



THE CORPORATION OF THE  
DISTRICT OF SUMMERLAND  
**COUNCIL REPORT**

DATE: February 14, 2017 File: 2016-1787  
TO: Linda Tynan, Chief Administrative Officer  
FROM: Dean Strachan, MCIP, RPP, Director of Development Services  
SUBJECT: OCP Amendment and Rezoning – 13610 Banks Crescent

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STAFF RECOMMENDATION:

That Council pass the following resolution:

*THAT the information update report dated February 14, 2017 from Dean Strachan, Director of Development Services be received.*

PURPOSE:

To receive an information update from staff on the OCP Amendment and Rezoning application for 13610 Banks Crescent.

BACKGROUND and DISCUSSION:

The Freshwater Fisheries Society of BC has expressed concerns in relation to potential impacts on their hatchery from the proposed development. It has been recommended that a review of these concerns be undertaken with the applicants and the hatchery, prior to the application proceeding further.

At their meeting of January 23, 2017, Council passed the following resolution:

*“THAT Staff be requested to meet with the applicants and representatives of the Freshwater Fisheries Society of BC to review the concerns raised in relation to the hatchery facility and the aquifer water source and report back to Council.”*

Staff have now confirmed a meeting on February 17, 2017 with representatives of the Freshwater Fisheries of BC to review the concerns raised. Following this meeting, staff or hatchery representatives may request additional meetings together and/or with the applicants. As per Council’s resolution, staff will report back to Council following completion of the review meetings or will provide updates as discussions/reviews progress if the timeline extends past February 27, 2017.

Attached for Council’s reference is additional information related to the subject application including a Hydrogeological update from Piteau Associates dated January 19, 2017. Also attached is an e-mail letter submitted by Kyle Girgan, Hatchery Manager, the Freshwater Fisheries Society of BC. Both documents are available on the District website under the page for the subject application.

In the report presented to Council on January 23, 2017 it was noted that if the issues and concerns with the hatchery are or can be addressed, then staff would recommend that additional study and review be requested including the following:

- a. *Revised and updated Environment Assessment Reporting in accordance with the District of Summerland Terms of Reference for Environmental Reports;*
- b. *Preparing of a District Revenue Analysis by the Finance Department;*
- c. *High level plan for upgrades required for road section determined through the traffic study to be upgraded from local roads restricting truck use to collector roads permitting truck use;*
- d. *Sanitary sewer service modelling for full build out of lift station and mains in service catchment area;*
- e. *Identify the preferred water service option and what off site works would be required;*
- f. *Additional storm water design including off site line routing plan; and*
- g. *Additional electrical design and modelling for onsite construction purposes as well as potential off site upgrades required.*

Additional areas of review and study may be identified through review of the comments and questions received.

If requested by Council, staff will proceed with the preparation of a summary of comments and questions received if the issues and concerns with the hatchery are or can be addressed.

LEGISLATION and POLICY:

N/A

FINANCIAL IMPLICATIONS:

There are no financial implications anticipated to result from the subject recommendation.

CONCLUSION:

As technical information and input is received, staff will continue to review, compile and update Council.

OPTIONS:

1. Move the motion as recommended by staff.
2. Refer back to staff for other options.

Respectfully Submitted,



Dean Strachan, MCIP, RPP  
Director of Development Services

Approved for Agenda



Linda Tynan, CAO



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## MEMORANDUM

**TO:** Malek Tawashy  
Development Project Manager  
Lark Group  
Our file: 3583-M002  
Date: January 19, 2017

**FROM:** Matthew L. Cleary, P.Ge.  
Email: [mcleary@piteau.com](mailto:mcleary@piteau.com)

**RE:** Hydrogeological Update (January 4, 2017 Meeting Summary)  
13610 Banks Crescent, Summerland, BC

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### **INTRODUCTION AND BACKGROUND**

Piteau Associates Engineering Ltd. (Piteau) was retained by the Lark Group in May 2016 to conduct a hydrogeological assessment addressing potential impacts to a nearby groundwater spring associated with construction of a proposed retirement and assisted living facility at the above referenced address (the Site). The findings of this assessment were presented in a memorandum dated July 12, 2016.

Working on behalf of Freshwater Fisheries Society BC (FFSBC), who utilize flow from Shaughnessy Spring (the Spring) to supply a nearby fish hatchery (the Hatchery), MDM Groundwater Consulting Ltd. (MDM) reviewed Piteau's July 12, 2016 memorandum. In an e-mail dated December 16, 2016 MDM reiterated the need for an erosion and sediment control plan (ESCP) and a groundwater monitoring plan (herein referred to as an environmental monitoring plan (EMP)) to be implemented during construction.

Development of ESCP documents is considered standard practice within the construction industry. As such, the development of an ESCP would have been conducted in the normal course of project development, with a specific focus on potential impacts to the Spring and the Hatchery. As per the request of FFSBC, CTQ and Piteau have developed concepts for an ESCP and an EMP, which were provided along with concept drawings to the Lark Group in December 2016.

A meeting (the Meeting) was held on January 4, 2017 to discuss the current status of the proposed development and preliminary plans plus concept drawings for the ESCP and EMP. The following persons were in attendance:

Malek Tawashy	Lark Group
Gary Tamblyn	New Essence Care Management
Kyle Girgan	Freshwater Fisheries Society BC
Matt Cameron	CTQ Consultants Ltd.
Matt Cleary	Piteau Associates Engineering Ltd.

Minutes from the Meeting were prepared by Mr. Malek Tawashy and made available for comment by meeting attendees and their respective organizations. In response, FFSBC outlined their outstanding concerns regarding construction related hazards and associated risks to the Spring water quality, specifically highlighting concerns regarding elevated turbidity and the possible release of contaminants during construction at the Site.

### **FFSBC CONCERNS AND ASSOCIATED ACTION ITEMS**

This memorandum has been prepared to address the FFSBC's concerns. These are set out below, along with action items suggested by Piteau:

- 1) FFSBC emphasized that the magnitude and duration of events with elevated turbidity are equally important in assessing the risk to the Hatchery. While not currently defined, there would be a maximum turbidity level in the Spring, irrespective of the duration of the event, for which trout would not be able to survive.

FFSBC is gathering information on the impacts of elevated turbidity on trout and will use this to further develop threshold criteria. These criteria will be included in the ESCP and EMP. In the event that an elevated turbidity event is observed during the construction period, a root cause analysis would be conducted to determine the cause(s) of the elevated turbidity.

Action: FFSBC turbidity criteria to be included in the ESCP and EMP, as appropriate.

- 2) FFSBC indicated that there have been brief events (up to two hours duration) of high turbidity following historical precipitation events and that they were manageable. One such event was reported to have occurred in September 2015. The specific source(s) of the elevated turbidity (eg., sloughing of a portion of the slope above the Spring, and/or entrainment of sediment in overland flow) was not identified.

Action: Review photographic documentation to help understand the cause of the September 2015 turbidity event.

- 3) As indicated by CTQ, a detailed spill response plan (SRP) would be included within the ESCP and EMP documentation. FFSBC has requested that the two existing monitoring wells (MW-1 and MW-2) be used to monitor groundwater quality during construction to provide early detection of potential impacts.

It is important to note that the relatively thick layer of overlying finer-grained silt and clay (10 to 25 m) has low permeability and will impede vertical contaminant migration, thus resulting in a low risk to water quality at the Spring.

Action: The SRP will be implemented in the event of releases of potentially hazardous substances on Site (eg., gasoline, diesel, hydraulic fluid and coolant). This would include recovery of spilled material and contaminated media, along with analysis of confirmation soil samples and groundwater and surface water monitoring.

- 4) FFSBC has indicated that monitoring wells MW-1 and MW-2 should be used to monitor potential vibration-induced turbidity within the aquifer, unless there is technical justification that disqualifies the monitoring wells for that purpose.

Under extreme conditions, vibration-induced turbidity may be generated within an aquifer by heavy machinery and trucks (live loads) operating at construction sites. Due to the depth to the water table at the Site (20 to 30 m below ground surface), it is expected that the energy generated from construction activities will be dissipated.

Vibration-induced turbidity within the aquifer is expected to be orders of magnitude lower than that of erosion-induced turbidity on the Site and therefore the associated risk to water quality within the Spring is interpreted to be very low.

It is worth noting that groundwater sampling for turbidity within the aquifer is possible, although remnant turbidity within the wells may preclude them from providing useful turbidity data.

Action: No action recommended.

- 5) Erosion-induced turbidity within the Spring has two interpreted generation mechanisms, including mobilization of fine sediment during high precipitation events and the rapid release of material from the slope (sloughing). Erosion-induced turbidity is interpreted to be a higher risk to water quality. Such turbidity events result when high intensity precipitation events mobilize sediment-laden runoff.

To mitigate against impacts associated with erosion-induced turbidity generated from the slopes below the Site, tiered silt fencing will be constructed on the vegetated portion of the slope above the Spring. Timing for installation of these works will be conducted in coordination with FFSBC.

The risk associated with erosion-induced turbidity is significantly reduced with the implementation of a system of tiered silt fences that are properly installed, monitored and maintained. The current ESCP concept drawing (attached) provides details regarding the proposed silt fencing. Ultimately, the locations of the silt fencing will be agreed to with FFSBC. With the incorporation of silt fencing, the risk associated with erosion-induced turbidity is interpreted to be low.

Action: Incorporate above described measures in the ESCP.

- 6) As presented in the Piteau (2016) memo, the bottom level parkade slab elevations are between 398 and 404 m-asl. Based on the groundwater elevations in MW-1 and MW-2 (370.1 and 370.0 m-asl, respectively), the water table is at least 20 m below the parkade slab and therefore the proposed structures would not intersect or impede the natural groundwater flow system.

As confirmed by the Lark Group, the proposed development will neither withdraw groundwater from the aquifer for water supply nor dispose of water to the aquifer. In accordance with the MDM review email dated October 20, 2016, MDM concurred with the Piteau (2016) memo, concluding that the proposed development posed "no potential impact" to water quantity discharging to the Springs.

Action: No action recommended.

### LIMITATIONS AND CLOSURE

This memorandum has been prepared by Piteau for the Lark Group and reflects Piteau's best judgement based on the information available at the time of preparation. Any use that a third party makes of this report, or any reliance on or decisions based upon it, are the responsibility of such third parties. Piteau accepts no responsibility for damages, if any, suffered by any third party as a result of decisions or actions made based on this report.

The findings, conclusions and recommendations in this report have been developed in a manner consistent with the level of skill normally exercised by environmental professionals currently practicing under similar conditions in British Columbia. No warranty is expressed or implied.

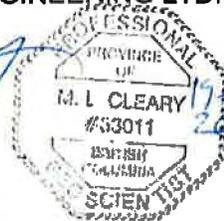
We trust this memorandum is sufficient for your current needs. Please contact the undersigned if you require further information.

Respectfully submitted,

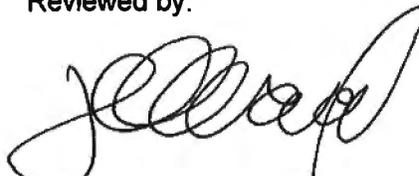
PITEAU ASSOCIATES ENGINEERING LTD.



Matthew L. Cleary, P. Geo.  
Senior Hydrogeologist



Reviewed by:



Remi J.P. Allard, P. Eng.  
Principal Hydrogeologist

MLC/RJPA/DJT/lm

Att.

1. Construction Erosion and Sediment Control Plan, CTQ (January 17, 2016)



## Ian McIntosh

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**From:** Girgan, Kyle <Kyle.Girgan@gofishbc.com>  
**Sent:** Monday, January 16, 2017 3:34 PM  
**To:** Ian McIntosh; Dean Strachan  
**Cc:** Yesaki, Tim  
**Subject:** Letter to District regarding Banks Cresc. Development

Mr. McIntosh,

The Freshwater Fisheries Society of BC (FFSBC) received a copy of Piteau Associates Ltd.'s report "Hydrogeological Assessment – 13610 Banks Crescent, Summerland BC" dated July 12, 2016, from the District on September 8, 2016. We subsequently received a District email (October 11, 2016) which stated that "*staff want to ensure that your water source remains unaffected should this development proceed*" and also requested that FFSBC provide "*comments on the hydrogeological report by Oct 28th at the latest*". Accordingly, FFSBC engaged an independent Hydrogeologist to review the Piteau report and provide comments regarding potential impacts of the proposed Lark Group project on our Summerland Trout Hatchery's sole source of water – Shaughnessy Springs. Our Hydrogeologist's resulting review comments were summarized in an email initially delivered to Piteau on October 24, 2016 and subsequently delivered to the District for consideration prior to a November 14, 2016 Council meeting.

Since issuing our initial Hydrogeology review comments, FFSBC staff have had some related communications with the project proponents (i.e., Lark Group and/or their consultants) to ensure our water concerns are fully understood and to additionally provide our sought input to the proponent's pending Erosion and Sedimentation Control Plan (ESC Plan). In those communications, FFSBC has been very careful to represent our position as a major stakeholder, but not as the lone stakeholder. Although we do recognize the project proponent's apparent commitment to understanding FFSBC's concerns and making efforts to reduce risks of impacts to Shaughnessy Springs, we've always anticipated that other stakeholders and/or interested individuals or groups might likewise contribute to the ESC Plan process.

We understand the District is not opposed to direct communication between the project proponents and stakeholders (e.g., FFSBC), as noted in a District email to Lark Group dated November 2, 2016. However, it is FFSBC's opinion that the most effective and appropriate approach for all Application-related communications, including interactions between a stakeholder and the project proponents, is through District staff. This centralized approach to managing written communications should help ensure the responsible decision makers (i.e., District) and public are continuously updated regarding the involvement, contributions and concerns of all stakeholders and interested groups/parties. Accordingly, all future FFSBC communications will be through District staff.

Regarding FFSBC's recent contributions to the development of the pending ESC Plan, we would like to continue providing review input and commentary specific to our primary operational objective, which is the maintenance of the Shaughnessy Springs water quality and water quantity to ensure uninterrupted operation of our Summerland Trout Hatchery during (and following) the proposed 3-year project construction schedule. FFSBC would welcome the contributions of other stakeholders and/or interested groups/parties to the on-going ESC Plan process, since their involvement could support FFSBC's stated water quantity and quality objectives.

However, at the time of preparing this email, FFSBC still has several outstanding concerns regarding confirmed hazards and related risks of impact to the Shaughnessy Springs. These concerns were either identified in our initial Hydrogeology review email (October 24, 2016) or later delivered to the District and/or Lark Group. Accordingly, FFSBC currently cannot support the proposed project until Spring water quality parameters and thresholds related to fish health are identified and quantified, and proponent commitments are in-place to continuously monitor both Spring water quality and Aquifer water quality to determine the cause(s) of any water quality variations during construction, and a contingency water source has been identified and confirmed to be accessible and capable of providing water of suitable quality and quantity required to maintain uninterrupted operations at the Summerland Hatchery. It is FFSBC's opinion that all aspects of the pending ESC Plan, including Spring and Aquifer monitoring, determination of related Spring and Aquifer water quality parameters and thresholds, and provision of a contingency water supply, are solely the responsibility of the project proponents, and are subject to both stakeholders' and decision makers' input and approval.

Regards,



**Kyle Girgan**

Hatchery Manager

Freshwater Fisheries Society of BC

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