSKA HOLDINGS LTD	710,076.71
INTERCITY RECYCLE LTD.	58,810.59
JAFA SIGNS LTD.	55,045.22
JETCO LAWN CARE SERVICES	53,160.06
KIMCO CONTROLS LTD.	42,056.62
LANDFORM ARCHITECTURE LTD	27,388.60
LIONS GATE RISK MANAGEMENT GROUP	55,765.50
MARTECH ELECTRICAL SYSTEM	70,921.65
MIKE JOHNSON EXCAVATING LTD.	41,017.93
MONERIS MERCHANT SERVICES	70,633.36
MORNEAU SHEPELL LTD.	409,767.68
MOYER BRAD	32,598.33
MPE ENGINEERING LTD	165,436.46
MUNICIPAL INSURANCE ASSN OF BC	192,343.07
MUNICIPAL PENSION PLAN	1,110,823.81
NARAMATA EXCAVATING & CONTRACTING LTD.	25,432.91
NEED A LIFT TRUCK SERVICES	67,245.74
NILEX CIVIL ENVIRONMENTAL GROUP	105,822.69
NORTHWEST HYDRAULIC CONSULTANTS LTD	33,689.97
OKANAGAN AND SIMILKAMEEN INVASIVE SPECIES SOCIETY	91,580.63
OKANAGAN BASIN WATER BOARD	69,353.63
OLIVER & DISTRICT HERITAGE SOCIETY	154,000.00
OLIVER COMMUNITY THEATRE SOCIETY	112,500.00
OLIVER TOURISM ASSOCIATION	56,000.00
OLIVER TOWN OF	31,409.38
OPUS CONSULTING GROUP LTD	25,585.10
OSOYOOS INDIAN BAND	50,678.70
OSOYOOS MUSEUM SOCIETY	583,493.00
OSOYOOS TOWN OF	684,911.73
PENTICTON & AREA COOPERATIVE ENTERPRISES	157,480.31
PETER'S BROS. CONSTRUCTION LTD.	25,204.20
PLAN B CONTRACTORS INC.	154,337.57
PRINCETON TOWN OF	564,254.00
PROVINCE OF BRITISH COLUMBIA	173,006.93

1. Alphabetical list of suppliers who received aggregate payments exceeding $25,000 (continued)

SUPPLIER NAME	AGGREGATE AMOUNT PAID TO SUPPLIER
QUALITY MAINTENANCE	51,575.89
REACTION DISTRIBUTING INC	32,721.15
RECEIVER GENERAL FOR CANADA	2,233,608.45
RECEIVER GENERAL FOR CANADA	30,061.74
REGIONAL DISTRICT OF CENTRAL OKANAGAN	139,549.00
REMAX PENTICTON REALTY PROPERTY MANAGEMENT	63,820.32
REVOLUTION ENVIRONMENTAL SOLUTIONS LP	59,491.03
RICOH CANADA INC.	26,140.33
ROBBINS DRILLING AND PUMP LTD.	84,595.32
ROCKY MOUNTAIN PHOENIX	146,787.49
ROGERS	33,127.14
ROSE GREGORY	29,500.00
SENKULMEN UTILITIES LTD.	68,364.35
SIMILKAMEEN COUNTRY DEVELOPMENT ASSOCIATION	33,000.00
SKAHA FORD INC.	61,038.79
SOCIAL PLANNING & RESEARCH COUNCIL OF BC	26,840.00
SOFTCHOICE CORPORATION	88,639.25
SOUTH OKANAGAN SECURITY SERVICES LTD	177,965.66
SPERLING HANSEN ASSOCIATES INC	108,715.88
SUMMERLAND DISTRICT OF	270,199.68
SUPERIOR SEPTIC SERVICES	94,396.39
TELUS COMMUNICATIONS (BC) INC.	85,349.91
TETRA TECH CANADA INC.	66,268.42
TRADEMARK INDUSTRIES	42,268.66
TWIN LAKES CONTRACTING LTD	37,051.88
TWINCON ENTERPRISES LTD	226,068.24
URBAN SYSTEMS LTD.	325,791.14
VALLEY ENVIRONMENTAL	34,713.00
VALUE CONTRACTING	36,001.47
WASTE CONNECTIONS OF CANADA INC.	1,251,363.42
WATERSHED ENGINEERING LTD	34,668.39
WEIGH TRONIX CANADA ULC	90,750.38
WESTERN WATER ASSOCIATES LTD.	66,611.69
WFR WHOLESALE FIRE & RESCUE LTD.	51,665.39
WHITE BRYN	86,463.38
WILDSTONE ENVIRONMENTAL LTD.	414,132.76
WINTON STEPHANIE	64,081.85
WISHBONE INDUSTRIES LIMITED	49,868.84
WORKERS' COMP. BOARD OF B.C.	108,940.08
YOUNG ANDERSON BARRISTERS & SOLICITORS	152,152.05
TOTAL OF AGGREGATE PAYMENTS EXCEEDING $25,000 PAID TO SUPPLIERS	$ 22,744,143

2. Consolidated total paid to suppliers who received aggregate payments of $25,000 or less

	$ 3,000,303

Note: The payments to suppliers figures shown above include approximately $278,750 in expenses attributed to Emergency Operations

3. Total of payments to suppliers for grants and contributions exceeding $25,000

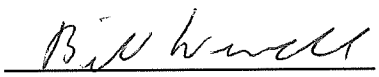
CONSOLIDATED TOTAL OF GRANTS EXCEEDING $25,000	$	623,304
CONSOLIDATED TOTAL OF AGGREGATED GRANTS NOT EXCEEDING $25,000	$	90,725
CONSOLIDATED TOTAL OF GRANTS	$	714,029
CONSOLIDATED TOTAL OF CONTRIBUTIONS EXCEEDING $25,000	$	263,353
CONSOLIDATED TOTAL OF AGGREGATED CONTRIBUTIONS NOT EXCEEDING $25,000	$	17,805
CONSOLIDATED TOTAL OF GRANTS & CONTRIBUTIONS	$	995,187

4. Reconciliation

TOTAL OF AGGREGATE PAYMENTS EXCEEDING $25,000 PAID TO SUPPLIERS	$	22,744,143
CONSOLIDATED PAYMENTS OF $25,000 OR LESS PAID TO SUPPLIERS	$	3,000,303
EMPLOYEE REMUNERATION EXPENSES (Salaries & Benefits)	$	8,564,129
CONSOLIDATED TOTAL OF GRANTS & CONTRIBUTIONS	$	995,187
REQUISITIONS TO OTHER BOARDS	$	2,452,636
AMORTIZATION EXPENSE	$	2,756,323
INFORMATION SERVICES CHARGES	$	6,372
ADMINISTRATION CHARGES	$	1,212,807
EMPLOYEE PORTION OF PAYROLL DEDUCTIONS AND BENEFITS	$	(2,530,515)
UNION DUES PAID ON BEHALF OF EMPLOYEES	$	(87,058)
GST REBATES & ITC'S RECEIVED	$	(362,951)
AMOUNTS PAID ON BEHALF OF OTHER ORGANIZATIONS	$	(213,508)
TANGIBLE CAPITAL ASSET PURCHASES	$	(6,261,752)
LANDFILL CLOSURE PROVISION	$	(636,757)
EXPENSES FROM OTHER ORGANIZATIONS NOT PAID BY RDOS	$	1,734,909
PREPAIDS EXPENSED	$	(11,875)
EOC EXPENSES CLAIMED DURING 2020	$	(352,730)
PAYABLES ACCRUED IN 2019 - PAID IN 2020	$	(1,033,578)
INTEREST EXPENSE	$	651,989
RECONCILING ITEMS*	$	(179,571)
TOTAL EXPENDITURES PER STATEMENT OF CONSOLIDATED REVENUES AND EXPENDITURES	$	32,448,502

*The Financial Statements are prepared on a consolidated basis using the accrual method of accounting, whereas the supplier payments schedule is prepared on a calendar cash payment basis.

Approved by:



Finance Officer

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Purchase of 105 Highway 3 East, Princeton

Administrative Recommendation:

THAT the Regional District of Okanagan Similkameen authorize the expenditure of $150,000 from the Area "H" Community Facilities Capital Reserve Fund to partner with the Town of Princeton for the purchase of 105 Highway 3 East (Legal Description Lot "A" Plan KAP72285 District Lot 10S 1822 Land District 54 PID 025-533-665) on the following conditions:

- **The purchase price of the land and improvements be no more than $300,000.**
- **The Vermillion Forks Metis Association, the Town of Princeton and the Regional District agree on a five (5) year lease for the operation of the improvements, with an option to purchase by VFMA, extendable for an additional five (5) years.**

Background:

In 2014, the RDOS Board created the Area "H" Community Facilities Capital Reserve Fund as a holding account for dividends received from the Vermillion Forks Community Forest Corp. Funds are dedicated for capital expenditures within Electoral Area "H".

Both the Town of Princeton and the Area "H" Director have expressed interest in purchasing the current Chamber of Commerce building for the use of the Vermillion Forks Metis Association. At the current time, the Metis Association lacks the liquidity necessary to purchase the building on its own, but it is their intent to eventually own it.

To achieve such aims and to maintain compliance with the Community Charter, there are several requirements that must be fulfilled:

- an agreement to purchase must be completed.
- the agreement must stipulate the Regional District's contribution and explicitly state the obligations of the Town, and that of the Regional District if the property is sold to the Metis Association and the obligations if the Metis Association defaults on their agreement. The conditions should be drafted such that the investment of both the Town and the Regional District are kept as safe as possible.

- a lease agreement that will trigger the sale to the Metis Association, set terms and conditions on use of the land and improvements, and sets payment obligations, if any, to the Town and Regional District from the Metis Association is required.

The objective is to have the sale of this property concluded by July 31, 2021.

Analysis:

After deducting the expenditures already committed in 2021, and including this request, the balance in the Area H Community Facilities Reserve Fund will be $1,266,755.

Alternatives:

Status quo – Expenditures do not occur.

Respectfully submitted:

"Jim Zaffino"

_____

Jim Zaffino, Manager of Finance

Mayor's Office, City of Penticton
171 Main Street, Penticton, B.C. V2A 5A9
Tel: 250-490-2400 Fax: 250-490-2402
www.penticton.ca

June 1, 2021

Karla Kozakevich, Chair, RDOS
101 Martin Street
Penticton, BC V2A 5J9

via email kkozakevich@rdos.bc.ca

On February 16, 2021 City Council passed a Notice of Motion directing City staff to arrange a review of current allocation practices of the Regional District of Okanagan-Similkameen and report back to Council on their impacts to taxpayers, and that staff prepare a proposed policy position regarding regional district overhead costs.

On May 18, City Council received the report titled "City Review of RDOS Overhead Cost Allocations", a report that compares the practices of four regional districts' administration overhead allocation methods. Council resolved to request the RDOS Board develop a general principle for allocating overhead costs for service provision, and the RDOS Board direct the RDOS staff to undertake a thorough and comprehensive review of their current overhead allocation practices to ensure fairness to all taxpayers and ratepayers in the regional district.

10.4 City Review of RDOS Overhead Cost Allocations

169/2021 **It was MOVED and SECONDED**
THAT Council receive into the record the report dated May 18, 2021 titled "City Review of RDOS Overhead Cost Allocations", a report that compares the practices of four regional districts' administration overhead allocation methods;

AND THAT Council share the results of the report with the Regional District of Okanagan-Similkameen (RDOS);

AND THAT Council request the RDOS Board develop a general principle for allocating overhead costs for service provision;

AND FURTHER THAT Council request the RDOS Board direct the RDOS staff to undertake a thorough and comprehensive review of their current overhead allocation practices to ensure fairness to all taxpayers and ratepayers in the regional district.

CARRIED
Councillor Sentes, Opposed

I have attached a copy of the staff report for the Board's attentions and request that the Board this matter at an upcoming Board meeting.

Yours truly,

John Vassilaki

John Vassilaki
Mayor

Council Report

penticton.ca

Date: May 18, 2021 File No: 1610
To: Donny van Dyk, Chief Administrative Officer
From: Courtney Jones, Financial Analyst

Subject: **City Review of RDOS Overhead Cost Allocations**

Staff Recommendation

THAT Council receive into the record the report dated May 18, 2021 titled "City Review of RDOS Overhead Cost Allocations", a report that compares the practices of four regional districts' administration overhead allocation methods;

AND THAT Council share the results of the report with the Regional District of Okanagan-Similkameen (RDOS);

AND THAT Council request the RDOS Board develop a general principle for allocating overhead costs for service provision;

AND FURTHER THAT Council request the RDOS Board direct the RDOS staff to undertake a thorough and comprehensive review of their current overhead allocation practices to ensure fairness to all taxpayers and ratepayers in the regional district.

Executive Summary

The following analysis includes a review of 4 regional district financial plans and methodologies of allocating administration overhead costs to municipalities/electoral areas highlighting the different methodologies applied, an interpretation and explanation of the methods applied, the ease of application of the methods utilized, and transparency of the allocations of administration overhead and the overall budget.

Based on the review of the Regional District's, staff have concluded that there are a multitude of methods to allocate overhead administration. Specific analysis of the RDOS financial plan and methodology of allocating administration overhead costs is detailed in the report and outlines the methodology changes made in allocating overhead administration over the last 3 years. Although it is difficult to compare one regional district to another, from this analysis some best practices were identified that have been included for both the overall financial plan and administration overhead. One such best practice is transparency regarding overhead allocation.

Conclusions from the review are that the RDOS's use of a direct time allocation method for salaries results in a substantial portion of residual overhead salary costs being allocated based on tax assessment. This may result in costs not being fully allocated to the user that receives these services. Undertaking a more comprehensive review by the RDOS of their current overhead allocation practices, will ensure that users of services, pay the cost of such services.

Strategic priority objective

Mission: Penticton will serve its residents, businesses and visitors through good governance, partnership and the provision of effective and community focused services.

Background

On February 16, 2021 City Council passed the following Notice of Motion:

12.1 Notice of Motion introduced by Councillor Regehr on February 2, 2021
Re: Regional District Overhead Costs

61/2021 **It was MOVED and SECONDED**
THAT Council direct staff to arrange a review of current overhead allocation practices of Regional District of Okanagan-Similkameen and report back to Council on their impacts to taxpayers;
AND THAT staff prepare a proposed policy position regarding regional district overhead costs and report back to Council by June 2021 for Council's consideration.

CARRIED
Councillor Sentes, Opposed

B.C. is composed of 162 municipalities and 27 regional districts. Regional districts in B.C. range in population from under 4,000 to over 2 million and range in size from 2,000 km2 to 119,337 km2. Each regional district is divided into smaller (mostly rural) areas called electoral areas.

Regional districts arose out of a need for greater regional cooperation and equitable cost-sharing between municipal areas and rural areas. Today regional districts help achieve regional economies of scale, and provide flexible service arrangements in which residents only pay for the services they receive. Regional districts have three basic roles. They provide a political and administrative framework to:

- Provide region-wide services such as regional parks, and emergency telephone services such as 911
- Provide inter-municipal or sub-regional services, such as recreation facilities where residents of a municipality and residents in areas outside the municipality benefit from the service
- Act as the general local government for electoral areas and provide local services such as waterworks and fire protection to unincorporated communities within the electoral areas

Regional district powers come primarily from the *Local Government Act* and *Community Charter*.

The City of Penticton is part of the Regional District of Okanagan Similkameen (RDOS). The RDOS was incorporated on March 4, 1966, under section 766 of the "Municipal Act", with the same 6 municipalities as today; Penticton, Summerland, Princeton, Oliver, Osoyoos, Keremeos, and only 8 of the current 9 Electoral Areas (A-H). Electoral Area I and the Penticton Indian band were not included in the original incorporation. The RDOS assumed all assets, rights, liabilities and obligations of the South Okanagan Regional Planning Board upon incorporation. Under section 783 of the Municipal Act required the Regional board to approve a budget on or before March 31, 1966.

Over the last 55 years, the budget of the RDOS has grown to over $60M from $137k in 1970 and the population of the regional district has grown to over 83,000 (2016 census) from a population of 25,320 (Municipalities only 1966 Census).

Local governments must annually adopt a financial plan in accordance with the *Local Government Act* and the *Community Charter.* The planning period for the financial plan must include the current fiscal year and the next four fiscal years (five-year plan). At a minimum, the plan must include:

- Proposed expenditures (operating, capital, interest and principal payment on debt), funding sources (for example, taxes, fees, grants, new borrowing and debenture debt), and transfers to and from reserve funds and surplus
- Objectives and policies for the fiscal year regarding distribution of funding sources, the distribution of property taxes amongst various property classes, and the use of any permissive tax exemptions

A local government must not budget for a deficit (planned expenditures and transfers to funds cannot exceed planned revenues, transfers from funds, and other cash contributions). However, if actual expenditures and net transfers from the previous year exceed that year's revenues and contributions, the resulting deficiency must be carried forward to the current year's financial plan as an expenditure. For regional district, this applies to each service budget.

Regional districts must show their accounting for each service separately and must adopt their financial plans by March 31 of each year. The earlier date for regional districts is to provide them time to prepare their annual tax requisitions for their member municipalities and the Provincial Surveyor of Taxes.

Analysis

For the purpose of this report 3 additional regional districts were selected that were comparable to the RDOS. The list of regional districts that were included in this analysis are:

- Regional District of East Kootenay (RDEK)
- Regional District of Central Okanagan (RDCO)
- Regional District of North Okanagan (RDNO)
- Regional District of Okanagan Similkameen (RDOS)

The analysis will review the overall financial plan and specifically look at how each regional districts handles and allocates administration overhead costs. In attachment A, a table highlighting each Regional Districts' statistical information is provided for reference.

Financial Plan Overview

The adoption of the Financial Plan sets out the legal spending authority for the Regional District. To operate most services, the regional district board must pass a service establishing bylaw. Service operating and capital expenditures are funded through a variety of revenue sources such as grants and transfers, fees and charges, interest, parcel tax, reserves and the majority through tax requisition. Regional Districts cannot directly tax properties. Instead, regional districts requisition their member municipalities and the Provincial Surveyor of Taxes (for rural electoral areas) to tax on behalf of the regional district in order to meet revenue needs. Each service budget is "charged out" to the applicable municipalities and electoral areas based on usage of the service and then tax assessment.

Each regional district has expenditures for the administration of the regional district. These expenditures are often referred to as administration overhead. Each regional district and their board can determine the different service budgets that group these costs. This is varied amongst regional districts but at minimum most regional districts have at least a general government service budget and electoral administration service budget. Other regional districts will also have, but not limited to, service budgets for Information

Services, Finance, Human Resources, Legislative Services, Corporate Facilities, and Engineering. How the administration overhead service budgets are allocated to the municipalities and electoral areas are not consistent and vary between regional districts. For the purpose of this report, the method of allocation of these administration overhead service budget is either allocated in full or a portion to other service budgets based a specific formula methodology (referred to as formula method). The balance of the administration overhead service budgets is then allocated based on the proportion of tax assessment (referred to as tax method). Analysis of each of the four selected regional districts budgets and methodology of administration overhead is detailed below.

Regional District of East Kootenay (RDEK)

Financial Plan

The RDEK financial plan includes the following reports to summarize the overall financial plan:

- Information report that is a high level written summary of the highlights of the financial plan;
- Summary of tax requisition for municipalities/electoral areas;
- Detailed roll up totalling all service area budgets;
- Each service budget detail;
- Each service budget has a separate budget information report that provides context around each service budget.

Administration Overhead

The administration overhead service budgets are General Administration and Electoral Administration. In the General Administration service budget, specific expenditures (salaries and other expenses) are identified and separately reported as shared services, which are allocated of out to each service budget using the formula method of the % of salaries in each service budget of the overall total of salaries. Capital is not allocated any administration overhead. The allocated amount of shared services (administration overhead) is clearly identified in each service budget under expenditures and the amount is straight forward to calculate. In 2021, the amount allocated out by this formula method, based on the details in the budget, is $847k. The balance (approx. $2.0M) of the General Administration budget is either funded through other sources or tax requisition. The tax requisition portion is allocated based on the tax method.

The Electoral Administration service budget, of $3.4M, is funded from other sources or tax requisition which is allocated based on the tax method and the service budget is charged a portion of shared services from the General Administration budget.

The combined General Administration and Electoral Administration budget expenditures for the 2021 budget is $6.3M, with $847k allocated by formula method, $3.1M allocated through tax requisition, and $2.3M funded by other sources.

Administration Overhead Allocation Formula Method Example

Total Administration overhead to be allocated	Total Salaries for all budgets	Total Salaries for Example Service budget	Administration overhead allocation
1,000,000	3,000,000	300,000	1,000,000 x 10% (300,000/3,000,000) = 100,000

Regional District of Central Okanagan (RDCO)

Financial Plan

The RDCO financial plan includes the following reports to summarize the overall financial plan:

- Summary report that is a written summary of the highlights of the financial plan which includes an explanation of the administration & engineering overhead methodology and rates applied comparative to the prior year;
- Summary roll up of the overall budget;
- The budget includes multiple different analysis and information such as a written context report on the budget, capital highlights, tax impacts, and average tax per home per municipality/electoral area for current year budget and first year budget;
- A summary of tax requisition by municipality/electoral area;
- A detailed summary of tax requisition for each municipality/electoral area;
- Each service budget detail

Administration Overhead

The RDCO administration overhead budgets are:

- Administration/ Corporate Services
- Finance
- Human Resources
- Information Systems
- Engineering Services (applied to certain budgets)
- Electoral Administration
- Regional Board

All administration overhead budgets are fully allocated out, with the exception of Electoral Administration and Regional Board, which are based on a formula method outlined in an approved Board's Administrative Overhead Policy 7.19, that was adopted in 2011, that details the methodology for calculating administration overhead (Attachment C). In the budget, the policy is referenced and current year tier rates are detailed to have transparency of the calculations.

This policy methodology is based on allocating the balance of all expenditures (all salaries and other expenses) not funded through other sources based on a tier system. The 5 overhead administration budgets are allocated to all of the other budgets for recovery based on the following 2021 tier rates. The tier rates

fluctuate annually based on the total cost of the recovery of the administration overhead budgets. If a flat % was utilized, some years it may over recover and other years it may not fully recover.

Engineering	3.08%
Administration Level 1	15.40%
Administration Level 2	10.27%
Administration Level 3	5.13%

Administration/ Corporate Services, Finance, Human Resources, and Information Systems are allocated to all service budgets. Engineering Overhead is applied only to certain budgets that the engineering department oversees, in addition to Administrative Overhead. In the administration overhead policy there is an explanation on how capital would be allocated administration overhead but in the 2021 budget there was no allocation to capital but each utility service budget was allocated administration overhead.

Administration overhead and engineering overhead allocated amounts are clearly stated on each service budget as a debit under the revenue section of the budget. This really helps to ensure service budgets expenses are easily identified and not overstated by allocations. The service budget clearly indicates the operating expense (which is the portion of the budget that is used to calculate the administration overhead) and other expenses that are not part of the administration overhead calculation. The only shortcoming with the summarized operating expense is that it does not provide transparency of what costs are part of the total operating expense such as salary, maintenance, consulting, etc. Each service budget does not indicate which administration service level is applied to the service budget, but it is easily calculated.

The total amount allocated in 2021 utilizing the formula method is $3.8M with the remaining $1.6M funded through other sources.

Electoral Administration and Regional Board budget, of $848k, is funded through other sources or tax requisition that is allocated based on the tax method.

The combined 2021 administration overhead expenses for 7 administration budgets noted above is $6.4M, $3.8M allocated by the formula method, $848k allocated by tax method, and $1.7M funded by other sources.

Administration Overhead Allocation Formula Method Example

Total Administration overhead to be allocated	Total Example Service budget Operations Expenses	Total Example Service budget tier level	Administration overhead allocation
1,000,000	1,500,000	Administration Level 2	1,500,000 x 10.27% = 154,050

Regional District of North Okanagan (RDNO)

Financial Plan

The RDNO financial plan includes the following reports to summarize the overall financial plan:

- Staff report that highlights the overall financial plan;
- High level summary of the total overall financial plan;
- Summary of the total requisition summary by service;
- A detailed summary of tax requisition for each municipality/electoral area;
- Each service budget detail.

Administration Overhead

The RDNO administration overhead budgets are General Government, Information Services, and Electoral Administration. The financial plan does not provide transparency to determine the methodology utilized to allocate the administration overheads, does not identify what portion has been allocated to each service budget or does not explain how the allocation is calculated.

Additional information on the methodology used to calculate the allocation was requested from the RDNO but has not yet been received at the time of writing this report. Based on the budget a portion, $2.6M, of General Government and Information Systems are allocated out to other service budgets and the balance, $1.6M, is funded through other sources or tax requisition allocated based on the tax methodology. There is not sufficient detail in each service budget to determine the administration overhead amount allocated to each service budget.

Electoral Administration, of $1.8M, is funded through other sources or tax requisition that is allocated based on the tax methodology.

The combined 2021 budget expenditures for the 3 administration budgets is $6.0M, $2.6M allocated by formula method, $1.3M allocated through tax requisition, and $2.1M funded by other sources.

Regional District of Okanagan Similkameen (RDOS)

Financial Plan

The RDOS financial plan includes the following reports to summarize the overall financial plan:

- A summary of tax requisition by municipality/electoral area;
- A detailed summarization of tax requisition for each municipality/electoral area;
- Each service budget detail.

Administration Overhead

The 2021 administration overhead budgets for the RDOS are:

- Human Resources
- Legislative Services
- Finance
- Corporate Facilities
- Information Systems
- General Government
- Electoral Administration

The RDOS 2021 administrative overhead formula methodology allocates the following budgets, for the non salary costs only, based on a tier system.

- Human Resources
- Legislative Services
- Finance
- Corporate Facilities
- Information Systems

Each service budget is allocated a tier recovery rate % based on a 5 tier recovery system (with tier 5 - capital having 7 additional levels). New for 2021, capital is allocated 20% of the total allocated administration overhead. Annually tier level recovery rates are set based on service's utilization of administration services and volume of transactions. Recovery rate % is set to result in full recovery of all non-salary (other expenses) costs of administration overhead. The recovery rate % for 2021 for each tier is:

- Tier 1 – Full utilization - 5.10%
- Tier 2 – Partial utilization - 4.03%
- Tier 3 – Minimal utilization - 3.00%
- Tier 4 – Contract services - 1.94%
- Tier 5 – Capital - Not able to calculate from budget or provided

The net operating budget is multiplied by the tier recovery rate to calculate the amount of administration overhead allocated to a service budget. The net operating budget is the total service budget expenses less any transfers to/from reserve, debt servicing, capital expenditures, and project expenditure. The tier recovery rates detailed above are not included in the financial plan or in the financial plan presentation. The tier recovery rates can be calculated from the budget, with substantial effort, but is challenging as the net operating budget is not clearly presented on each service budget. Although the net operating amount and tier recovery rates can be calculated, there is no ability to confirm these calculations are accurate. The 2021 total administration overhead allocated utilizing the formula method is $1.5M with the remaining $582k funded through other sources.

General Government and Electoral Administration budgets, of $4.1M, are funded through other sources or tax requisition which is allocated based on the tax methodology.

The combined 2021 budget expenditures for the 7 administration budgets is $5.9M, $1.5M allocated by formula method, $3.3M allocated through tax requisition, and $1.1M funded by other sources. As salaries are allocated to service budgets based on usage, the total amount above is not the full administration costs for the RDOS. The full administrative overhead amount is not able to be calculated as the allocated salaries are included in the salaries and wages line item in each service budget along with the direct salaries and wages for that service budget, not separately itemized.

All salaries (including administration salaries) are allocated to services areas based on time spent on each service from the time tracking system. A new tracking system has been implemented in the last year (replaces old system - Time Tracker) that is utilized for payroll in which time is recorded to each service area. This system would be updated at a minimum biweekly to meet payroll timelines. Information Systems (IS) salaries continue to be allocated to the service budget where they plan to deliver the services. Salaries in the General Government or Electoral Area Administration budgets are the allocated amounts based on the estimated time spent on these functions. Salaries in each service budget are combined to include both the allocated time as well as direct service specific salaries. Non-continuing or part time salaries are recorded in the wages line item in each service budget.

Administration Overhead Allocation Formula Method Example

As the service budget tier level and the recovery rate % are not included in the financial plan, the administration overhead allocation cannot be easily calculated. A calculation could be completed to determine the tier recovery rate, however data to validate the information is correct is not readily available.

To calculate the tier recovery rate:

- Calculate the net operating budget (the total service budget expenses less any transfers to/from reserve, debt servicing, capital expenditures, project expenditures, and administration overhead);
- Divide allocated administration overhead by the net operating budget to determine tier recovery rate.

However, to determine the common tier rates utilized and which recovery rate is applicable to which tier, the calculations would have to be done for all 155 services budgets. The challenges encountered when completing the manual calculations were that they were susceptible to calculation errors and performing them was time consuming.

RDOS Administration Overhead Allocation History 2019 - 2021

Over the last 3 years the administration overhead allocation method has evolved, which has created significant swings in the amount of administration overhead allocated to each service budget.

2020 Method

The 2020 method was similar to the 2021 method, with the following major differences:

- Net Operating Budget – in 2020 the net operating budget deducted all the same items as in 2021 (transfers to/from reserve, debt servicing, capital expenditures, project expenditures) but also deducted salaries;
- There was no administration overhead allocation applied to capital projects;
- There was a 3 tier system and the recovery rates were:
    - Tier 1 – Full utilization – 8.25%
    - Tier 2 – Partial utilization – 5.50%
    - Tier 3 – Minimal utilization – 2.75%

  Although the tier rates were not included in the adopted budget they were provided upon request from the RDOS;

In 2020, salaries were allocated to services areas based on time spent on each service, similar to 2021. In 2020, a tracking system (Time Tracker) was utilized to track actual time spend on each service budget. For exempt employees Time Tracker was not utilized to prepare payroll. A time lag in allocating time to each service budget could occur, which would effect accuracy of the allocation. Starting in 2020, Information Systems (IS) salaries are allocated to the service budget where IS plans to deliver the services. Salaries in the General Government or Electoral Area Administration budgets are the allocated amounts based on the estimated time spent on these functions. Salaries in each service budget are combined to include both the allocated time as well as direct service specific salaries. Non-continuing or part time salaries are recorded in the wages line item in each service budget.

2019 Method

The 2019 administration overhead budgets consisted of:

- Human Resources
- Information Services
- General Government
- Electoral Administration

In 2019, salaries were included in Human Resources and Information Systems service budgets.

The formula method provided by the RDOS for 2019 is all of Human Resources expenses and some specific General Government items were allocated out based on the percentage of the 2018 administration overhead allocation of the total administration overhead allocated expense for each service budget. A tier system was not utilized and the amount allocated to each service budget is not clearly defined separately in each service budget but combined in the administration line detail. The 2019 financial plan does not include the methodology utilized for allocating administration overhead.
Information systems service budget allocation details were not provided by the RDOS but was charged out based on a fee system.

The annual changes to the administration overhead over the last 3 years reflects that the RDOS has been making improvements to the methodology to move closer to a practice of those whom benefit from a service pay the full cost of that service provision.

An example comparing the 2019 – 2021 administration overhead allocated by the formula methodology is summarized in the table below. In the table below, it shows that the effect of the change in formula method from 2019 to 2021. The administration overhead amount allocated by formula method was lower in 2020 for service budgets that had salaries as this was deducted from the net operating budget amount before charging the applicable tier rate, assuming everything else stayed constant. This would appear to be counter intuitive as a service budget that has more employees, would most likely have higher utilization on the administration overhead budgets such as Human Resources, Information Systems, and potentially Finance. This was recognized by the RDOS and adjusted in 2021, with salaries being included in the net operating expenses which increased the administration overhead allocation to budgets with salaries.

Example Service Budget	2019 Budget	2020 Budget	2021 Budget
Total Expenses	1,500,000	1,500,000	1,500,000
Deduct: Administration Charges	58,075	26,194	50,951
Total Expenses without Administration Overhead	1,441,926	1,463,606	1,449,049
Deduct:			
Transfers		100,000	100,000
Capital & Equipment		150,000	150,000
Debt Interest & principle		200,000	200,000
Salaries		500,000	
Total Net Operating Expenses	1,441,926	513,606	999,049
2018 Total Administration Overhead	702,310		
2018 Allocated Administration Overhead	28,286		
2018 Administration Overhead rate (2018 Allocated Admin OH/2018 Total Admin OH)	4.03%		
Assumed same Tier Level & Rate		Tier 1 - 5.10%	Tier 1 - 5.10%
Administration Overhead Allocation	58,075	26,194	50,951

Some examples of the service budgets that had significant changes from 2019 - 2021 in formula based administration overhead allocated were:

Service Budget	2019 Admin OH	2019 % of Total budget	2020 Admin OH	2020 % of Total budget	2021 Admin OH	2021 % of Total budget
Recycling/Garbage - Area C	14,686	5.1%	21,032	7.4%	8,012	2.9%
Recycling/Garbage - Keremeos	8,435	6.6%	9,776	7.4%	3,738	2.9%
Refuse Disposal - Oliver	27,774	2.5%	52,605	3.4%	42,591	1.8%
Building Inspection	101,829	7.9%	13,036	1.1%	50,023	4.0%

The increases/decreases between each service budget are not consistent year over year, meaning not all overhead administration allocation amounts increased in 2021 with the change in formula method allocation, some decreased.

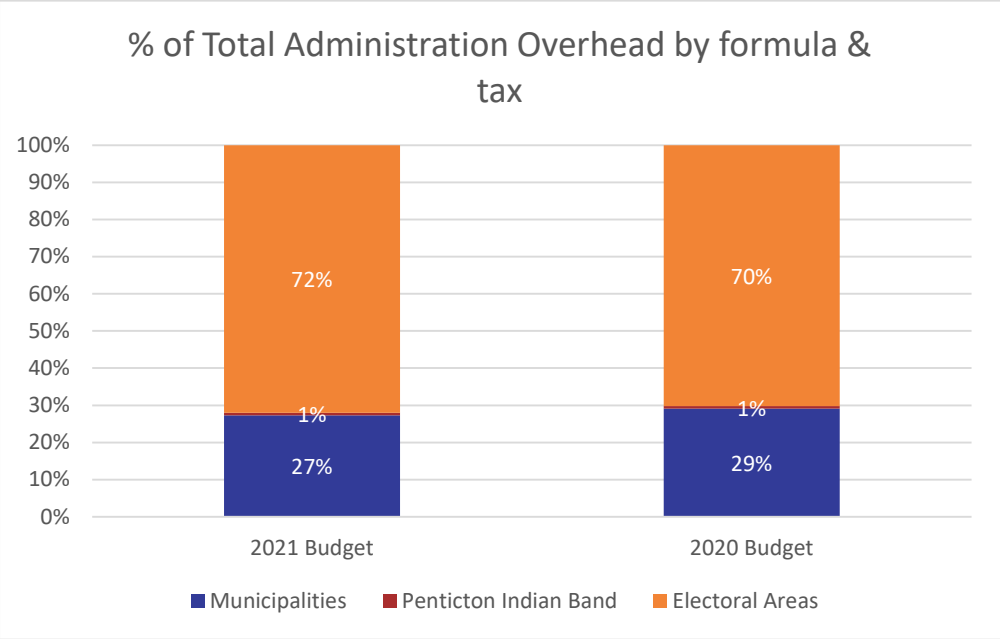
Administration Salaries

As previously mentioned in the explanation of the formula methods, all salaries (including administration salaries) are allocated to services areas that are estimated based on time spent on each service. Salaries in each service budget are combined to include both the allocated time as well as direct service specific salaries. By combining these salaries, the allocation of salaries is not clearly identified, and does not allow for trending of direct salary costs. In the 2021 budget, almost half of the service budgets did not have any salaries charged to its budget. This could be for multiple reasons, such as the budget does not have any salaries required, budgets are too small to required salary time, or the budget was not allocated any salaries. The RDOS would have more in-depth information on which budgets require salaries for the delivery of the service. The effect of all budgets not being charged some salary time is the residual time is budgeted in one specific service area budget and allocated by the tax methodology. This results in larger municipalities/electoral areas bearing a greater share of the cost, which is probably not a true

representation of the actual time utilization of each municipality/electoral area. Five service budgets were allocated the highest tier rating, Tier 1 - full utilization, for administration overhead allocation. These budgets did not have any salary time allocated to the them, which implies that they may not be fully utilizing the administration overhead or it would be expected that some salary time would be spent on these budgets. While the time spent on some service budgets may actually be very minimal or too little to quantify, other municipalities/electoral areas are covering these costs based on tax assessments, and not on actual utilization.

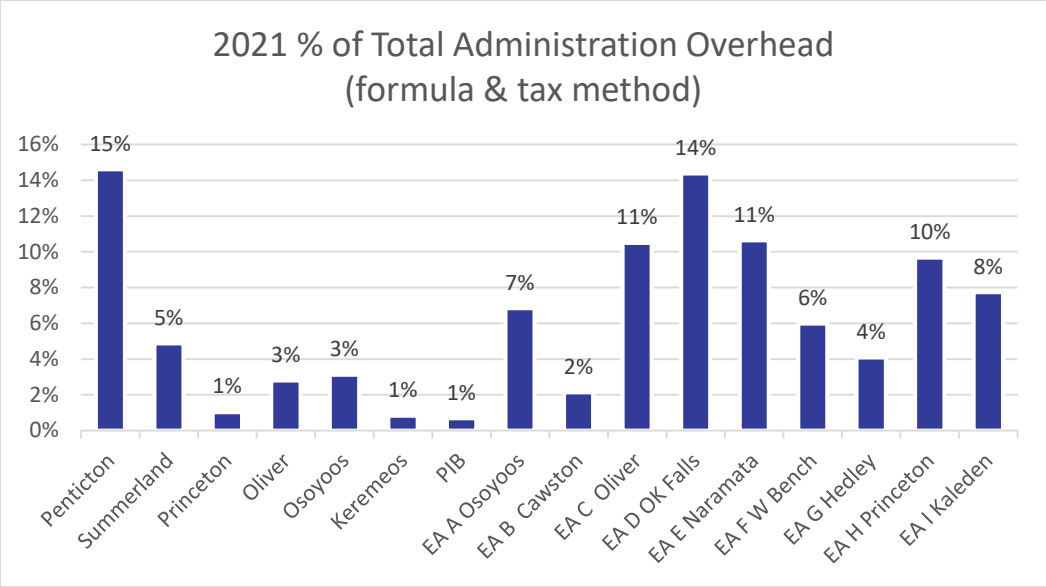
Administration Overhead Allocation Analysis

The percentage of administration overhead for all 7 administration budgets (formula and tax method combined) by Municipality/Electoral Area shows that overall in 2021 Electoral Areas were charged 72%, the majority, of the administration overhead, compared to 70% in 2020. This is similar to the electoral area's percentage of overall budget of 69% in 2021 and 70% in 2020. The drivers that are contributing to the increase in 2021 electoral area administration overhead are the allocation of 20% of administration overhead to capital and the change in the net operating expenses in 2021 to include salaries.

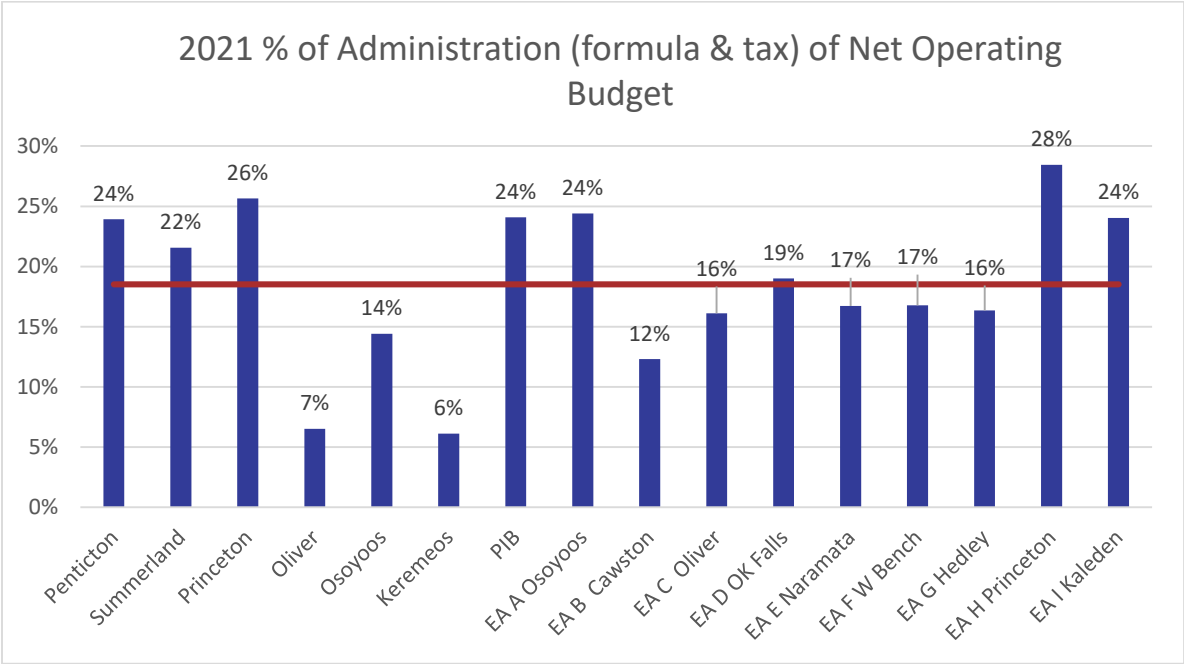


This chart only includes the portion of administration overhead salaries that are including in the General Government and Electoral Area service budgets.

A detailed split of the 2021 administration overhead for all 7 administration budgets (formula and tax method combined) shows that Electoral Area C, D, E and Penticton are allocated the highest amount of administration overhead - between 11-15% of the total overhead admonition (formula & tax method).



The Total Administration overhead (formula & tax) as a percent of net operating budget on average is 19%, but the graph below shows that Penticton, Princeton, Penticton IB and Electoral Areas A, H, & I are charged substantially more than the average while Oliver and Keremeos are charged significantly lower than the average, relative to their net operating budgets. This shows that some Municipalities/Electoral Areas are being charged more administration and may be subsidizing other Municipalities/Electoral Areas. To fairly distribute costs, Municipalities/Electoral Areas should be charged based on utilization of the overall administrative services. Municipalities that have their own resources, would generally utilize substantially less administrative services from the RDOS, while Electoral Areas that do not maintain their own services would seem to utilize the RDOS administrative services more.

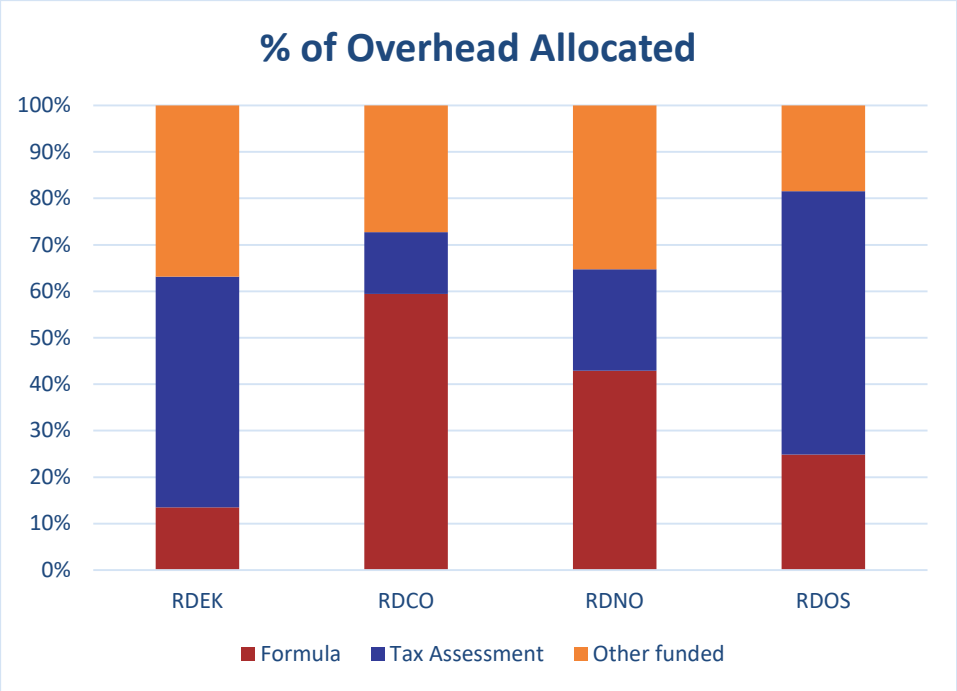


Summary of the 4 Regional Districts

The following table provides a summary comparison of the 4 regional districts reviewed:

	RDEK	RDCO	RDNO	RDOS
Total Service Budgets Summary	YES – by service budget	YES – split by fund with capital separate and service budget	YES – Very high level summary of revenues and expenditures	NO
Summary of Tax Requisition	YES – by Muni/EA	NO	YES – by service budget	YES – by Muni/EA
Detail tax requisition for each Muni/Electoral Area	NO – Total amount only	YES	YES	YES
Service Budgets included in formula allocation	Shared Overhead portion for: • General Administration	All costs including Salaries for: • Administration/ Corporate Services • Finance • Human Resources • Information Systems • Engineering Services (applied to certain budgets)	Portion of: • General Government • Information Systems	All Non Salary related costs for: • Human Resources • Legislative Services • Finance • Corporate Facilities • Information Systems
Formula Method	Allocation based on salaries in service budget	Tier Method	Information not obtained from RD	Tier Method
Administration Overhead Allocated to Capital	NO	NO	NO	YES – 20% Started in 2021
Administrative Salaries	Charged to General Administration budget, shared services are allocated to service budgets	Charged to applicable administration budget, allocated fully by formula to service budgets	Charged to General Government or Information System budget, portion allocated by formula	Allocated directly to each service budget based on time spent
Electoral Administration (EA)	Allocated to EA's by tax proportion	Allocated to EA's by tax proportion	Allocated to EA's by tax proportion	Allocated to EA's by tax proportion

A comparison of the 4 regional districts administration overhead allocation methods show that there is varying methods utilized to allocate administration overhead. The RDCO and RDNO both allocate the majority of their administration overhead by the formula method, while the RDEK and the RDOS allocate the majority by tax assessment.



The higher percent of overhead that is allocated by the tax method charges more to municipalities/electoral areas that have high tax assessments and may not match utilization of these services. Often municipalities have higher tax assessment levels due to density within the municipality, however the municipality may have duplication of the same resources as the regional district and do not utilize regional district services to the same higher level that electoral areas utilize.

Identified Best Practices for Consideration

Overall Budget

- A written summary with highlights and context/assumptions accompanying the financial plan;
- A summarized roll up of all service budgets should be included in the financial plan approval package and posted online as part of the approved financial plan to allow for summarization, transparency, and comparison of total regional district budgets and operations;
- A summary and detailed tax requisition for each municipality and electoral area should be included in the financial plan approval package and posted online as part of the approved budget to allow for summarization, transparency, and comparison of each tax requisition;
- Each service budget should have written context that includes, not limited to, tier administration level, capital or major project summaries, assumptions for the service budget;
- Each service budget should clearly separate administration overhead allocations, salary allocation, or any other allocation. A subtotal for expenses that are included in the administration overhead calculation;
- The financial plan package presented to the board during budget reviews should the same as the adopted budget and the budget uploaded and retained on the website.
- Each version of the financial plan should be retained on the website or at a minimum, the draft original budget that was part of the budget review as well as the final adopted budget should be available on regional districts website. This allow for transparency in the changes from the original budget to the adopted budget.

- Due to the current pandemic, many budgets were live streamed due to restricted public assess, these live streams provide significant context and information around the review of the Financial Plan. The process of continuing to post the live stream the financial plan review meetings should continue, even when the pandemic ends.

Administration Overhead Allocation

- Administration overhead allocation policy should be developed and approved by board and posted on the website. The policy should be reviewed annually to ensure it is being followed and still represents a methodology that is fair and equitable to all service budgets. Specific items that should be included in the policy are:
    - Service budgets that are included in the allocation to other service budgets;
    - Detailed explanation of how the allocation is calculated with how tier rates are determined, and approved;
    - Note all exceptions to the methodology for service budgets;
    - Note all service budgets that are exempt from administration overhead allocation and why;
    - Note how allocation to capital budgets is determined and calculated;
    - Note how allocation to projects is determined and calculated, if different from other calculations;
    - Now how if tier rates fluctuated dependent on the total allocation amount, a summary of the rates of 5 years should be retained online as part of the either the policy or as part of the section where the approved budget is posted online.
- Administration overhead allocations should include all overhead expenses, salaries and non salary expenses, for transparency of the allocation and to ensure all budgets are paying for a portion of administrative salaries. If salaries are not included in the overhead administration allocation, they should be clearly separated on each service budget to allow for comparison and transparency of the allocation.
- Each annual budget should reference the policy and provide the link to the policy;
- The administration overhead allocation should be clearly itemized on each service budget;
- Expenses that are applicable to administration overhead allocation should be clearly total on each service budget to allow for transparent and easy calculation of the administration overhead allocation;
- The administration overhead allocation should remain fairly consistent year to year and any changes to the methodology clearly documented, with affects of the change, and retained online for a period of time for transparency and clarity.

Conclusion

Given there are opportunities to align the costs of services more closely to those receiving the services, based on practices in other regional districts The RDOS board should request the RDOS staff perform a thorough and comprehensive review of their current overhead allocation, review the best practices identified in this report, determine which are not already being done, and where feasible implement the best practices.

Attachments

Attachment A – Regional District Statistical Information

Attachment B – Calculations

Attachment C – RDCO Administration Policy 7.19

Links to Budgets

Regional District of East Kootenay Budgets

https://www.rdek.bc.ca/departments/finance/

Regional District of Central Okanagan Budgets

https://www.regionaldistrict.com/your-services/finance-services/budgets.aspx

Regional District of North Okanagan budgets

http://www.rdno.ca/index.php/services/administration/finance

Regional District of Okanagan Similkameen budgets

https://www.rdos.bc.ca/finance/budget-and-financial-statements/

Respectfully submitted,

Courtney Jones

Concurrence

GM Finance & Administration	Chief Administrative Officer
JWB	DvD

Attachment A - Regional District Statistical Information

	RDEK	RDCO	RDNO	RDOS
Population (2016)	60,439	194,882	84,354	83,022
Land Area (km2)	27,542	2,905	7,503	10,412
Regions	Cranbrook Fernie Kimberly Sparwood Elkford Invermere Radium Canal Flats 6 Electoral Areas	Kelowna Peachland Lake Country West Kelowna Area CO East Area CO West	Armstrong Enderby Vernon Coldstream Spallumcheen Lumby 5 Electoral Areas	Penticton Summerland Princeton Oliver Osoyoos Keremeos Penticton IB 9 Electoral Areas
Number of service budgets (2021)	115	82	71	155
RD Services	911 Emergency Calling Building Inspection Cemeteries Columbia Basin Trust Dog Control Economic Dev. Electoral Admin. Elk Valley Airport Emergency Programs Fire Protection Fireworks Regulations CV Broadband Flood Control General Government Grants in Aid Invasive Plant Man. Library Mosquito Control Noise Control Planning & Dev. Recreation Facilities Solid Waste Starling Control Street Lighting Trails/Parks Transit Unsightly Premises Water Systems Water Level Control	911 Emergency Calling Air Quality Monitoring Animal Control Building Inspection Economic Dev. Electoral Admin. Fire Protection General Government Grants in Aid Mosquito Control Noise Abatement Noxious Insect Control Okanagan Basin WB Planning Recreation Facilities Regional Library Regional Rescue Serv. Refuse Solid Waste Sterile Insect Release Street Lights Trails/Parks Transit Weed Control Water	911 Emergency Calling Animal Control Conservation Fund Development Serv. Drainage Economic Dev. Electoral Admin. Emergency Planning Fire Protection Grants General Government Kingfisher School Noxious Weeds Okanagan Basin WB Recreation Facilities Regional Library Regional Planning Safe Communities Search & Rescue Solid Waste St. John's Ambulance Starling Control Street Lights Sterile Insect Release Trails/Parks Transit Victim Assistance Water	911 Emergency Calling Animal Control Building Inspection Bylaw Enforcement Cemeteries Cultural/Heritage Destruction of Pests Economic Dev. Electoral Admin. Electoral Area Planning Emergency Planning Environmental Cons. Fire Protection General Government Grants in Aid Illegal Dumping Invasive Species Mosquito Control Noise Bylaws Nuisance Control Okanagan Basin WB Recreation Facilities Recycle/Garbage Refuse Regional Growth Strat. Regional Library Solid Waste Sterile Insect Release Street Lights Tourism Trails/Parks Transit Unsightly Premises Victim Services Water

Attachment B - Calculations

This table is a summary of each Regional Districts administration budgets. The administration budgets may not, in all instances, include the same detailed items, costs and expenses so may not be fully comparable.

	RDEK	% Total Budget	RDCO	% Total Budget	RDNO	% Total Budget	RDOS	% Total Budget
Total 2021 Budget	$ 62,095,407		$ 72,682,797		$ 91,439,797		$ 60,350,377	
2021 Property and Parcel taxes requisition	$ 21,370,907	34.4%	$ 31,750,735	43.7%	$ 19,412,014	21.2%	$ 20,432,221	33.9%
Administration Overhead Allocated								
by formula method	$ 846,614	1.4%	$ 3,801,012	5.2%	$ 2,569,243	2.8%	$ 1,477,084	2.4%
by tax method	$ 3,109,000	5.0%	$ 847,699	1.2%	$ 1,304,666	1.4%	$ 3,363,875	5.6%
by tax requisition	**$ 3,955,614**	**6.4%**	**$ 4,648,711**	**6.4%**	**$ 3,873,909**	**4.2%**	**$ 4,840,959**	**8.0%**
Administration overhead funded by other funding sources	$ 2,310,725	3.7%	$ 1,745,767	2.4%	$ 2,110,190	2.3%	$ 1,096,759	1.8%
Total Administration Overhead	**$ 6,266,339**	**10.1%**	**$ 6,394,478**	**8.8%**	**$ 5,984,099**	**6.5%**	**$ 5,937,718**	**9.8%**

Regional District Of Central Okanagan

Policy and Procedures Manual

Chapter:	**7.**	**FINANCE**	**Policy Resolution No. #241/11**
Section:	**7.19**	**Administration Overhead**	**Page: 719**
			Resolution Date: October 13, 2011

7.19 Administration Overhead

The Board's policy is to recover the costs of the Administration / Corporate Services, Finance, Human Resources, Information Services and Engineering functions through service /user fees and administration levies rather than a direct tax requisition.

A. Overhead Allocated to Operating Budgets:

1. Engineering Services overhead budget recovery shall be direct charged as a line item, only to services that the Engineering Department oversees (*excluding Waste Reduction Office Services based out of 1450 KLO). Prorate to each function based on budgeted costs (excluding debt and transfers to capital and reserves). Currently these functions include:
    - Mosquito Control
    - Street Lights
    - Westside Waste Disposal & Recycling Centre
    - Westside Landfill
    - Septage Facility
    - Water Services
    - Sewer Services

    (*supplies, staff costs, etc. are already direct charged to these functions).

2. Pool the budgeted recovery requirements for the functions of: Administration / Corporate Services (which includes 1450 KLO Road costs), Finance, Human Resources, and Information Services and allocate to other services based on:
    - Program cost budget (excluding debt and transfers to capital and reserves) MULTIPLIED BY:
        - Recovery rates in the following proportions, determined by administrative service level:
            - 100% of base rate (as determined each year): Full services (Staffing and related support of all or most administrative functions)
            - 2/3 of base rate: Partial Services (Excludes some significant portion of above administrative support functions)
            - 1/3 of base rate: Minimal Administrative Services (i.e. Quarterly or Yearly Payments)

    - OR a specifically determined Flat Rate:
        - OBWB: $15,000 (staff consultation, and involvement re: verifications, etc., presentations to Board).
        - SIR: $15,000 (staff consultation, and involvement re: verifications, etc., presentations to Board).
        - OK Regional Library: $5,000 (Quarterly payments).
        - Simple Tax transfers to Municipalities originating from incorporation: $0

B. Overhead Allocated to Capital Projects:

1. Engineering: Water and Sewer construction projects (included in current bylaws): 3% of costs

2. All Services:

   - Capital Construction / Development / Installations -- No external project manager (More administrative support required for purchasing, payments, management, insurance advice, etc.): 3% of costs

   - Capital Construction / Development / Installations – With external project manager. (Staff are directing the project manager instead of all the details for the whole project. - Recognizes that project manager provides some supervisory, purchasing, payment, etc. services): 1.5% of costs.

   - Acquisitions and Purchases (eg. Land, vehicles, including firetrucks): 0.25% of costs.

Capital project overhead recoveries will be credited to each overhead pool in A. The recoveries are to be based on actual costs incurred.

If a project is over $5,000,000: At a minimum, the cost recoveries up to $5,000,000 as described above will be allocated, with perhaps consideration being given to a reduced percentage for additional costs over $5,000,000 (only if warranted – i.e. all administrative costs would be more than fully recovered and the overhead would be deemed to be excessive).

(During preparation of project budget estimates, consult with Finance, then bring to Governance & Service Committee / Board a proposal for review of overhead being charged and justification.)

C. External Work – Project Administration Charges:

Project administration charges be levied in the amount of 15% (or the base administration overhead rate - whichever is higher) on:

1. Administration and/or engineering services provided for studies and plans carried out by the Regional District on work related to proposal or development proposed to take place within the Regional District; (i.e. Neighborhood Plans, etc.)

2. Those tasks undertaken through the Inspection Services/Bylaw Enforcement Department to effect compliance with Regional District bylaws and policies. (i.e. Weeds, etc.)

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 17, 2021

RE: Kaleden Extension of the Okanagan Falls Sewer Service

Administrative Recommendation:
THAT first, second and third reading of Okanagan Falls Sanitary Sewer Service Area Amendment Bylaw No. 1239.09, 2021 be rescinded and the bylaw abandoned; and,

THAT first, second and third reading of Kaleden Extension of the Okanagan Falls Sewer Service Establishment Bylaw No. 2889, 2020, be rescinded and the bylaw abandoned; and,

THAT first, second and third reading of Kaleden Extension of the Okanagan Falls Sewer Service Loan Authorization Bylaw No. 2890, 2020 be rescinded and the bylaw abandoned; and further,

THAT first, second and third reading of Kaleden Extension of the Okanagan Falls Sewer Service Capital Reserve Establishment Bylaw No. 2923, 2021, be rescinded and the bylaw abandoned.

Purpose:
To rescind readings and abandon bylaws for a potential service that did not received elector approval.

Reference:

Business Plan Objective:
Goal 2.2 To meet public needs through the development and implementation of key services

Background:
At the March 4, 2021 Board meeting, the Board of Directors gave three readings to Bylaw No. 2889, 2020, and Bylaw No. 1239.09, 2021 that, upon adoption, would have created a service for a sewage collection system connecting to the wastewater treatment facility in Okanagan Falls. Bylaw No. 2890, 2020, authorized the borrowing of up to $4,040,000 for the construction of the infrastructure necessary to provide the service. Bylaw No. 2923, 2021 would establish a reserve fund for the proposed service.

Analysis:
An assent vote was held on Saturday June 5, 2021 to obtain elector approval for the establishment of the service within Kaleden, with the following results:

	YES	NO
Advance Voting Opportunity: May 26, 2021 101 Martin Street, Penticton BC, COMBINED with Mail-in Ballots		
General Voting Day, June 5, 2021, Kaleden		
TOTAL NUMBER OF VALID VOTES CAST	**65**	**91**

This determination of official assent voting results was made by the Chief Election Officer on June 9, 2021 at 4:00 pm and is based on ballot accounts as prepared by the Chief Election Officer.

Because approval of the electorate was NOT obtained, the Board of Directors may not adopt Bylaw No. 2889, 2020, or Bylaw No. 2890, 2020. Additionally, without the creation of the Kaleden portion of the service, Bylaw No. 1239.09, which extends the boundaries of the Okanagan Falls Sewer Service, and Bylaw No. 2923, which would have created a reserve for the Kaleden extension, are not required.

Communication Strategy:
The official results of the assent vote have been posted to the RDOS and Regional Connections websites, social media, and provided to the Board Directors and the media.

Respectfully submitted:

"Christy Malden"

_____

C. Malden, Manager of Legislative Services

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN
BYLAW NO. 1239.09, 2021

A bylaw to amend the Okanagan Falls Specified Area Sanitary Sewer System Local Service Establishment Bylaw No.1239, 1991.

WHEREAS the Board of the Regional District of Okanagan Similkameen has adopted Bylaw No. 1239, 1991, Okanagan Falls Specified Area Sanitary Sewer System Local Service Establishment Bylaw;

AND WHEREAS the Regional District of Okanagan-Similkameen wishes to proceed under the *Local Government Act* to amend the boundaries of the service area of the Okanagan Falls Sanitary Sewer Service Area and to include a portion of the community of Kaleden in Electoral Area "I", thus adding another participant to the service;

NOW THEREFORE, the Board of the Regional District of Okanagan Similkameen, in open meeting assembled, enacts as follows:

1. CITATION

1.1. This bylaw may be cited as the "Okanagan Falls Sanitary Sewer Service Area Amendment Bylaw No. 1239.09, 2020."

2. INTERPRETATION

2.1. The Okanagan Falls Specified Area Sanitary Sewer System Local Service Establishment Bylaw No. 1239, 1991 is amended as follows:

2.1.1 deleting Section 2 in its entirety and replacing it with:
"The boundaries of the service area are the boundaries of a portion of Electoral Area "D" as outlined on Schedule A, and a portion of Electoral Area "I" as outlined on Schedule B, attached to and forming part of this bylaw."

2.1.2 deleting Section 3 in its entirety and replacing it with:
"Electoral Area "D" and Electoral Area "I" are the participating areas."

2.1.2 add a new section 4 and 5 as follow, and renumbering subsequent sections:

4. "VOTING ON MATTERS RESPECTING THE ADMINSTRATION AND OPERATION OF THE SERVICE

4.1 Voting on a resolution or the reading, adopting, amendment or repeal of this bylaw respecting the administration and operation of the service shall be by a majority of the votes cast of the Regional District of Okanagan-Similkameen Board of Directors. Each director who is present at the time of the vote is entitled to vote on the matter."

5. "SERVICE REVIEW AND DISPUTE RESOLUTION

5.1 A participant may initiate a bylaw-based service review if the following circumstances apply:

(i) the participant has been a participant in the service for at least two years; and,
(ii) the participant considers that the effectiveness and/or value of the service is not satisfactory.

5.2 To initiate a service review, a participant must provide written notice to the Board, all other participants, and the Corporate Officer.

5.3 The notice under 5.2 must describe the conditions of involvement in the service that the participant finds unsatisfactory and provide reasons relating to those conditions as to why the participant wishes to initiate a review.

5.4 Upon receipt of the notice, the Corporate Officer shall secure a date for the participants to review the service.

5.5 If a review does not result in resolution of the matter to the satisfaction of the Service Participants, resolution of outstanding issues shall be determined by majority of the votes cast of the Regional District of Okanagan-Similkameen Board of Directors."

2.1.4 add a new Schedule B attached to and forming part of this bylaw.

READ A FIRST, SECOND AND THIRD TIME this 4th day of March, 2021.

ELECTORAL AREA "D" DIRECTOR CONSENT OBTAINED this 11th day of March, 2021.
ELECTORAL AREA "I" DIRECTOR CONSENT OBTAINED this 9th day of March, 2021.

APPROVED BY THE INSPECTOR OF MUNICIPALITIES this 5th day of April, 2021

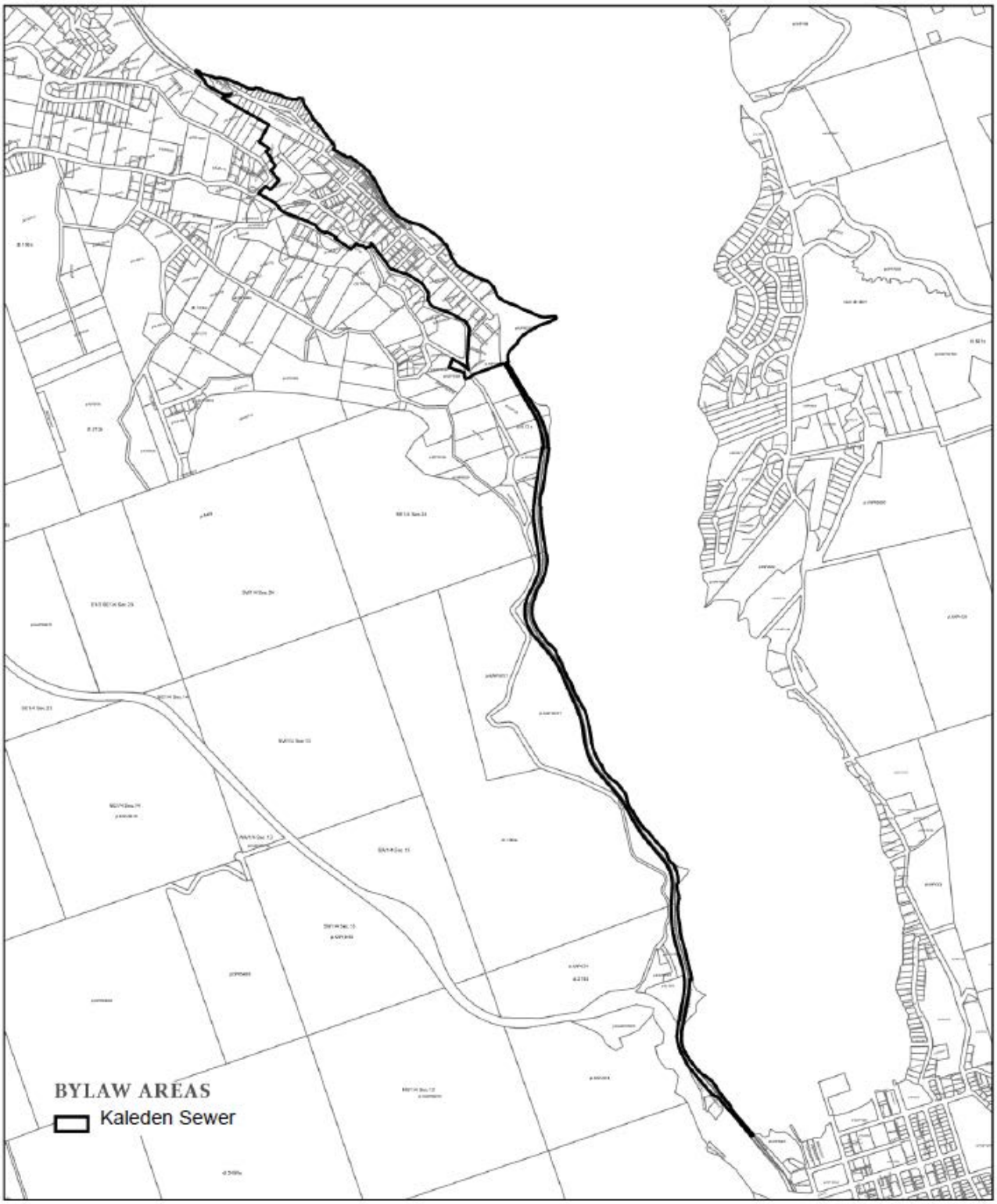
ADOPTED this ___ day of ___, 20__.

_____ _____

Board Chair Corporate Officer

FILED with the Inspector of Municipalities this ___ day of ___, 20__.

SCHEDULE B
(map of Kaleden/porton of EA I)



REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

BYLAW NO. 2889. 2020

A bylaw to establish a service for the provision of sewer within a portion of the community of Kaleden in Electoral Area "I".

WHEREAS the Regional District of Okanagan-Similkameen may, by bylaw, establish a service under the provisions of 332 of the *Local Government Act*;

AND WHEREAS the Board of the Regional District of Okanagan Similkameen has adopted Bylaw No. 1239, 1991, Okanagan Falls Specified Area Sanitary Sewer System Local Service Establishment Bylaw;

AND WHEREAS the Board of the Regional District desires to establish a service for the provision of sewer in a portion of the Kaleden area;

AND WHEREAS the assent of the electors has been received for the establishment of the Kaleden Extension of the Okanagan Falls Sewer Service;

AND WHEREAS the approval of the electors in the participating area has been obtained in accordance with the *Local Government Act*;

NOW THEREFORE, the Board of the Regional District of Okanagan-Similkameen in open meeting assembled enacts as follows:

1 CITATION

1.1 This Bylaw shall be cited as the Kaleden Extension of the Okanagan Falls Sewer Service Establishment Bylaw No. 2889, 2020.

2 ESTABLISHMENT OF THE SERVICE

2.1 The Regional District of Okanagan-Similkameen hereby establishes within Electoral Area "I" a service for the infrastructure required for the collection and conveyance of sewer effluent in a portion of the Kaleden area of the Regional District, to the known as the Kaleden Extension of the Okanagan Falls Sewer Service Area.

2.2 The Service may make contributions to a Reserve Fund established for the purpose of maintaining the infrastructure required for the collection and conveyance of sewer effluent in the Kaleden Extension of the Okanagan Falls Sewer Service Area.

3 BOUNDARIES OF THE SERVICE AREA

3.1 The boundaries of the service area are shown outlined on Schedule "A" attached to and forming part of this bylaw.

4 PARTICIPATING AREAS

4.1 The participants in the service area, established under Section 3 are a portion of Electoral Area "I".

5 METHODS OF COST RECOVERY

5.1 As provided in the *Local Government Act*, the annual costs of the Service shall be recovered by one or more of the following:

(a) property value taxes imposed in accordance with Division 3;
(b) subject to subsection (2) of Section 378, parcel taxes imposed in accordance with Division 3;
(c) fees and charges imposed under Section 397 (imposition of fees and charges);
(d) revenues raised by other means authorized under this or another Act;
(e) revenues received by way of agreement, enterprise, gift, grant or otherwise.

6 Limit

6.1 The maximum amount that may be requisitioned annually for the service shall not exceed $250,000.

READ A FIRST, SECOND, AND THIRD TIME this 20th day of February, 2020

THIRD READING RESCINDED AND BYLAW REREAD A THIRD TIME this 4th day of March, 2021.

APPROVED BY THE INSPECTOR OF MUNICIPALITIES this 25th day of March, 2021

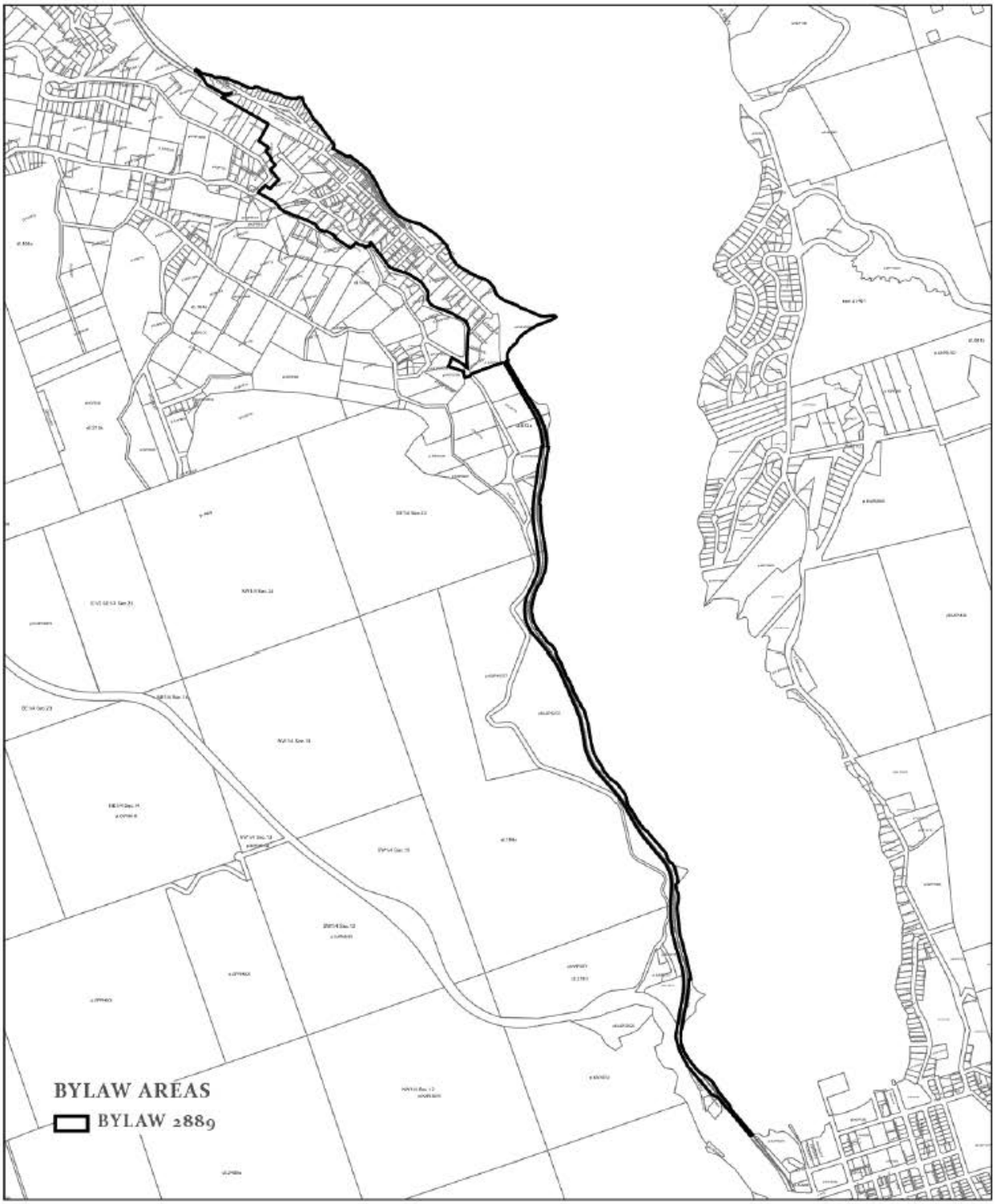
APPROVAL BY ASSENT OF THE ELECTORS this __ day of ___, 20__.

ADOPTED this ___ day of ___, 20__

_____ _____

RDOS Board Chair Corporate Officer

Schedule A



Kaleden Sewer - Local Service Establishment
Bylaw 2889, 2020.

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

BYLAW NO. 2890, 2020

A bylaw to authorize the long-term borrowing for the construction of the Kaleden Extension of the Okanagan Falls sewer service.

WHEREAS pursuant to the *Local Government Act* and the *Community Charter*, the Regional District of Okanagan-Similkameen may, by loan authorization bylaw, borrow money for capital purposes;

AND WHEREAS the Board of the Regional District of Okanagan-Similkameen has established by Bylaw No. 2889, a service for the infrastructure required for the collection and conveyance of sewer effluent in a porton of the community of Kaleden in Electoral Area "I";

AND WHEREAS it is deemed desirable and expedient to construct the extension of the sewer system servicing the Kaleden Extension of the Okanagan Falls Sewer Service Area;

AND WHEREAS the estimated cost of constructing the extension of the sewer system including expenses incidental thereto is the sum of $10,000,000 of which the sum of $4,040,000 is the amount of debt intended to be borrowed by this bylaw;

AND WHEREAS the maximum term for which a debenture may be issued to secure the debt created by this bylaw is for a term not to exceed thirty (30) years;

AND WHEREAS the authority to borrow under this bylaw expires five (5) years from the date on which this bylaw is adopted;

AND WHEREAS the Regional Board of the Regional District of Okanagan-Similkameen has obtained the approval of electors in accordance with the *Local Government Act*;

NOW THEREFORE, the Board of the Regional District of Okanagan-Similkameen in open meeting assembled enacts as follows:

1. CITATION

1.1 This Bylaw shall be cited as Regional District of Okanagan-Similkameen Kaleden Extension of the Okanagan Falls Sewer Service Loan Authorization Bylaw No. 2890, 2020

2. AUTHORIZATION OF PURCHASE

2.1 The Regional Board is hereby empowered and authorized to undertake and carry out or cause to be carried out the construction of the Kaleden Extension of the Okanagan Falls Sewer System serving the Kaleden Extension of the Okanagan Falls Sewer Service Area generally in accordance with plans on file in the Regional District office and to do all things necessary in connection therewith and without limiting the generality of the foregoing:

3. LOAN AUTHORIZATION

3.1 To borrow upon the credit of the Regional District a sum not more than four million forty thousand dollars ($4,040,000).

3.2 To acquire all such real property, easements, rights-of-way, licenses, rights or authorities as may be requisite or desirable for or in connection with the construction of Kaleden Extension of the Okanagan Falls Sewer System in Electoral Area "I".

4. TERM OF DEBENTURE

4.1 The maximum term for which debentures may be issued to secure debt created by this bylaw is thirty (30) years.

READ A FIRST, SECOND, AND THIRD TIME this 20th day of February, 2020

THIRD READING RESCINDED AND BYLAW RE-READ A THIRD TIME this 4th day of March, 2021.

APPROVED BY THE INSPECTOR OF MUNICIPALITIES this 25th day of March, 2021.

RECEIVED ASSENT OF THE ELECTOR THIS ___ day of ___, ___

ADOPTED this ___ day of ___, ___

_____ _____

RDOS Board Chair Corporate Officer

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

BYLAW NO. 2923, 2021

A bylaw to establish a Kaleden Extension to the Okanagan Falls Sewer Capital Reserve Fund for capital expenditures related to the services provided under the Kaleden Extension of the Okanagan Falls Sewer Service Establishment Bylaw.

WHEREAS the Community Charter authorizes the Board, by bylaw to establish a capital reserve fund for or in respect of capital projects and land;

AND WHEREAS the Regional District of Okanagan-Similkameen has adopted Regional District of Okanagan-Similkameen Kaleden Extension of the Okanagan Falls Sewer Service Establishment Bylaw No. 2889, 2020;

NOW THEREFORE, the Board of the Regional District of Okanagan-Similkameen in open meeting assembled enacts as follows:

1 CITATION

1.1 This Bylaw shall be cited as the Kaleden Extension of the Okanagan Falls Sewer Service Capital Reserve Establishment Bylaw No 2923, 2021.

2 INTERPRETATION

2.1 The Kaleden Extension of the Okanagan Falls Sewer Service Capital Reserve Establishment Fund is hereby established for the purposes of maintaining the infrastructure required for the collection and conveyance of sewer effluent in the Kaleden Extension of the Okanagan Falls Sewer Service Area.

2.2 Money from current revenue, or appropriated from surplus (to the extent to which it is available), from the Kaleden Extension of the Okanagan Falls Sewer Service may, from time to time, be paid into the Reserve Fund.

2.3 Upon full payment of debt for the Kaleden Extension of the Okanagan Falls Sewer, any remaining funds in the Kaleden Extension of the Okanagan Falls Sewer Service Capital Reserve shall be transferred to the Electoral Area "D" – Okanagan Falls Sewage Disposal Reserve Fund.

READ A FIRST, SECOND, AND THIRD TIME this 4th day of March, 2021

ADOPTED this ___ day of ___, 20__

_____ _____

RDOS Board Chair Corporate Officer

ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: B. Newell, Chief Administrative Officer

DATE: June 3, 2021

RE: South Okanagan Conservation Fund – Update and Request for Direction

Administrative Recommendation:

1. **THAT the Board approve the Okanagan Nation Alliance Trout Creek request for funding and work plan re-allocation and extension to December 31st, 2021 to allow completion of the engineer designs selected by the most recent steering committee meeting; and further,**

2. **THAT the Freshwater Fisheries Society of BC project approved for 2021 delivery be cancelled due to receiving 100% funding from another granting organization.**

Purpose:
To update the Board on South Okanagan Conservation Fund and to obtain approval for a requested extension for a project that requires additional time for completion.

Reference:
South Okanagan Conservation Fund (SOCF) Terms of Reference – (May 2017).

Background:

On December 15th 2016, the RDOS Board adopted Bylaw No. 2690 to establish an Environmental Conservation Service. The bylaw establishes an Environmental Conservation Service for the Electoral Areas "A", "C", "D", "E", "F" and "I" and the City of Penticton, District of Summerland, and Town of Oliver (the participating areas). The annual maximum amount that may be requisitioned for the cost of the service will not exceed the greater of $450,000 (or $0.0292 per thousand dollars of net taxable value of land and improvements in the RDOS).

These requisitioned funds are in support of undertaking and administering activities, projects, and works that will include, but is not limited to, water, environment, wildlife, land and habitat conservation efforts to protect natural areas within the participating areas of the Regional District of Okanagan-Similkameen.

The Fund is guided by a Terms of Reference that addresses all aspects of fund detail including the purpose, administration, themes/goals, guiding principles, timelines, governance, fund design, and supporting appendices relating to criteria for ineligible activities, terms for a Technical Advisory Committee and conflict of interest guidelines.

Analysis:
The following is an update on projects that were completed in 2020 (2019 intake), a request for approval for a project change and extension, and a status update on a project for 2021 (2020 intake).

Updates regarding 2020 projects:

- 12 applications received at 2019 intake seeking $245,000 in funding.
- Nine projects approved by the RDOS Board for delivery in 2020 (3 new and 6 continuing). Just over $221,000 approved for disbursal.
- Two projects did not go forward due to COVID -19 challenges. Actual disbursal was $193,238.
- All 2020 recipients have completed Final Reports (due February 2021):

    - Habitat Stewardship and Enhancement in the South Okanagan – Ok Similkameen Stewardship Society ~$40,000
    - k'əmcənitkw Floodplain Re-engagement – Ok Nation Alliance ~ $26,577
    - Yellow Flag Iris Technology Transfer – Nature Trust of BC~ $3,150
    - Invasive Plant Management on Conservation Lands - Nature Conservancy of Canada ~ $15,000
    - South Okanagan Bat Habitat and Conservation - Bat Education and Ecological Protection Society ~ $9,893
    - Love Your Lakes – Southern Interior Land Trust ~ $39,047

- One 2020 project has an extension request (Trout Creek Restoration Initiative – Okanagan Nation Alliance).

The Trout Creek River Restoration Initiative (Okanagan Nation Alliance)
This project was funded in the amount of $59,231.00 in March of 2020 with a Final Report date of February 2021. At the time of final reporting, ONA reported on all other completed deliverables, and communicated that an extension would be helpful to complete the engineering design components of the project. As project lead, ONA was waiting for the results of a technical report related to the perpetual slide upstream of the planned restoration area, and two Steering Committee meetings to provide direction to the scope and scale of the design changes and required extension. That direction has formed this substantive extension request.

Trout Creek is the primary water source for the District of Summerland. It is the second largest community watershed in the Okanagan. Restoration is proposed to take place in the lower reach, from Highway 97 bridge to roughly 1300 meters upstream, where the creek has minimal natural confinement. Delays in completing the engineered design for the restoration have occurred as inputs depended on the decisions needed by District of Summerland on their management of the anthropogenic sediment inputs just upstream of the site. The Steering Committee has provided technical direction to have ONA:

1. Allocate a portion of the funding for the restoration design, to support an engineer to complete cost/benefit analysis of 2 perpetual slide solutions (a.) building a sediment basin for annual cleanout within the fish restoration study area and (b.) installing a box culvert at the toe of the slide.
2. The results of this analysis will inform the completion of an engineered design for the restoration. That design at can be completed with the remaining funds.
3. To complete these works ONA requests an extension to December 2021.

The SOCF Technical Advisory Committee has reviewed the funding re-allocation and extension request from ONA and recommends approval based on the provided rationale.

The Penticton Creek Restoration Initiative (Freshwater Fisheries Society of BC)
This project was approved for $252,560.00 in February of 2021 (2020 intake) for the restoration construction of reach 3A/Upper 3B. In mid-May, 2021 the proponent advised the RDOS that they had received 100% funding from other sources for their planned works, and no longer required the grant. The previously SOCF funded Penticton Creek 3A/Upper 3B Engineered Design project (2019) will be ready to implement with this new funding received from other sources.

Alternatives:
1. THAT the recommendations be approved.
2. THAT the decision on the recommendation be deferred for further information from administration and/or the applicants.
3. THAT the recommendations be denied.

Respectfully submitted:

*"*Christy Malden*"*

C. Malden, Legislative Services Manager

OKANAGAN NATION ALLIANCE

#101 – 3535 Old Okanagan Hwy, Westbank, BC V4T 3L7
Phone: (250) 707-0095 Fax (250) 707-0166 www.syilx.org

28 May, 2021

South Okanagan Conservation Fund
Regional District of South Okanagan
101 Martin Street, Penticton, BC V2A 5J9

Dear Bryn White and Technical Advisory Committee,

This letter is a follow up to discussions from the April 28th, 2021 extension request. We have since held two steering committee meetings to plan and prioritize effective implementation of the multi-year and multi-faceted Trout Creek restoration works. The Trout Creek steering committee has been active this year in reviewing the materials for the most effective fish habitat restoration while coordinating with the District of Summerland on their progress dealing with the "perpetual slide". Because of the high level of coordination between the two groups on the two issues (fish habitat structures & water quality) there are obvious interdependence between projects.

The assessment of fish habitat structures and conceptual designs are complete. The Trout Creek Steering Committee would like to support the DOS in decisions regarding the perpetual slide so that they could decide on a course of action for restoration. For these reasons we have 2 requests;

1. Adjust the engineer funding to support an engineer to complete cost/benefit analysis of 2 slide solutions (a.) building a sediment basin for annual cleanout within the fish restoration study area and (b.) installing a box culvert at the toe of the slide.
2. To complete these works we would request an extension for the works until December 2021.

With this decision made by the DOS, then the restoration works can be most effectively planned. New projected timeline:

- To date we have spent $2021 on transferring lidar data to AutoCAD in prepartion for engineer designs. These funds were dispensed in place of the certified surveyor ($3000)
- June to July – engineer complete cost benefit analysis of the two slide mitigation options ($7500).
- August to December – given the outcomes and the DOS decisions, the Steering committee will most effectively be able to prioritize the first phase of construction works and we can commission an engineer to design with the remaining $17,500.

We remain committed to this project for the long-term.

Kind regards,

Karilyn Alex, Fish Biologist

Okanagan Nation Alliance