



Chance Find Procedures for Archaeological Material

This document provides information on how a developer and/or their contractor(s) can manage for potential archaeological material discoveries while undertaking construction and/or maintenance activities. This document can provide assistance to in-field contractors in the identification of archaeological remains and the procedures to follow if a discovery is made. The discovery of human remains initiates a different course of action and is outlined separately.

Under the provincial *Heritage Conservation Act (HCA)*, archaeological sites that pre-date 1846 are automatically protected whether on public or private land. Protected sites may not be damaged, altered or moved in any way without a Section 12 or 14 Permit as issued through the *HCA*. It is illegal to collect or remove any heritage object from an archaeological site unless authorized to do so under permit.

1. Activities occurring outside of known Archaeological Sites:

When archaeological material is encountered outside of known archaeological site areas work in the vicinity must stop immediately no matter what type of material or feature has been identified. Alteration to an archaeological site can only occur under a Section 12 (Site Alteration Permit) or Section 14 (Heritage Inspection Permit) *Heritage Conservation Act* permit. Such permit applications should be prepared by a professional archaeologist.

If archaeological material is discovered during the course of construction activities:

- 1.1 **Stop Work:** Halt all work in the area of the discovery and safely secure the area. Contact the project manager or site foreman.
- 1.2 **Contact an Archaeologist:** An archaeologist should be contacted as soon as possible. For a list of qualified archaeologists in the area, the proponent is directed to the BC Association of Professional Consulting Archaeologists website: www.bcapa.ca. The proponent may also wish to contact the Ktunaxa Nation Council's Environment and Archaeological Stewardship Coordinator for direction (1-250-420-2739; njkapell@ktunaxa.org).

Takisqnuuk

Lower Kootenay

St. Mary's

Tobacco Plains

- 1.3 **Archaeologist provides guidance:** The archaeologist will direct the proponent on the next courses of action, which will include notifying the Archaeology Branch and First Nations with interest in the area.

2. Activities Occurring within Known Archaeological Site Boundaries:

Land altering activity within a previously recorded archaeological site must be conducted under a Section 12 HCA Site Alteration Permit (SAP), in some cases with an onsite archaeological monitor. It is common for additional archaeological material and features to be encountered during activities occurring within previously recorded archaeological sites. Minor finds (lithic flakes, diffuse charcoal or fire altered rock) may not require work to stop, however significant finds require a level of assessment by a professional archaeologist, and it is up to the onsite project manager to determine the level of significance based on criteria presented below.

2.1 Significant Cultural Finds that Require a Professional Archaeologist (described in detail in Section 4)

- Intact archaeological features, which can include but are not limited to hearths, cultural depressions (e.g. cache pits, house depressions) and rock alignments or forms (e.g. tipi rings, cairns, blinds)
- Significant archaeological materials, which include but are not limited to, the presence of formed lithic tools (e.g. projectile point, microblade core, scraper), a dense concentration of lithic waste flakes, or artistic items
- Human Remains (described in detail in Section 3)

2.2 Archaeological Site Management Options

- 2.2.1 **Site Avoidance:** If the boundaries of a site have been delineated, redesign the proposed development to avoid impacting the site. Avoidance is normally the fastest and most cost effective option for managing archaeological sites. Site avoidance could also be achieved through minimizing ground disturbance by looking for alternative constructive methods.
- 2.2.2 **Mitigation:** If it is not feasible to avoid the site through project redesign, it is necessary to conduct systematic data collection and analysis within the site prior to its loss. This could include surface collection and/or excavation. This work can be time-consuming and therefore expensive to conduct.
- 2.2.3 **Protection:** It may be possible to protect all or portions of the site which will be impacted through installation of barriers during the development period and possibly for a longer period of time. Methods for barrier construction could

include fencing around site boundaries or applying geotextile to the ground surface and capping it with fill. The exact method used would be site-specific.

3. Chance Find Procedures for Identified Human Remains

Procedures in the event of the discovery of human remains during construction are covered in depth by an Archaeology Branch Policy Statement, found on their website at www.for.gov.bc.ca/archaeology, and are summarized below.

- 3.1 Stop all construction activities immediately in the area of found or suspected human remains and contact the RCMP and/or Office of the Coroner.
- 3.2 The coroner must determine whether the remains are of contemporary forensic concern or archaeological/aboriginal.
- 3.3 If the remains are found to be of aboriginal ancestry then the next step involves the relevant First Nations collaboratively determining the appropriate treatment of those remains.

The key to respectfully dealing with ancient aboriginal remains is to involve the appropriate First Nations as early as possible in the process. However this must be done in a manner that does not interfere with the coroner's office ability to conduct their business in the manner that they see fit.

4. Site Identification Guide

The following are characteristics typical to site types found within the Ktunaxa Traditional Territory.

4.1 Artifact Scatters

Lithic (stone) scatters from the production and maintenance of stone tools are the most common type of archaeological site found in the region. Other materials that may be represented in artifact scatters are Fire Broken Rock (FBR), bone, antler and tooth.

Lithics: What to look for

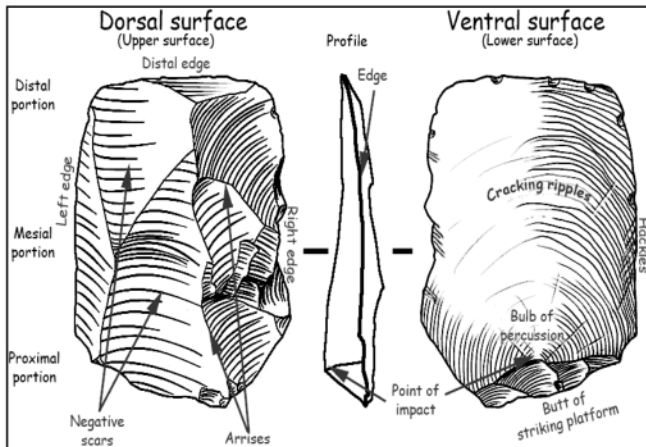


Image 1: Basic flake morphology

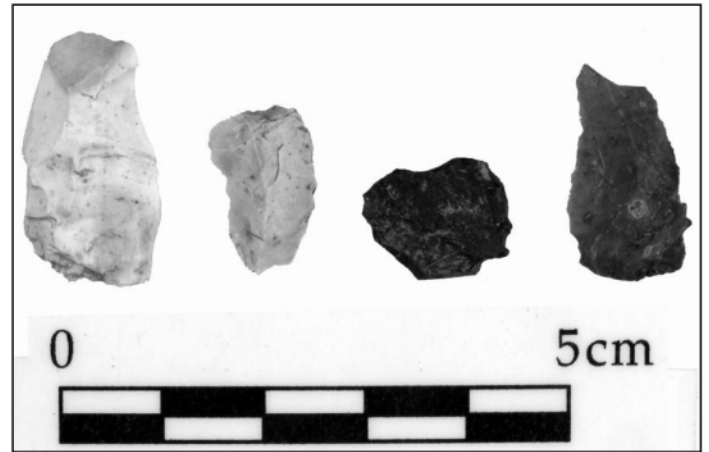


Image 2: Examples of lithic flakes

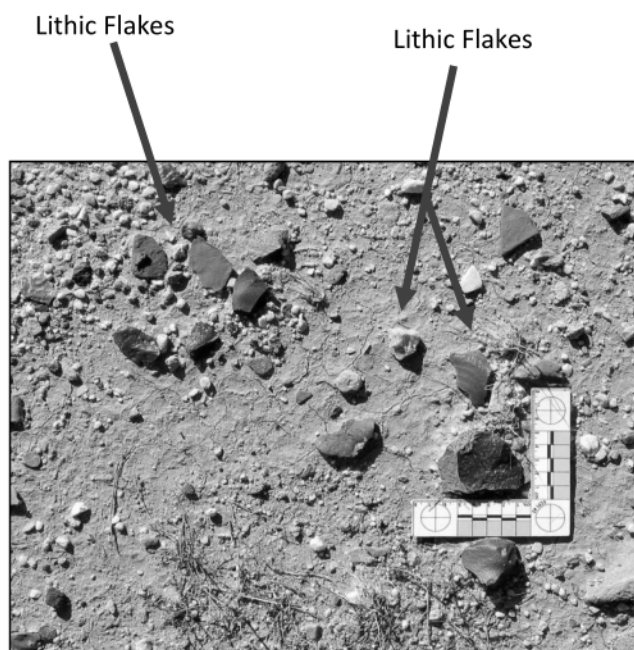


Image 3: Example of lithic scatter found on ground surface

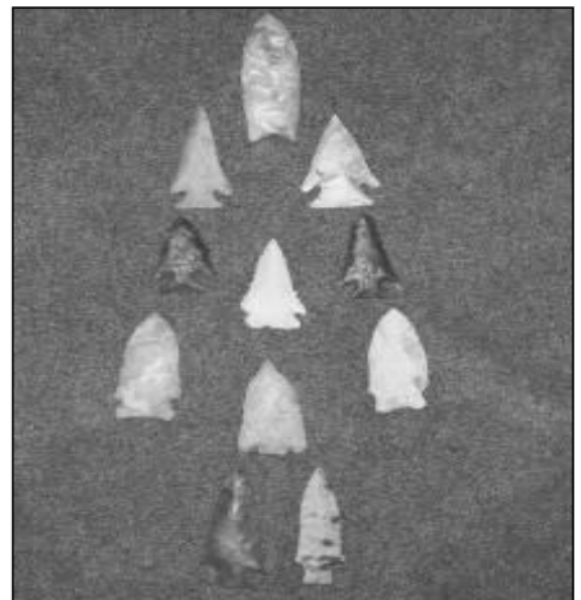


Image 4: Example of formed lithic artifacts



Image 5: Ground stone artifacts

Bone, Tooth and Antler Artifacts: What to Look For

- Obvious shaping
- Incising
- Unnatural holes



Image 6: Bone and Antler artifacts

4.2 Fire Broken Rock and Hearths

Fire-broken rock (FBR) results from the use of fire during cooking, heating and processing activities. FBR is often associated with other features including hearths and cultural depressions, but can also be thinly scattered in concentrations away from the features with which they were first associated.

When looking for FBR, note concentrations of roughly fractured rock from rapid heating and cooling, rock showing signs of burning or oxidation and/or reddening or blackening of surrounding matrix.



Image 7: Example of FBR; note the zig/zag pattern of breakage common to FBR

A hearth feature is evidence of a fire pit or other fireplace feature of any period. Hearths were used for cooking, heating, and processing of some stone, wood, faunal, and floral resources and may be either lined with a wide range of materials like stone or left unlined. Occasionally site formation processes (e.g., farming or excavation) deform or disperse hearth features, making them difficult to identify without careful study.

Hearths: What to look for

- FBR
- reddening or blackening of the associated soil/sediment
- charcoal
- layering of FBR and charcoal, and
- depressions in the earth associated with FBR, reddened or blackened matrix and charcoal.

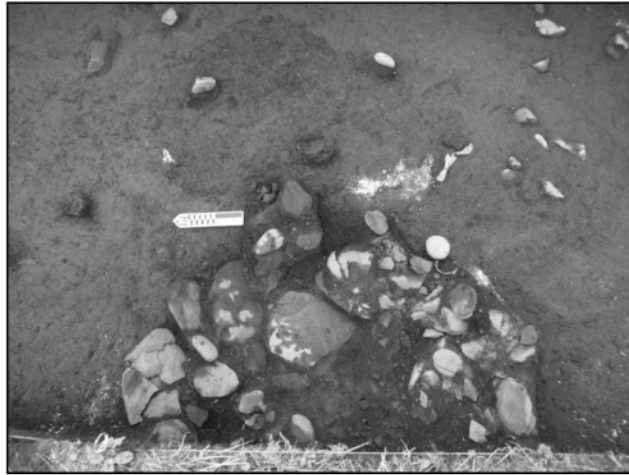


Image 8: Example of a hearth uncovered along the wall of an excavation unit

4.3 Cultural Depressions

Any depression seen on the ground surface that appears to have been excavated by man can be a cultural depression and have archaeological significance. These “pits” were dug for a variety of reasons such as for food storage, cooking or as a base for a dwelling. They can range in size from 1m across to 7-10m across, and are usually found associated with other artifacts such as FBR and lithic scatters.

To identify a cultural depression, look for:

- Subtle to deep scours on the ground surface that are circular to rectilinear in shape
- A raised rim along the edge of a depression
- Depressions associated with artifacts and FBR
- Depressions associated with fire reddening and blackening of the matrix



Image 9: Example of a large cultural depression in a natural setting

4.6 Rock Alignments

There are several types of rock alignments that occur within the culture area, which include tipi rings, medicine wheels, cairns and blinds. When attempting to identify rock alignments, look for a group of rocks that look purposefully placed as in a circle, pile or line; isolated groups of rock that do not seem to belong to that landscape; and/or rocks which form a pattern.



Image 10: Example of a Cairn or piling of rocks



Image 11: Example of a tipi ring in a natural setting

RDCK Map

Legend

- Civic Address
- Address Range
- Streams
- Cadastre / Property U
- Lakes (Mid Scale)
- Electoral Boundaries (



Notes

Map Details

Date Plotted: 9/19/2016



202 Lakeside Drive
Nelson, BC
1-800-268-7325
<http://www.rdc.ca>

This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and

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Page 10 of 22 to/à Page 11 of 22

Withheld pursuant to/removed as

s.3



Change Approval and Notification (Changes In and About a Stream)

Tracking Number: 100305848

Applicant Information

If approved, will the authorization be issued to an Individual or Company/Organization? Individual
Are you the Individual this application will be issued to? Yes

APPLICANT CONTACT INFORMATION

Please enter the contact information of the Individual/Organization who is acting on behalf of the applicant.

Name: Rodney Ratcliffe
Phone: s.22
Daytime Phone:
Fax:
Email:
Mailing Address:

ELIGIBILITY

Please answer the following questions related to your Change Approval/Notification.

Question	Answer	Warning
Is this application to support oil and gas activity that is being authorized by the Oil and Gas Commission?	No	

TECHNICAL INFORMATION

GOVERNMENT AND FIRST NATION FEE EXEMPTION REQUEST

Do you belong to, are you applying on behalf of, or are you:

- A provincial government ministry
- The Government of Canada
- A First Nation for water use on reserve land
- A person applying to use water on Treaty Lands
- A Nisga'a citizen
- An entity applying to use water from the Nisga'a Water Reservation?

No

APPLICATION BY GOVERNMENT

Please indicate if you are someone who works in the government OR you are working on behalf of the government.

Are you, or are you applying on behalf of, a government entity? No

TYPE OF WORKS

Please select the type of Notifications/Approvals you want to apply for as part of this application.

Please select the type of works to be undertaken:	Notification
	<input type="checkbox"/> Road Crossing Culvert - Construction / Maintenance / Removal
	<input type="checkbox"/> Clear Span Bridge - Construction / Maintenance / Removal
	<input type="checkbox"/> Pipeline Crossing – Construction / Maintenance
	<input type="checkbox"/> Dry Hydrant – Construction / Maintenance
	<input type="checkbox"/> Pier, Wharf, (including docks) – Construction / Maintenance / Removal

- ☐ Cutting of annual vegetation in a stream channel
- ☐ Dike or Erosion Protection Works - Repair / Maintenance
- ☐ Storm Sewer Outfalls – Construction / Maintenance
- ☐ Control of Eurasian Watermilfoil or other invasive aquatic vegetation
- ☐ Ice Bridge / Winter Ford or Snowfill - Construction / Maintenance
- ☐ Maintenance of minor and routine nature by a public utility
- ☐ Removal of a beaver dam (as authorized under the Wildlife Act)
- ☐ Construction of a temporary ford
- ☐ Construction of a temporary diversion around a worksite

Approval:

- ☐ Bank Erosion Protection
- ☐ Bridge (other than clear span) - Construction / Maintenance / Removal
- ☐ Stream Diversion
- ☐ Large Debris Removal by machine - Plan required
- ☒ Gravel removal
- ☐ Other

Please note that the ultimate decision whether this constitutes a Notification or a Change Approval lies with the Province of British Columbia

SITES

Click on the Add Sites button to add one or more sites.

SITE

Location ID: Kootenay

STREAM

Name of the Stream: West arm Kootenay Lake
Source Flows Into: Columbia River

PROPOSED WORKS

Detailed Description of Works: removal of gravel that is choking off access to my dock and to creat more flow to keep weeds down and duck mites because of all the geese and ducks
Footprint of Project: 700 m2

PROPOSED TIMING FOR WORKS

Start Date: Mar 30, 2020
End Date: May 4, 2020
Is the proposed timing within the approved regional timing window? Yes

LOCATION OF WORKS

Provide a legal description of the land(s) where works are proposed: LOT 2A PLAN NEP 1040 DL 1313 REF PLAN 444270
Geographic Coords of Works: 49.6113140, -117.0515730
Photo of Works Location: Kootenay - GOOGLE MAO PIC

LAND OWNERSHIP AT THE WORKS

Land Ownership: ☒ Applicant owns land
☐ Land is Crown Land but applicant has tenure
☐ Land is Crown Land but tenured to Ministry of Transportation
☐ A third Party owns the land but the applicant has lease or tenure

- ☐ A third Party owns the land but applicant has written consent
☐ Land is Crown Land but the applicant does not have a tenure

LOCATION INFORMATION

LAND DETAILS

DRAWINGS

A Drawing to Scale is required that meets the Application Drawing Standards. Choose one of the options below to submit the required map/drawing.

Additionally, it is recommended that you provide a topographical map showing the general location of the property where the water is proposed to be used and the works constructed in relation to nearby communities, highways, railways and other water sources.

(this additional map will not be necessary if your Drawing to Scale is provided using the Geomark Service or a spatial file such as .KML or .KMZ)

☒ I have map(s) saved to my computer and wish to provide these with my application

MAP FILES

Do you have a PDF or image file of a drawn map? You can upload it here.

Description	Filename
google map picture	THUMBNAIL-1.jpeg
legal dock showing where work is	IMG_0029.jpeg
work area in front of dock at low water	THUMBNAIL.jpeg

ATTACHED DOCUMENTS

Document Type	Description	Filename
Other	proposed work	THUMBNAIL-1.jpeg

PRIVACY DECLARATION

PRIVACY NOTE FOR THE COLLECTION, USE AND DISCLOSURE OF PERSONAL INFORMATION

Personal information is collected by FrontCounter BC under the legal authority of section 26 (c) and 27 (1)(a)(i) of the Freedom of Information and Protection of Privacy Act (the Act).

The collection, use, and disclosure of personal information is subject to the provisions of the Act. The personal information collected by FrontCounter BC will be used to process your inquiry or application(s). It may also be shared when strictly necessary with partner agencies that are also subject to the provisions of the Act. The personal information supplied in the application package may be used for referrals or notifications as required. Personal information may be used by FrontCounter BC for survey purposes. For more information regarding the collection, use, and/or disclosure of your personal information by FrontCounter BC, please contact FrontCounter BC at 1-877-855-3222 or at:

FrontCounter BC Program Director
 FrontCounter BC, Provincial Operation
 441 Columbia Street
 Kamloops, BC V2C 2T3

☒ Check here to indicate that you have read and agree to the privacy declaration stated above.

REFERRAL INFORMATION

Some applications may also be passed on to other agencies, ministries or other affected parties for referral or consultation purposes. A referral or notification is necessary when the approval of your application might affect someone else's rights or resources or those of the citizens of BC. An example of someone who could receive your application for referral purposes is a habitat officer who looks after the fish and wildlife in the area of your application. This does not apply to all applications and is done only when required.

Please enter contact information below for the person who would best answer questions about your application that may arise from anyone who received a referral or notification.

Company / Organization:
Contact Name: Rod Ratcliffe
Contact Address: s.22

Contact Phone:
Contact Email:

☒ I hereby consent to the disclosure of the information contained in this application to other agencies, government ministries or other affected parties for referral or First Nation consultation purposes.

APPLICATION AND ASSOCIATED FEES

Item	Amount	Taxes	Total	Outstanding Balance
Changes in and about a Stream Application Fee	\$250.00		\$250.00	\$0.00

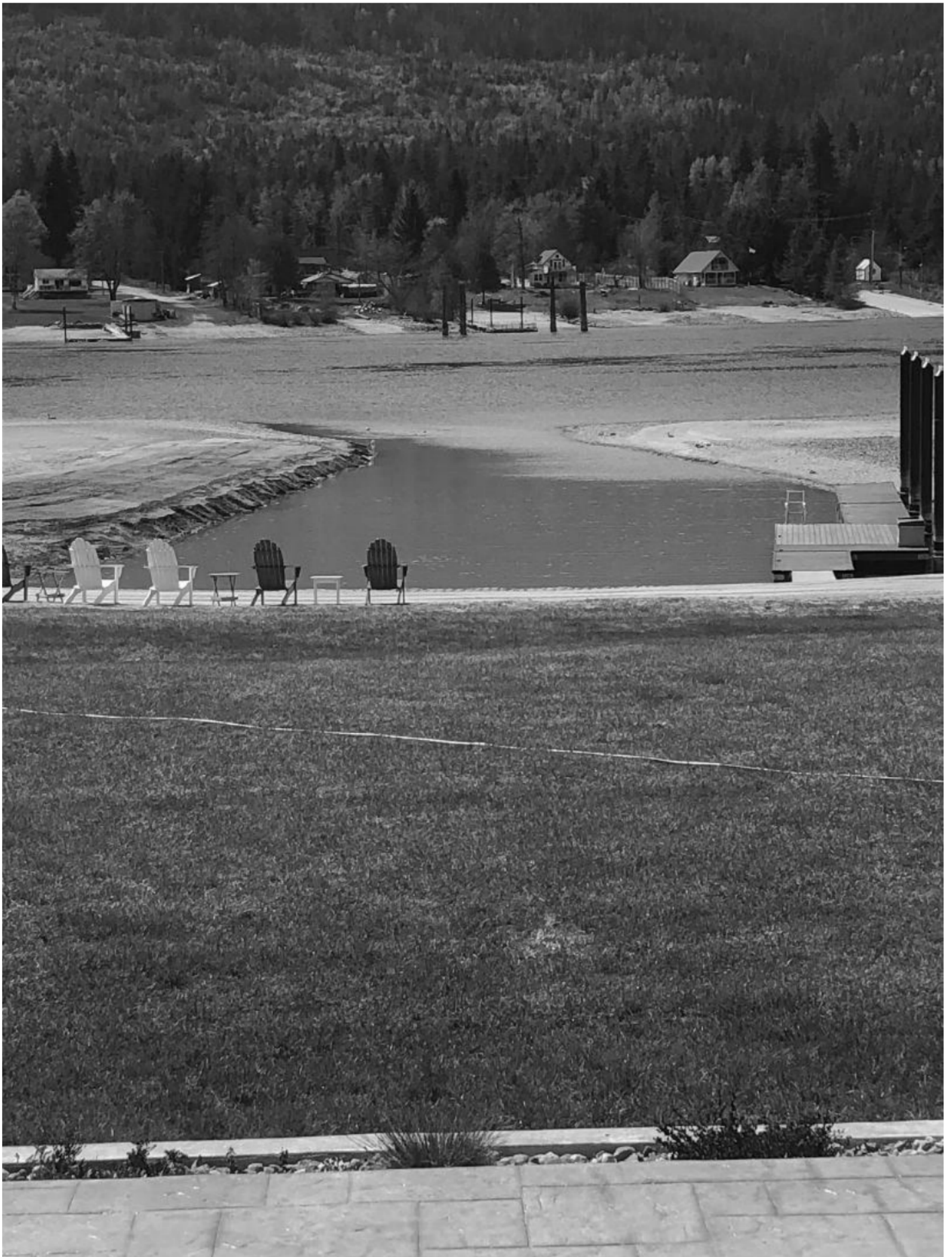
OFFICE

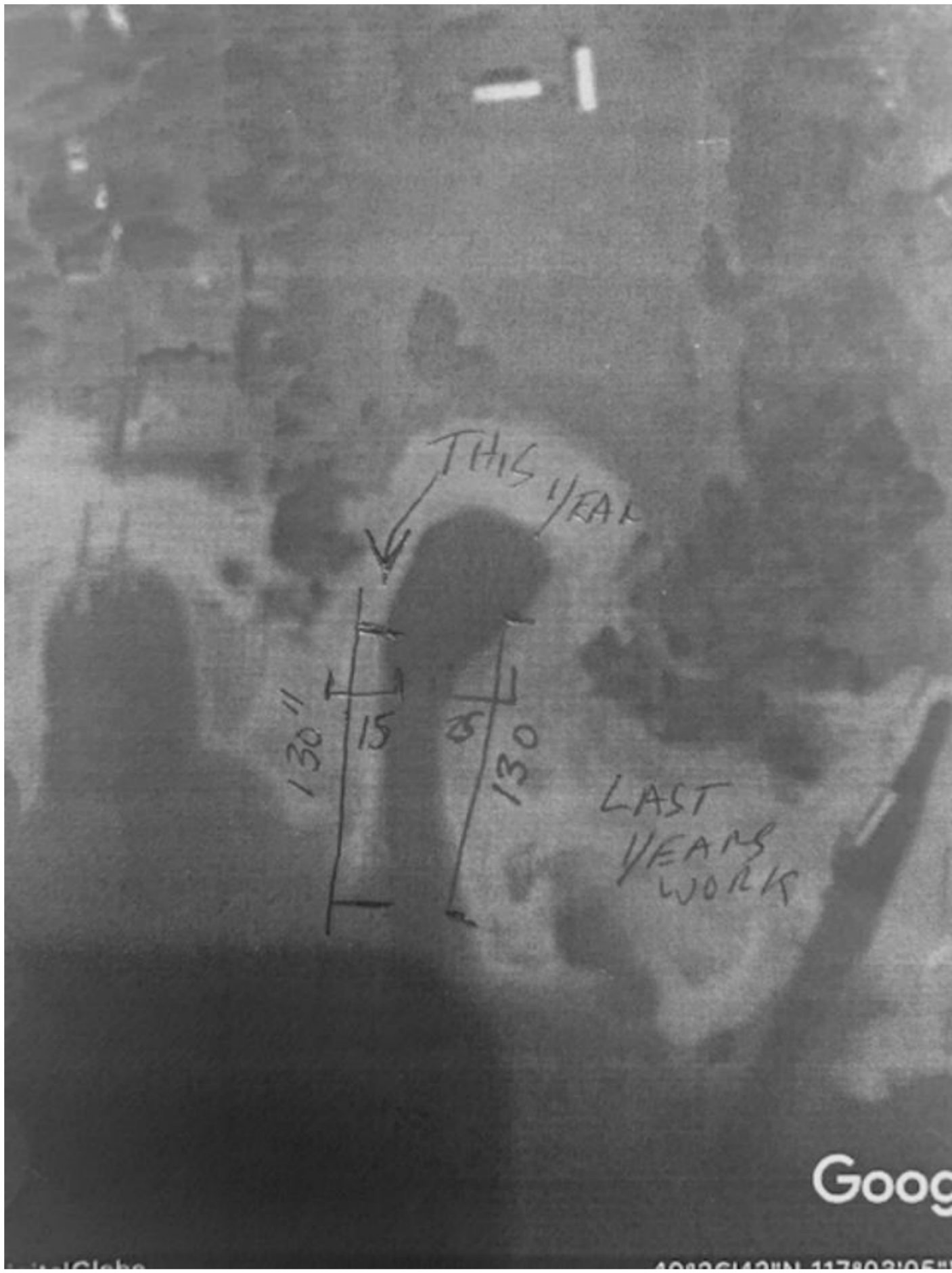
Office to submit application to: Cranbrook

PROJECT INFORMATION

Is this application for an activity or project which requires more than one natural resource authorization from the Province of BC? No

OFFICE USE ONLY		
Office Cranbrook	File Number	Project Number
	Disposition ID	Client Number







APPROVAL

Changes In and About a Stream

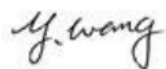
WATER SUSTAINABILITY ACT – Section 11 (1)

Rodney Ratcliffe is hereby authorized to make changes in and about a stream as follows:

- A. The stream is Kootenay Lake .
- B. The changes to be made in and about the stream are Gravel Removal within the North shore of West Arm of Kootenay Lake as submitted with application.
- C. All works shall be located and constructed in accordance with the description of works contained in the document entitled “Change Approval and Notification (Changes in and About a Stream)” under Section 11 of the *Water Sustainability Act* and Part 3 of the *Water Sustainability Regulations* submitted by Rodney Ratcliffe, dated December 10, 2019.
- D. The works authorized shall be completed on or before April 30, 2020.
- E. Care shall be exercised during all phases of the work to minimize siltation.
- F. The excavator must be operated from dry ground.
- G. The holder of this approval shall take reasonable care to avoid damaging any land, works, trees or other property, and shall make full compensation to the owners for any damage or loss resulting from the exercise of the rights granted with this approval.
- H. This approval does not authorize entry onto privately held land.
- I. All excavated material and debris shall be placed in a stable area above the high water mark and protected from erosion by planting grass and/or vegetation.
- J. No vegetation (terrestrial or aquatic) is to be cleared so as to allow access for machinery to the work site.
- K. The machine operator shall pass the excavator bucket through the water before removing any material to scare any resident fish from the area.

Page 1 of 2

- L. If freshwater mussels are disturbed during excavation, they must be removed and relocated adjacent to the work area within the wetted portion of Kootenay Lake.
- M. Any machinery operated on site shall be in good repair and be free of hydraulic leaks and excess surface oil and grease. It is preferred that machines use biodegradable hydraulic oil when working within Kootenay Lake.
- N. Fuelling and servicing of vehicles and equipment must occur a minimum of 100 meters away from all streams, lakes and waterbodies and any spills must be properly cleaned up and reported as required by the Spill Reporting Regulation (B.C. Reg. 263/90).
- O. All motorized vehicles should be checked thoroughly for invasive plants prior to entering the area. The transport of invasive weeds should be avoided at all times and inspections of all machinery should be completed routinely to ensure that invasive species are not transported to new areas.
- P. Upon completion of this project, the streambed shall be left in a smooth condition with no depressions that could trap fish or initiate erosion.
- Q. Upon commencement of the project, the works shall be pursued to completion as quickly as possible.
- R. This Approval, or a copy of it, must be kept or posted on the work site so that it may be shown to a Ministry official upon request.



Yong Wang, P.Geol.
Assistant Water Manager
Water Stewardship Division
Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Date: April 3, 2020

Approval: 4007727
Page 2 of 2

Ministry of Forests, Lands, Natural Resource Operations & Rural Development	Kootenay-Boundary Water Management	Mailing Address: 401-333 Victoria Street Nelson BC V1L 4K3	Telephone: 250 354-6333 Facsimile: 250 354-6332 Website: www.env.gov.bc.ca
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Province of British Columbia *Water Sustainability Act*

PERMIT AUTHORIZING THE OCCUPATION OF CROWN LAND FOR A CHANGE APPROVAL Section 24 of the *Water Sustainability Act*

The holder of the *Water Sustainability Act* Section 11 Approval file number 4007727 is hereby authorized to occupy Crown land by constructing, maintaining and operating thereon the works authorized under the said approval.

- (a) The Crown land which is authorized to be occupied under this permit is a portion of the foreshore and land covered by the waters of Kootenay Lake, and adjacent to That Part of Lot A2, District Lot 1313, Kootenay District, Plan 1040. The locations of which are shown approximately in the information submitted with the document entitled "Change Approval and Notification (Changes in and About a Stream)" under Section 11 of the *Water Sustainability Act* and Part 3 of the *Water Sustainability Regulations*, submitted by Rodney Ratcliffe, dated December 10, 2019.
- (b) The dimensions of the Crown Land authorized to be occupied under this permit, are for: sediment removal works having an area of approximately 350 square metres.
- (c) This permit shall become void if the approval with respect to which the permit is issued should terminate, be abandoned or cancelled, or amended so as to render this permit unnecessary.
- (d) This permit is issued and accepted on the understanding that the permittee shall indemnify and save harmless the Government of the Province of British Columbia for all loss, damage to works, cost or expense suffered by the permittee by reason of the Crown land or any portion thereof being submerged or damaged by erosion or otherwise affected by flooding.
- (e) The holder of this permit shall not be entitled to compensation if the Crown grants permits to other persons to occupy the land affected by this permit.
- (f) In the event of a dispute at any time with respect to the area or boundaries of the land affected by this permit, the holder shall, at his own expense, have the said land surveyed by a duly authorized surveyor.

Yong Wang, P.Geol.
Assistant Water Manager
Water Stewardship Division
Ministry of Forests, Lands, Natural Resource Operations and Rural Development



April 6, 2020

File: 76910-20/A4007727

Rodney Ratcliffe
s.22

Dear Rodney Ratcliffe:

Re: Section 11 Approval – Kootenay Lake (West Arm) – Gravel Removal

Approval for the above has been granted, and the approval document verifying this is attached.

This Approval or copy of it should be kept on the work site so that it may be shown to a Ministry official upon request. Not having a copy of this document at the worksite is an offence under Section 106(3)(k) of the *Water Sustainability Act*.

A Permit over Crown Land (PCL) has been issued with this approval to provide authorization for the works described by your approval on Crown Land.

Freshwater clams/mussels are known to occur in Kootenay Lake and are an important part of local First Nations culture. If clams or mussels are to be disturbed within the footprint of the worksite they should be carefully removed from the immediate worksite footprint and placed in an adjacent area outside of the worksite within the wetted perimeter (similar habitat). If this is not possible then the clams/mussels should be placed in a live well with water exchange (freshwater as per the volume of the live well) every hour and be placed back into the habitat upon completion of the works. You may wish to consider having an environmental professional to conduct a survey of the site for native mussels prior to beginning work.

Provincial records indicate that the proposed work area has potential to contain an archaeological site which would be protected under the *Heritage Conservation Act* (HCA). Archaeological sites are automatically protected by the HCA even if they are undocumented. Any disturbance of an archaeological site without a permit is a breach of the legislation and may result in substantial fines. It is the applicant's responsibility to contact the Heritage Branch at either 1-250-953-3334 or arcwebfeedback@gov.bc.ca for further guidance. In addition, please familiarize yourself with the information contained in the attached document

**Ministry of Forests, Lands,
Natural Resource
Operations and Rural
Development**

Water Stewardship
Kootenay Boundary

Mailing/Location Address:
401 333 Victoria Street
Nelson BC V1L 4K3

Telephone: 250-354-6333
Facsimile: 250-354-6332
Website: www.env.gov.bc.ca/wsd/

entitled “Chance Find Procedures for Archaeological Material” and ensure that these recommendations are followed. You may also wish to consider having an archaeological assessment of the site conducted prior to beginning work to identify the potential for finding an archaeological site.

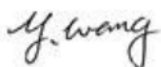
Please note that dredging activities have a high impact on aquatic ecosystems. Considering the cumulative impacts of human activities in aquatic and riparian ecosystems, there is greater emphasis on the importance of limiting or discontinuing high impact activities of this nature. Future dredging activities may be subject to additional reporting, such as an Environmental Management Plan, or other professional assessments in order to meet the requirements of authorization under the *Water Sustainability Act*.

The Federal Fisheries Act requires that projects avoid causing the death of fish (s.34) and/or the harmful alteration, disruption or destruction of fish habitat (s.35) unless authorized by the Minister of Fisheries and Oceans Canada (DFO). You are recommended to visit the Projects Near Water website to check if your project needs a review: <https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-003-eng.html>. Obtaining this approval does not constitute fulfilment of the requirements under the Federal Fisheries Act.

The gravel removed from this site could be used for restoration projects for salmonid spawning grounds. Please consider donating the gravel to local conservation groups, such as the West Arm Outdoors Club.

If you have any questions or concerns regarding this Approval, please contact Sophie Michaelsen, Water Stewardship Officer, at sophie.michaelsen@gov.bc.ca. You should contact your local government (local or municipal) to determine if there are any additional requirements.

Yours truly,



Yong Wang, P.Geol.
Assistant Water Manager

Attachment: Ktunaxa Chance Find Procedures

cc: Habitat Management, Attn: Tim Davis (tim.davis@gov.bc.ca)
Compliance and Enforcement Branch, Attn: Murray Watt (murray.watt@gov.bc.ca)
Compliance and Enforcement Branch, Attn: Iain Hartley (iain.hartley@gov.bc.ca)
Ktunaxa Nation Council (referrals@ktunaxa.org)
First Nation Relations, Attn: Allison Pagett (allison.pagett@gov.bc.ca)



APPROVAL

Changes In and About a Stream

WATER SUSTAINABILITY ACT – Section 11 (1)

Rodney Ratcliffe is hereby authorized to make changes in and about a stream as follows:

- A. The stream is Kootenay Lake.
- B. The changes to be made in and about the stream are gravel removal within Kootenay Lake.
- C. All works shall be located and constructed in accordance with the description of works contained in the document entitled “Change Approval and Notification (Changes in and About a Stream)” under Section 11 of the *Water Sustainability Act* and Part 3 of the *Water Sustainability Regulations*, submitted by Rodney Ratcliffe, dated September 9, 2018.
- D. The works authorized shall be completed on or before May 10, 2019.
- E. Care shall be exercised during all phases of the work to minimize siltation.
- F. The excavator must be operated from dry ground.
- G. The holder of this approval shall take reasonable care to avoid damaging any land, works, trees or other property, and shall make full compensation to the owners for any damage or loss resulting from the exercise of the rights granted with this approval.
- H. This approval does not authorize entry onto privately held land.
- I. All excavated material and debris shall be placed in a stable area above the high water mark and protected from erosion by planting grass and/or vegetation.
- J. Riparian vegetation must not be cleared so as to allow access for machinery to the work site.
- K. The machine operator shall pass the excavator bucket through the water before removing any material to scare any resident fish from the area.

Page 1 of 2

- L. Any machinery operated on site shall be in good repair and be free of hydraulic leaks and excess surface oil and grease.
- M. Fuelling and servicing of vehicles and equipment must occur a minimum of 100 meters away from all streams, lakes and waterbodies and any spills must be properly cleaned up and reported as required by the Spill Reporting Regulation (B.C. Reg. 263/90).
- N. All motorized vehicles should be checked thoroughly for invasive plants prior to entering the area. The transport of invasive weeds should be avoided at all times and inspections of all machinery should be completed routinely to ensure that invasive species are not transported to new areas.
- O. Upon completion of this project, the streambed shall be left in a smooth condition with no depressions that could trap fish or initiate erosion.
- P. Upon commencement of the project, the works shall be pursued to completion as quickly as possible.
- Q. This Approval, or a copy of it, must be kept or posted on the work site so that it may be shown to a Ministry official upon request.



Thomas W. Cummings, P.Ag.
 Assistant Water Manager
 Water Stewardship Division
 Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Date: April 30, 2019

Approval: A4007515

Page 2 of 2

Ministry of Forests, Lands, Natural Resource Operations & Rural Development	Kootenay-Boundary Water Management	Mailing Address: 401-333 Victoria Street Nelson BC V1L 4K3	Telephone: 250 354-6333 Facsimile: 250 354-6332 Website: www.env.gov.bc.ca
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Date: April 30, 2019

File: 76910-20/A4-7515

Rodney Ratcliffe

s.22

Dear Rodney Ratcliffe:

Re: Section 11 Approval – Kootenay Lake (West Arm) – Gravel Removal

Approval for the above has been granted, and the approval document verifying this is attached.

This Approval or copy of it should be kept on the work site so that it may be shown to a Ministry official upon request. Not having a copy of this document at the worksite is an offence under Section 106(3)(k) of the *Water Sustainability Act*.

A Permit over Crown Land (PCL) has been issued with this approval to provide authorization for the works described by your approval on Crown land.

Freshwater clams/mussels are known to occur in Kootenay Lake and are an important part of local First Nations culture. If clams or mussels are to be disturbed within the footprint of the worksite they should be carefully removed from the immediate worksite footprint and placed in an adjacent area outside of the worksite within the wetted perimeter (similar habitat). If this is not possible then the clams/mussels should be placed in a live well with water exchange (freshwater as per the volume of the live well) every hour and be placed back into the habitat upon completion of the works. You may wish to consider have an environmental professional conduct a survey of the site for native mussels prior to beginning work.

Provincial records indicate that the proposed work area has potential to contain an archaeological site which would be protected under the *Heritage Conservation Act* (HCA). Archaeological sites are automatically protected by the HCA even if they are undocumented. Any disturbance of an archaeological site without a permit is a breach of the legislation and may result in substantial fines. It is the applicant's responsibility to contact the Heritage Branch at either 1-250-953-3334 or arcwebfeedback@gov.bc.ca for further guidance. In addition, please familiarize yourself with the information contained in the attached document

Ministry of Forests, Lands,
Natural Resource
Operations and Rural
Development

Water Stewardship
Kootenay Boundary

Mailing/Location Address:
401 333 Victoria Street
Nelson BC V1L 4K3

Telephone: 250-354-6333
Facsimile: 250-354-6332
Website: www.env.gov.bc.ca/wsd/

entitled "Chance Find Procedures for Archaeological Material" and ensure that these recommendations are followed. You may also wish to consider having an archaeological assessment of the site conducted prior to beginning work to identify the potential for finding an archaeological site.

The gravel removed from this site could be used for restoration projects for salmonid spawning grounds. Please consider donating the gravel to local conservation groups, such as the West Arm Outdoors Club.

If you have any questions or concerns regarding this Approval, please contact Ben Cross, Water Stewardship Officer, at Benjamin.Cross@gov.bc.ca. You should contact your local government (local or municipal) to determine if there are any additional requirements.

Yours truly,



Tom Cummings, P.Ag.
Assistant Water Manager

Attachment

cc: Habitat Management, Attn: Tim Davis (Tim.Davis@gov.bc.ca)
Compliance and Enforcement Branch, Attn: Murray Watt (Murray.Watt@gov.bc.ca)
Ktunaxa Nation Council (Referrals@ktunaxa.org)



APPROVAL

Changes In and About a Stream

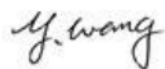
WATER SUSTAINABILITY ACT – Section 11 (1)

Rodney Ratcliffe is hereby authorized to make changes in and about a stream as follows:

- A. The stream is Kootenay Lake .
- B. The changes to be made in and about the stream are Gravel Removal within the North shore of West Arm of Kootenay Lake as submitted with application.
- C. All works shall be located and constructed in accordance with the description of works contained in the document entitled “Change Approval and Notification (Changes in and About a Stream)” under Section 11 of the *Water Sustainability Act* and Part 3 of the *Water Sustainability Regulations* submitted by Rodney Ratcliffe, dated December 10, 2019.
- D. The works authorized shall be completed on or before April 30, 2020.
- E. Care shall be exercised during all phases of the work to minimize siltation.
- F. The excavator must be operated from dry ground.
- G. The holder of this approval shall take reasonable care to avoid damaging any land, works, trees or other property, and shall make full compensation to the owners for any damage or loss resulting from the exercise of the rights granted with this approval.
- H. This approval does not authorize entry onto privately held land.
- I. All excavated material and debris shall be placed in a stable area above the high water mark and protected from erosion by planting grass and/or vegetation.
- J. No vegetation (terrestrial or aquatic) is to be cleared so as to allow access for machinery to the work site.
- K. The machine operator shall pass the excavator bucket through the water before removing any material to scare any resident fish from the area.

Page 1 of 2

- L. If freshwater mussels are disturbed during excavation, they must be removed and relocated adjacent to the work area within the wetted portion of Kootenay Lake.
- M. Any machinery operated on site shall be in good repair and be free of hydraulic leaks and excess surface oil and grease. It is preferred that machines use biodegradable hydraulic oil when working within Kootenay Lake.
- N. Fuelling and servicing of vehicles and equipment must occur a minimum of 100 meters away from all streams, lakes and waterbodies and any spills must be properly cleaned up and reported as required by the Spill Reporting Regulation (B.C. Reg. 263/90).
- O. All motorized vehicles should be checked thoroughly for invasive plants prior to entering the area. The transport of invasive weeds should be avoided at all times and inspections of all machinery should be completed routinely to ensure that invasive species are not transported to new areas.
- P. Upon completion of this project, the streambed shall be left in a smooth condition with no depressions that could trap fish or initiate erosion.
- Q. Upon commencement of the project, the works shall be pursued to completion as quickly as possible.
- R. This Approval, or a copy of it, must be kept or posted on the work site so that it may be shown to a Ministry official upon request.



Yong Wang, P.Geol.
 Assistant Water Manager
 Water Stewardship Division
 Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Date: April 3, 2020

Approval: 4007727
 Page 2 of 2

Ministry of Forests, Lands, Natural Resource Operations & Rural Development	Kootenay-Boundary Water Management	Mailing Address: 401-333 Victoria Street Nelson BC V1L 4K3	Telephone: 250 354-6333 Facsimile: 250 354-6332 Website: www.env.gov.bc.ca
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April 6, 2020

File: 76910-20/A4007727

Rodney Ratcliffe

s.22

Dear Rodney Ratcliffe:

Re: Section 11 Approval – Kootenay Lake (West Arm) – Gravel Removal

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**Ministry of Forests, Lands,
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entitled “Chance Find Procedures for Archaeological Material” and ensure that these recommendations are followed. You may also wish to consider having an archaeological assessment of the site conducted prior to beginning work to identify the potential for finding an archaeological site.

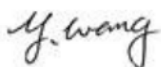
Please note that dredging activities have a high impact on aquatic ecosystems. Considering the cumulative impacts of human activities in aquatic and riparian ecosystems, there is greater emphasis on the importance of limiting or discontinuing high impact activities of this nature. Future dredging activities may be subject to additional reporting, such as an Environmental Management Plan, or other professional assessments in order to meet the requirements of authorization under the *Water Sustainability Act*.

The Federal Fisheries Act requires that projects avoid causing the death of fish (s.34) and/or the harmful alteration, disruption or destruction of fish habitat (s.35) unless authorized by the Minister of Fisheries and Oceans Canada (DFO). You are recommended to visit the Projects Near Water website to check if your project needs a review: <https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-003-eng.html>. Obtaining this approval does not constitute fulfilment of the requirements under the Federal Fisheries Act.

The gravel removed from this site could be used for restoration projects for salmonid spawning grounds. Please consider donating the gravel to local conservation groups, such as the West Arm Outdoors Club.

If you have any questions or concerns regarding this Approval, please contact Sophie Michaelsen, Water Stewardship Officer, at sophie.michaelsen@gov.bc.ca. You should contact your local government (local or municipal) to determine if there are any additional requirements.

Yours truly,



Yong Wang, P.Geol.
Assistant Water Manager

Attachment: Ktunaxa Chance Find Procedures

cc: Habitat Management, Attn: Tim Davis (tim.davis@gov.bc.ca)
 Compliance and Enforcement Branch, Attn: Murray Watt (murray.watt@gov.bc.ca)
 Compliance and Enforcement Branch, Attn: Iain Hartley (iain.hartley@gov.bc.ca)
 Ktunaxa Nation Council (referrals@ktunaxa.org)
 First Nation Relations, Attn: Allison Pagett (allison.pagett@gov.bc.ca)

Re: 4007727 Gravel removal authorization Ratcliffe

From: Simpson, Andrew FLNR:EX <Andrew.Simpson@gov.bc.ca>
To: Michaelsen, Sophie FLNR:EX <Sophie.Michaelsen@gov.bc.ca>
Cc: Watt, Murray J FLNR:EX <Murray.J.Watt@gov.bc.ca>
Sent: April 9, 2020 3:03:39 PM PDT

Hi Sophie,

Thanks for getting back to me. I spoke with Rodney yesterday and he provided me with copies of all the paperwork. Today I actually stopped by his worksite on my way through to Balfour. The machine was not actively working when I arrived, and Rodney informed me that they were pretty much complete already. I did not see any indication of anything contrary to the conditions of the approval during my site inspection.

Regards,

Andrew

Sent from my iPhone

On Apr 9, 2020, at 2:01 PM, Michaelsen, Sophie FLNR:EX <Sophie.Michaelsen@gov.bc.ca> wrote:

Hi Andrew,

I just listened to your voicemail about the Ratcliffe dredging file. The approval was issued on Monday April 6th. I am aware that Mr. Ratcliffe dredged the opposite side of the inlet in 2019. In his original applicant he made no mention of planning to dredge again the following year. The back to back dredging applications caused concern for water stewardship but at this point there's no grounds to refuse the application. I spoke to Mr. Ratcliffe about his dredging schedule and he assured me that he does not plan to dredge this area again. I did include some wording in the approval cover letter that spoke to the impacts of dredging and that in the future it may not be supported. I thought this context might be helpful for any future conversations you may have about this file. I have attached the approval email for reference.

Sophie Michaelsen FIT
Water Stewardship
250-417-9536
Kootenay Boundary Region
Ministry of Forests, Lands Natural Resource
Operations and Rural Development

<mime-attachment>

RE: Works at Harrop Ferry

From: Hills, Gerald FLNR:EX^{s.15}
To: Watt, Murray J FLNR:EX <Murray.J.Watt@gov.bc.ca>
Sent: May 5, 2020 9:23:10 AM PDT

If we have explained it to Lands that is fine. I just got the impression they didn't think we did our job. If that is the case - I didn't want to leave it there.

Gerald Hills
Regional Manager, Compliance and Enforcement
Revelstoke | Kootenay Boundary Region
Compliance and Enforcement Branch | FLNRORD
Office: 250 805-6736 | Mobile: 250 814-4267
Report a Natural Resource Violation

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

From: Watt, Murray J FLNR:EX <Murray.J.Watt@gov.bc.ca>
Sent: May 5, 2020 9:05 AM
To: Hills, Gerald FLNR:EX <Gerald.Hills@gov.bc.ca>
Subject: RE: Works at Harrop Ferry

Still their problem...we inspected and the guy had the authorization to do what he was doing...we passed this to Lands and Water....we articulated once...how many times do we need to followup again

Murray WATT S/Cst., PAg., G-I-T, CAN-CISEC
Supervisor, Natural Resource Officer
Castlegar Field Unit | Kootenay Boundary Region Compliance and Enforcement Branch | FLNRORD
Mobile: 778-266-0387
Report a Natural Resource Violation

Pronouns: him, he, his

"The standard you walk by is the standard you accept" (David Morrison, Chief of Army, Australian Army)

I humbly acknowledge that I work within the traditional ancestral and unceded territory of the Ktunaxa Nation, as well as the Sinixt, Secwepemc and the Okanagan peoples

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

From: Hills, Gerald FLNR:EX
Sent: May 5, 2020 9:04 AM
To: Watt, Murray J FLNR:EX
Subject: RE: Works at Harrop Ferry

Thanks - this helps. There appears to be a disconnect between Lands and Water. Thus I think it would be good to summarize so that they can either a) improve communications so that Lands knows what WSD is doing and what doesn't need LA authorization or b) make it clearer what activities also need a LA authorization (eg in the authorization letter).

Gerald Hills
Regional Manager, Compliance and Enforcement Revelstoke | Kootenay Boundary Region Compliance and

Enforcement Branch | FLNRORD

Office: 250 805-6736 | Mobile: 250 814-4267 Report a Natural Resource Violation

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

From: Watt, Murray J FLNR:EX <Murray.J.Watt@gov.bc.ca>

Sent: May 5, 2020 7:34 AM

To: Hills, Gerald FLNR:EX <Gerald.Hills@gov.bc.ca>

Subject: FW: Works at Harrop Ferry

I forward this to you awhile back on Harrop.....

Murray WATT S/Cst., PAg., G-I-T, CAN-CISEC

Supervisor, Natural Resource Officer

Castlegar Field Unit | Kootenay Boundary Region Compliance and Enforcement Branch | FLNRORD

Mobile: 778-266-0387

Report a Natural Resource Violation

Pronouns: him, he, his

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

From: Simpson, Andrew FLNR:EX

Sent: April 8, 2020 12:25 PM

To: Watt, Murray J FLNR:EX

Subject: RE: Works at Harrop Ferry

I just spoke with Mr RATCLIFFE, and he confirmed that he's completing the dredging project he started in May last year. As was the case last year, he got his Section 11 approval confirmed and started work the very next day. He is sending me the documentation as we speak (now attached). COS probably was not able to access the most up to date info, but I put a call in to MICHALSON at Water just to confirm (RATCLIFFE actually provided me with her cell number). If I do head over to the East shore of KL tomorrow I can stop by s.22 just to confirm that the is proceeding according to the conditions of the approval.

Given that his dredging last year produced over 1/2 a dozen complaints. I'd expect we'll hear a lot more squawking about this in the next 48 hours....

Andrew Simpson

Natural Resource Officer

West Kootenay Field Unit – Kootenay Boundary Region Compliance and Enforcement Branch Ministry of Forests, Lands, Natural Resource Operations and Rural Development
845 Columbia Ave, Castlegar, BC V1N 3H3

Cell: 250-489-9423

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

From: Watt, Murray J FLNR:EX <Murray.J.Watt@gov.bc.ca>
Sent: April 8, 2020 10:54 AM
To: Simpson, Andrew FLNR:EX <Andrew.Simpson@gov.bc.ca>
Subject: FW: Works at Harrop Ferry

Murray WATT S/Cst., PAg., G-I-T, CAN-CISEC
Supervisor, Natural Resource Officer
Castlegar Field Unit | Kootenay Boundary Region Compliance and Enforcement Branch | FLNRORD
Mobile: 778-266-0387
Report a Natural Resource Violation

Pronouns: him, he, his

"The standard you walk by is the standard you accept" (David Morrison, Chief of Army, Australian Army)

I humbly acknowledge that I work within the traditional ancestral and unceded territory of the Ktunaxa Nation, as well as the Sinixt, Secwepemc and the Okanagan peoples

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

From: Mann, Cynthia ENV:EX
Sent: April 8, 2020 10:46 AM
To: Watt, Murray J FLNR:EX
Subject: Works at Harrop Ferry

Hi Murray. As discussed. The application for change approval for gravel removal. The application is still in progress with water stewardship. Tracking number is 100305848.

Sophie Michalson is the water authorization specialist on this file.

Applicant is Rodney Rattcliffe

s.22

Harrop Ferry Lansing

I will text the picture. Thanks.

Sent from my iPhone