From: Matt Brigden

Sent: Friday, March 10, 2023 1:02 PM

To: Aaron Ruhl
Cc: Jennifer Elderkin

Subject: Drainage and Sanitary SRW **Attachments:** LMP26793.pdf; BK9037.pdf

Hi Aaron,

Here is the SRW and Legal Plan as requested.

Let me know if you need anything else.

Regards, Matt



Matthew Brigden, EIT | Engineering Technologist III

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Direct line: 604.532.7567

Web | Facebook | Twitter | YouTube



From: Roeland Zwaag

Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl

Cc: Kevin Larsen; Patty Jadis

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Follow Up Flag: Follow up Flag Status: Completed

Aaron, can you please review?

Kevin, FYI.

Roeland.

From: s. 22(1)

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag <rzwaag@tol.ca>

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

Begin forwarded message:

From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>>

Date: February 1, 2023 at 12:42:39 PM PST

To:

Subject: Natural Resource Violation Report 202271

Thank you for submitting Natural Resource Violation Report number 202271. Your report has been received by Natural Resource Officers with the Compliance and Enforcement Branch. We appreciate you taking the time to bring this to our attention as all complaints help inform our enforcement strategies. Emerging priorities and officer capacity may lead to some complaints not being actioned. If more information is required, a Natural Resource Officer may contact you.

We have been experiencing system issues which has prevented us from providing you with your natural resource violation report number sooner. We sincerely apologize for this delay.

Please do not reply to this e-mail as email responses are not received at this address.

Danielle

Natural Resource Violation Reporting Line http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1 877-952-7277, option 2

Original Message From: mailer@a100.gov.bc.ca <mailer@a100.gov.bc.ca></mailer@a100.gov.bc.ca>
Sent: January 31, 2023 10:59 AM
To: FOR Compliance and Enforcement Contact Centre FOR:EX
< <u>CE.FrontCounterBCContactCentre@gov.bc.ca</u> >
Subject: Report of Natural Resource Violation
Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53.
referer: https://www.for.gov.bc.ca/ remote address: \$\frac{8.22(1)}{2}\$
ReportDate: 01/31/2023
ReportTime: 10:51
LastName: s. 22(1)
FirstName: s. 22(1)
EmailAddress: s. 22(1)
DaytimePhone: \$ 22(1)
MailingAddress:
PropertyAddress: s. 22(1)
Location: Gloucester Park in Langley, including West Creek.
Nearest_City_Town: Langley
ViolatorAddress: Township of Langley BD Developments
ViolationHour_Start: 00
ViolationMinute_Start: 00

ViolationHour_End: 00

ViolationMinute_End: 00

NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands, concerns about wildlife (already reported to RAPP) but wanted to report concern of diversion water and impact on the wetlands.

Township of Langley managing watercourses, BD Development Group doing the work.
The stream is a red coded fish bearing
stream (salmon/Coho).
No machines in the area at the moment. Believe damage is done.
DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.
AgenciesNotified: DFO and Township of Langley
Hazards: None

From: Aaron Ruhl

Sent: Wednesday, February 01, 2023 4:15 PM

To: Jennifer Elderkin

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Please provide an update as to the work we may have been performing in the area?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag <rzwaag@tol.ca>
Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Patty Jadis <pjadis@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Aaron, can you please review?

Kevin, FYI.

Roeland.

From: 5. 22(1)

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag < rzwaag@tol.ca>

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

Begin forwarded message:

From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

Date: February 1, 2023 at 12:42:39 PM PST

To: s. 22(1)

Subject: Natural Resource Violation Report 202271

Thank you for submitting Natural Resource Violation Report number 202271. Your report has been received by Natural Resource Officers with the Compliance and Enforcement Branch. We appreciate you taking the time to bring this to our attention as all complaints help inform our enforcement strategies. Emerging priorities and officer capacity may lead to some complaints not being actioned. If more information is required, a Natural Resource Officer may contact you.

We have been experiencing system issues which has prevented us from providing you with your natural resource violation report number sooner. We sincerely apologize for this delay.

Please do not reply to this e-mail as email responses are not received at this address.

Danielle

ViolatorAddress: Township of Langley

Natural Resource Violation Reporting Line http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1 877-952-7277, option 2

```
----Original Message-----
From: mailer@a100.gov.bc.ca <mailer@a100.gov.bc.ca>
Sent: January 31, 2023 10:59 AM
To: FOR Compliance and Enforcement Contact Centre FOR:EX
<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>>
Subject: Report of Natural Resource Violation
Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53.
referer: https://www.for.gov.bc.ca/
remote address:
ReportDate: 01/31/2023
ReportTime: 10:51
LastName:
FirstName:
EmailAddress:
DaytimePhone:
MailingAddress:
PropertyAddress:
Location: Gloucester Park in Langley, including West Creek.
Nearest_City_Town: Langley
```

BD Devel	opments
----------	---------

ViolationHour_Start: 00

ViolationMinute_Start: 00

ViolationHour_End: 00

ViolationMinute_End: 00

NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands, concerns about wildlife (already reported to RAPP) but wanted to report concern of diversion water and impact on the wetlands.

Township of Langley managing watercourses, BD Development Group doing the work.

S. ZZ(1)	
	. The stream is a red coded fish bearing
stream (salmon/Coho).	
at the state of th	

No machines in the area at the moment. Believe damage is done.

DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.

AgenciesNotified: DFO and Township of Langley
Hazards: None

From: Roeland Zwaag

Sent: Monday, March 06, 2023 10:50 AM

To: Aaron Ruhl

Cc: Kevin Larsen; Mark Bakken; Stephen Richardson; Patty Jadis

Subject: FW: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates

Aaron,

Further to the voice mail I forwarded from , please see e-mail below.

Let me know if we should meet to discuss or otherwise advise when you have spoken with \$\(^{\circ}22(1)\)

Roeland.

Sent: Monday, March 06, 2023 10:43 AM

To:

Lisa Dreves <stewardship@leps.bc.ca>;

Art Demsky <arthur.demsky@dfo-mpo.gc.ca>;

Nichole Marples <Exec_Director@leps.bc.ca>;

Roeland Zwaag <rzwaag@tol.ca>

Subject: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates

Subsequent to our meeting yesterday, this beautiful coho smolt was live trapped and released on March 6th 2023 in Gloucester Industrial Estates. The adjacent ponds and water courses are being drained by the Township of Langley, purportedly for "flood mitigation" and waterfowl habitat is also being severely impacted.

The smolts historically leave for the ocean in mid-April and this habitat destruction must stop now!



From: Jennifer Elderkin

Sent: Tuesday, March 14, 2023 4:18 PM

To: Aaron Ruhl

Subject: FW: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water

Approval Application 2010025

FYI

Sent from my Galaxy

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

From: "Snook, Roxanne FOR:EX" < Roxanne. Snook@gov.bc.ca>

Date: 2023-03-14 3:00 p.m. (GMT-08:00)

To: Jennifer Elderkin <jelderkin@tol.ca>, "Sutherland, Barbara FOR:EX" <Barbara.Sutherland@gov.bc.ca>, Justin St

Andrassy < jstandrassy@tol.ca>

Cc: Lovena Morton Lovena Morton Lovena Morton <a href="mail

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval

Application 2010025

Hi Jennifer,

Thanks for reaching out. I have no concerns with these works. It came to my attention from a concerned group over an application that's under review with our team (a Natural Resource Violation report). As far as I understand, there's been no non-compliance under the WSA, so no need for my involvement.

Thanks again,

Roxanne



Roxanne Snook, MSc., RPBio (She/her/hers)

Surface Water Protection Officer

South Coast Natural Resource Region

Ministry of Forests

200 -10428 153 Street, Surrey BC, V3R 1E1

Email: Roxanne.Snook@gov.bc.ca | Ph: (236) 468-3941

Report a Natural Resource Violation

"Anthropocene rivers are largely imprisoned in the banks of their history." -Brown et al. (2018)

From: Jennifer Elderkin < jelderkin@tol.ca> Sent: Friday, March 10, 2023 3:50 PM

To: Sutherland, Barbara FOR:EX <Barbara.Sutherland@gov.bc.ca>; Justin St Andrassy <jstandrassy@tol.ca>; Snook,

Roxanne FOR:EX <Roxanne.Snook@gov.bc.ca>

Cc: Lovena Morton Lovena Morton <a href="mai

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval

Application 2010025

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Good afternoon,

This email chain came to my attention yesterday and I just wanted to reach out to see if you had any questions or concerns for our Stormwater department. Please don't hesitate to reach out via email or phone call if there is anything you'd like to discuss.

Regards,



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Sutherland, Barbara FOR:EX < Barbara.Sutherland@gov.bc.ca >

Sent: Monday, February 27, 2023 12:22 PM

To: Justin St Andrassy < jstandrassy@tol.ca>; Snook, Roxanne FOR:EX < Roxanne.Snook@gov.bc.ca>

Cc: Lovena Morton < lmorton@tol.ca; Ashleigh Gilbert < agilbert@tol.ca>

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval

Application 2010025

Thanks Justin.

From: Justin St Andrassy < jstandrassy@tol.ca>

Sent: February 27, 2023 11:59 AM

To: Snook, Roxanne FOR:EX <Roxanne.Snook@gov.bc.ca>; Sutherland, Barbara FOR:EX

<Barbara.Sutherland@gov.bc.ca>

Cc: Lovena Morton < lmorton@tol.ca; Ashleigh Gilbert < agilbert@tol.ca>

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval

Application 2010025

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Roxanne and Barb, my department is not directly involved in the current beaver mitigation activities by TOL Stormwater department in the Gloucester detention ponds. However, we are aware of on-going maintenance efforts to keep the area's ToL stormwater system / flooding to a safe level, and that the Stormwater dep. conducts various beaver dam / blockage mitigation works in order to maintain the systems (they work in association with a QEP - EBB Consulting - under applicable Prov. Notifications).

To my knowledge, these works are completely unrelated to whatever development is being discusses/proposed for the area.

From what I understand, for years now these calls come in every time maintenance is conducted. But I will send the stormwater department a message to ensure that they are aware of new calls (in case they are not aware already)

Justin St. Andrassy, EP, TAg | Environmental Coordinator II

Township of Langley | Engineering Division Water Resources and Environment Department (WRE) 20338 65 Ave, Langley, BC, V2Y 3J1 istandrassy@tol.ca

Direct Line: 604.532.7528

Web | FaceBook | Twitter | YouTube

From: Snook, Roxanne FOR:EX < Roxanne.Snook@gov.bc.ca >

Sent: Monday, February 27, 2023 11:24 AM

 $\textbf{To:} \ \text{Sutherland, Barbara FOR:EX} < \underline{\text{Barbara.Sutherland@gov.bc.ca}}; \ \text{Justin St Andrassy} < \underline{\text{istandrassy@tol.ca}}; \ \text{Ashleighted}$

Gilbert < agilbert@tol.ca >

Subject: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval Application

2010025

Hi Barb,

I chatted with Ashleigh last week and asked her about the flood mitigation/instream works being done at Gloucester wetlands. She confirmed it was the TOL doing the flood mitigation to ensure flows reach downstream sections of West Creek. I have attached the email correspondence with her, as she had gone out to the site the week previous so there are some recent photos in there too. I hadn't realized these were the same properties that the complaints were coming in for.

I won't be going out to this site unless Justin and Ashleigh have anything else to add or have additional concerns.

Just as an FYI, Ashleigh, and Justin, we've received several complaints regarding these works. Is there any public outreach that the TOL does in this area? I don't mind responding these complainants, but they are more concerned that the works are being done to reduce the setbacks and push forward development at this location. Sounds messy and political \bigcirc

Hope you all had a nice weekend, Sincerely, Roxanne



Roxanne Snook, MSc., RPBio (She/her/hers)

Surface Water Protection Officer South Coast Natural Resource Region Ministry of Forests 200 -10428 153 Street, Surrey BC, V3R 1E1

Email: Roxanne.Snook@gov.bc.ca | Ph: (236) 468-3941

Report a Natural Resource Violation

"Anthropocene rivers are largely imprisoned in the banks of their history." -Brown et al. (2018)

From: Sutherland, Barbara FOR:EX < Barbara.Sutherland@gov.bc.ca >

Sent: Monday, February 27, 2023 11:14 AM

To: Justin St Andrassy < jstandrassy@tol.ca >; Ashleigh Gilbert < agilbert@tol.ca >

Cc: Snook, Roxanne FOR:EX <Roxanne.Snook@gov.bc.ca>

Subject: Potential Unauthorized works on Gloucester Golf course Property - Water Approval Application 2010025

Hi Justin and Ashleigh,

We have had a report of works being done by the ToL on the Gloucester Golf course site.

Do you know anything about it?



Thanks,



Barbara Sutherland, BSc (Eng), BSc (EnvP)

Senior Authorizations Specialist - Water Stream Management Authorizations South Coast Natural Resource Region Ministry of Forests

200-10428 153 Street, Surrey BC, V3R 1E1 | Phone: 778-572-2199 | Fax: 604-586-

4444

Our Vision: Economic prosperity and environmental sustainability

From: Kevin Larsen

Sent: Tuesday, March 07, 2023 12:13 PM

To: Roeland Zwaag
Cc: Aaron Ruhl
Subject: FW: Beavers

I could send him the TOL fact sheet(s), but the question on related activity in Gloucester should go to Aaron / Jennifer?

Please advise.

From: Eric Woodward <ewoodward@tol.ca>
Sent: Tuesday, March 07, 2023 12:10 PM

To: Kevin Larsen <klarsen@tol.ca>

Cc: Roeland Zwaag <rzwaag@tol.ca>; Mark Bakken <mbakken@tol.ca>

Subject: Beavers

Kevin,

Can I get all current policy documents that government the removal of beaver dams? And a brief outline of any related activities within Gloucester within the last three months?

I have an inquiry I need to get back to, so somewhat time sensitive. Don't need a big report for the second, just a sense of it.

Eric.

Eric Woodward | Mayor Township of Langley

ewoodward@tol.ca

From: Jennifer Elderkin

Sent: Friday, March 03, 2023 4:27 PM

To: Aaron Ruhl

Subject: FW: Gloucester Beaver Dams

FYI below.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Brad Henningson

 bhenningson@tol.ca>

Sent: Friday, March 03, 2023 4:26 PM
To: Jennifer Elderkin < jelderkin@tol.ca>
Cc: Matt Brigden < mbrigden@tol.ca>
Subject: Gloucester Beaver Dams

Hi Jennifer

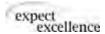
This morning March 3, I had my Foreman 1 Dustin send a crew into Gloucester pond #2 North to notch beaver dams. There are two dams at this location that require routine maintenance. Beavers are active at this location and have caused nearby businesses to flood in the past. While at this location asked my crew what they were doing. My crew was polite and responded that they had notched the dams. As they walked away took their pictures.

Regards, Brad



Brad Henningson | Foreman II

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4



Web | Facebook | Twitter | YouTube

From: Aaron Ruhl

Sent: Wednesday, March 08, 2023 3:38 PM

To: Jennifer Elderkin

Subject: FW: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

Please advise on the three points below, by 10am tomorrow

I will draft the response based upon your answers

Thanks.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: MediaInquiries <mediainquiries@tol.ca>
Sent: Wednesday, March 08, 2023 3:30 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Peter Chevrier <pchevrier@tol.ca>; Roeland Zwaag <rzwaag@tol.ca> **Subject:** Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

Hi Aaron,

Please see this 2nd media inquiry below about 'Beaver dam removal on Munday Creek in Gloucester'. This is a second inquiry on this topic.

There are specific questions Matthew Claxton is asking noted in red below. Can you provide me the answers.

Thank you.

Media Inquiry details:

Media Inquiry Subject: Beaver dam removal on Munday Creek in Gloucester

Media Outlet: Langley Advance Times | Media Reporter Name: Matthew Claxton

Media Reporter Email Address: matthew.claxton@langleyadvancetimes.com

Media Reporter Phone Number: 604-825-1578

Media Inquiry Description:

Received an email from local environmentalists that several beaver dams have been destroyed recently on East Munday Creek in the Gloucester Industrial Park.

- 1. Can you confirm that Township crews or contractors have been removing these dams?
- 2. Have the beavers been trapped as well, lethally or for removal? If so, why?
- 3. Is there a concern that disrupting this area by removing the dams could damage the environment for other wildlife, such as salmon fry, birds, etc?

Media Deadline: 2023-03-09 3:00 PM

Media Relations

Township of Langley 20338 – 65 Avenue

Langley, BC V2Y 3J1 www.tol.ca/mediainquiries

From: Aaron Ruhl

Sent: Wednesday, March 08, 2023 8:22 AM

To: Jennifer Elderkin

Subject: FW: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276

Street

Attachments: RE: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates;

05-205 Control of Nuisance Animals.pdf; Beaver Management Guide FINAL.pdf

Importance: High

Jennifer – please review the following, provide any comments, and confirm it is factual.



Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag <rzwaag@tol.ca>
Sent: Wednesday, March 08, 2023 7:17 AM
To: Peter Chevrier <pchevrier@tol.ca>

 $\textbf{Cc:} \ A aron \ Ruhl < aruhl@tol.ca>; \ Kevin \ Larsen < klarsen@tol.ca>; \ Stephen \ Richardson < srichardson@tol.ca>; \ Dave$

Anderson < danderson@tol.ca>

Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Good morning Peter,

The response will require input from Engineering (on the beaver management practices) and Community Development (on the development application).

I have attached a recent e-mail on this matter. Mayor Woodward also requested background information yesterday in response to inquiries he had received.

Roeland.

From: MediaInquiries < mediainquiries@tol.ca > Sent: Tuesday, March 07, 2023 5:04 PM
To: Roeland Zwaag < rzwaag@tol.ca >

Cc: Peter Chevrier < pchevrier@tol.ca >

Subject: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Hi Roeland

Please see the media inquiry below about 'Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street'. I believe this would fall within your area. If this is not accurate, please let me know.

If you would like my assistance to help prepare your response, or if you would prefer that I responded to this inquiry, please let me know and provide me with the information, or a designate to work with. Thank you.

Media Inquiry details:

Media Inquiry Subject: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Media Outlet: Vancouver Sun |

Media Reporter Name: Joanne P Lee-Young

Media Reporter Email Address: <u>jlee-young@postmedia.com</u>

Media Reporter Phone Number: 6042401812

Media Inquiry Description: I am working on a story about the possibility that beaver dams are being dismantled and ponds drained on a property in the West Creek wetlands where a developer is applying for a rezoning for industrial use. The site is at the 5500 block of 268 Street through 276 Street. There's no report to council yet about the plans for this property -- the folder number is SA101305. Is there any chance you could please let me know what might be happening -- It is also the case, I understand, that some beaver dams and water levels are lowered every year to mitigate flooding. Thanks for your help.

Media Deadline: 2023-03-08 12:00

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries From: Roeland Zwaag

Sent: Friday, March 03, 2023 11:22 AM

To: Aaron Ruhl

Subject: FW: Voice Mail (1 minute and 30 seconds)

Attachments: (1 minute and 30 seconds) Voice Mail.mp3

Follow Up Flag: Follow up Flag Status: Completed

?

Roeland.

From: Microsoft Outlook <MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@tol.ca> On Behalf Of

Sent: Friday, March 03, 2023 11:15 AM

To: 6163 < 6163@tol.ca>

Subject: Voice Mail (1 minute and 30 seconds)

You received a voice message from

s. 22(1)

Caller-Id:

Voice Mail Preview isn't available for this message.

The message is too long.

From: Aaron Ruhl

Sent: Friday, March 03, 2023 11:44 AM

To: Jennifer Elderkin

Subject: FW: Voice Mail (1 minute and 30 seconds)

Attachments: (1 minute and 30 seconds) Voice Mail.mp3

Update please

Did you end talking with the province?

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Roeland Zwaag <rzwaag@tol.ca> Date: 2023-03-03 11:21 a.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: FW: Voice Mail (1 minute and 30 seconds)

?

Roeland.

From: Microsoft Outlook <MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@tol.ca> On Behalf Of

Sent: Friday, March 03, 2023 11:15 AM

To: 6163 <6163@tol.ca>

Subject: Voice Mail (1 minute and 30 seconds)

You received a voice message from

s. 22(1)

Caller-Id:

Voice Mail Preview isn't available for this message.

The message is too long.

From: Matt Brigden

Sent: Thursday, March 09, 2023 4:07 PM

To: Aaron Ruhl
Cc: Jennifer Elderkin

Subject: Gloucester Detention Ponds **Attachments:** Glouchester Pond -R01.pdf

Hi Aaron,

The SRW documents and legal plans we discussed can be found <u>here.</u> I placed copies of the main SRW document and associated legal plans in the main folder but all of the various subdivision and cancelled titles can be found in the subfolders.

Map is attached, I believe it has everything you were looking for but let me know if you need any changes.

Regards, Matt



Matthew Brigden, EIT | Engineering Technologist III

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Direct line: 604.532.7567

Web | Facebook | Twitter | YouTube



From: Aaron Ruhl

Sent: Tuesday, March 07, 2023 12:23 PM
To: Jennifer Elderkin; Matt Brigden
Subject: Gloucester Ponds - Bever Dams

Importance: High

I require all the dates staff have maintained beaver dams in Gloucester this year with a note of the work performed.

I need this ASAP, thanks

Dates I currently have are:

January 19, 2023 - Staff received a service request related to a blockage/flooding in the area. Upon inspection they found two beavers dams believed to be the cause the cause of the issue. The dams were hand notched as allowed to alleviate flooding.

January 20, 2023 – Staff returned to notch the dams

January 23, 2023 – Staff retuned to notch the dams

January 30, 2023 – Staff retuned to notch the dams

March 3, 2023 – Staff retuned to notch the dams

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Peter Chevrier

Sent: Friday, March 10, 2023 8:55 AM
To: Mark Bakken; Jason Winslade
Cc: Aaron Ruhl; Roeland Zwaag
Subject: Media Article - Beaver dams

FYI Media Article - Beaver dams in Gloucester estates (with TOL response info)

A second article is imminent in LAT but it has not yet been published.

https://vancouversun.com/news/local-news/langley-industrial-development-could-harm-ecosystem-opponents?fbclid=IwAR2vry8aAGM8OKj23zEz85O-LcEEyLW7II5Qd TTNBhzLB1OK05zkK0B9rA

Peter Chevrier | Manager, Communications

Corporate Communications | Township of Langley 20338 – 65 Avenue, Langley, BC V2Y 3J1 Office: 604-532-3573

tol.ca | eNews | Social



From: MediaInquiries

Sent: Wednesday, March 08, 2023 3:30 PM

To: Aaron Ruhl

Cc: Peter Chevrier; Roeland Zwaag

Subject: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

Follow Up Flag: Follow up Flag Status: Completed

Hi Aaron,

Please see this 2nd media inquiry below about 'Beaver dam removal on Munday Creek in Gloucester'. This is a second inquiry on this topic.

There are specific questions Matthew Claxton is asking noted in red below. Can you provide me the answers.

Thank you.

Media Inquiry details:

Media Inquiry Subject: Beaver dam removal on Munday Creek in Gloucester

Media Outlet: Langley Advance Times | Media Reporter Name: Matthew Claxton

Media Reporter Email Address: matthew.claxton@langleyadvancetimes.com

Media Reporter Phone Number: 604-825-1578

Media Inquiry Description:

Received an email from local environmentalists that several beaver dams have been destroyed recently on East Munday Creek in the Gloucester Industrial Park.

- 1. Can you confirm that Township crews or contractors have been removing these dams?
- 2. Have the beavers been trapped as well, lethally or for removal? If so, why?
- 3. Is there a concern that disrupting this area by removing the dams could damage the environment for other wildlife, such as salmon fry, birds, etc?

Media Deadline: 2023-03-09 3:00 PM

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries From: Roeland Zwaag

Sent: Monday, February 06, 2023 11:08 AM

To: Aaron Ruhl

Cc: Kevin Larsen; Patty Jadis; Jennifer Elderkin

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Follow Up Flag: Follow up Flag Status: Completed

Hi Aaron,

Can we expect to hear from the Province on this complaint relatively soon or should we be pro-active and initiate contact?

Roeland.

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Saturday, February 04, 2023 11:51 AM

To: Roeland Zwaag <rzwaag@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Patty Jadis <pjadis@tol.ca>; Jennifer Elderkin <jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Roeland,

Staff have been managing beaver dams to mitigate flooding the area, pursuant to direction provided by a qualified professional. They most recently visited the site on January 30, 2023 to inspect and notch the dams by hand. Further work may also include the installation of a pond leveller.

Below is a draft response which could be sent:



From: Roeland Zwaag <<u>rzwaag@tol.ca</u>>

Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Patty Jadis <pjadis@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Aaron, can you please review?

Kevin, FYI.

Roeland.

From: s. 22(1)

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag < rzwaag@tol.ca>

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

Begin forwarded message:

From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>>

Date: February 1, 2023 at 12:42:39 PM PST

To: s. 22(1)

Subject: Natural Resource Violation Report 202271

Thank you for submitting Natural Resource Violation Report number 202271. Your report has been received by Natural Resource Officers with the Compliance and Enforcement Branch. We appreciate you taking the time to bring this to our attention as all complaints help inform our enforcement strategies. Emerging priorities and officer capacity may lead to some complaints not being actioned. If more information is required, a Natural Resource Officer may contact you.

We have been experiencing system issues which has prevented us from providing you with your natural resource violation report number sooner. We sincerely apologize for this delay.

Please do not reply to this e-mail as email responses are not received at this address.

Danielle

Natural Resource Violation Reporting Line http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1877-952-7277, option 2

----Original Message-----From: mailer@a100.gov.bc.ca <mailer@a100.gov.bc.ca> Sent: January 31, 2023 10:59 AM To: FOR Compliance and Enforcement Contact Centre FOR:EX <CE.FrontCounterBCContactCentre@gov.bc.ca> Subject: Report of Natural Resource Violation Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53. referer: https://www.for.gov.bc.ca/ remote address: ReportDate: 01/31/2023 ReportTime: 10:51 LastName FirstName: EmailAddress: DaytimePhone: 8.22(1) MailingAddress: PropertyAddress: Location: Gloucester Park in Langley, including West Creek. Nearest_City_Town: Langley ViolatorAddress: Township of Langley **BD** Developments ViolationHour_Start: 00 ViolationMinute_Start: 00 ViolationHour_End: 00 ViolationMinute_End: 00

NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands,

concerns about wildlife (already reported to RAPP) but wanted to report concern of diversion water and impact on the wetlands.

Township of Langley managing watercourses, BD Development Group doing the work.

Township of Langley managing watercourses, by Development Group doing the work.
s. 22(t)
. The stream is a red coded fish bearing
stream (salmon/Coho).
No machines in the area at the moment. Believe damage is done.
DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.
AgenciesNotified: DFO and Township of Langley
Hazards: None

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ReportDate: 01/31/2023
ReportTime: 10:51
LastName:
FirstName s. 22(1)
EmailAddress: ^{8,22(1)}
DaytimePhone: s. 22(1)
MailingAddress: 8.22(1)
PropertyAddress: s. 22(1)
Location: Gloucester Park in Langley, including West Creek.
Nearest_City_Town: Langley
ViolatorAddress: Township of Langley BD Developments
ViolationHour_Start: 00
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From: Jennifer Elderkin

Sent: Thursday, February 02, 2023 3:19 PM

To: Aaron Ruhl

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Follow Up Flag: Follow up **Flag Status:** Completed

Monday Jan 30 involved very minimal notching, hand cleared maybe 10 sticks overall. Not much beaver activity between Jan 23 and Jan 30 had occurred.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Jennifer Elderkin

Sent: Thursday, February 02, 2023 2:22 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Correction, add Jan 30. It's on the paper timesheet, it doesn't show me in the system yet because it hasn't transferred yet.

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Direct Line: 604.532.7301

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To: Aaron Ruhl <aruhl@tol.ca>

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Regards,



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Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

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To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Thanks

In the format of a draft response, thanks

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca > Date: 2023-02-01 5:43 p.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Will confirm with staff tomorrow and let you know.

Sent from my Galaxy

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To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Please provide an update as to the work we may have been performing in the area?

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remote address: \$\frac{5\text{22(1)}}{22(1)}\$

ReportDate: 01/31/2023

ReportTime: 10:51

LastName \$\frac{5\text{22(1)}}{22(1)}\$

FirstName: \$\frac{5\text{22(1)}}{22(1)}\$

EmailAddress: \$\frac{5\text{22(1)}}{22(1)}\$

MailingAddress:	
PropertyAddress:	
Location: Gloucester Park in Langley, including Wes	st Creek.
Nearest_City_Town: Langley	
ViolatorAddress: Township of Langley BD Developments	
ViolationHour_Start: 00	
ViolationMinute_Start: 00	
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AgenciesNotified: DFO and Township of Langley	
Hazards: None	

From: Jennifer Elderkin

Sent: Monday, February 06, 2023 11:30 AM

To: Aaron Ruhl

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

I've left a message and awaiting a call back from the officer(s).



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

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If not, reach out pro-actively?

Please advise

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ViolationMinute_End: 00

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Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca > Date: 2023-02-01 5:43 p.m. (GMT-08:00)

To: Aaron Ruhl < aruhl@tol.ca >

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Will confirm with staff tomorrow and let you know.

Sent from my Galaxy

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Date: 2023-02-01 4:15 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Please provide an update as to the work we may have been performing in the area?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag < rzwaag@tol.ca Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl < aruhl@tol.ca >

Cc: Kevin Larsen < klarsen@tol.ca >; Patty Jadis < pjadis@tol.ca >

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

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Kevin, FYI.

Roeland.

From: 8. 22(1)

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag <rzwaag@tol.ca>

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

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Sincerely,

Sent from my iPad

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From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>> **Date:** February 1, 2023 at 12:42:39 PM PST

To:

Subject: Natural Resource Violation Report 202271

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Please do not reply to this e-mail as email responses are not received at this address.

Danielle

Natural Resource Violation Reporting Line http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1877-952-7277, option 2

----Original Message----

From: mailer@a100.gov.bc.ca <mailer@a100.gov.bc.ca>

Sent: January 31, 2023 10:59 AM

To: FOR Compliance and Enforcement Contact Centre FOR:EX

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>> Subject: Report of Natural Resource Violation

Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53.

referer: https://www.for.gov.bc.ca/remote address: \$\s^{\sc 22(1)}\$

ReportDate: 01/31/2023
ReportTime: 10:51
LastName:
FirstName
EmailAddress:
DaytimePhone s.22(1)
MailingAddress MailingAddress
PropertyAddress:
Location: Gloucester Park in Langley, including West Creek.
Nearest_City_Town: Langley
ViolatorAddress: Township of Langley BD Developments
ViolationHour_Start: 00
ViolationMinute_Start: 00
ViolationHour_End: 00
ViolationMinute_End: 00
NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands, concerns about wildlife (already reported to RAPP) but wanted to report concern of diversion water and impact on the wetlands.
Township of Langley managing watercourses, BD Development Group doing the work.
. The stream is a red coded fish bearing
stream (salmon/Coho). No machines in the area at the moment. Believe damage is done. DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.
AgenciesNotified: DFO and Township of Langley
Hazards: None

From: Jennifer Elderkin

Sent: Thursday, February 02, 2023 2:22 PM

To: Aaron Ruhl

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Correction, add Jan 30. It's on the paper timesheet, it doesn't show me in the system yet because it hasn't transferred yet.

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca> Date: 2023-02-02 1:54 p.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Pulled the WO and the timesheet data which shows staff were there Jan 19, 20 & 23.

Langley Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Thursday, February 02, 2023 12:24 PM To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

When were staff onsite, January 19 and/or 31?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca > Sent: Thursday, February 02, 2023 12:19 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

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remote address: s. 22(1)

ReportDate: 01/31/2023

ReportTime: 10:51

LastName: 22(1)

FirstName: s. 22(1)

EmailAddress:

DaytimePhone: 8. 22(1)

MailingAddress:

PropertyAddress:

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

BD Developments

ViolationHour_Start: 00 ViolationMinute_Start: 00 ViolationHour_End: 00

ViolationMinute End: 00

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ReportDate: 01/31/2023

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LastName

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PropertyAddress	

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

BD Developments

ViolationHour_Start: 00

ViolationMinute_Start: 00

ViolationHour_End: 00

ViolationMinute_End: 00

NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands, concerns about wildlife (already reported to RAPP) but wanted to report concern of diversion water and impact on the wetlands.

Township of Langley managing watercourses, BD Development Group doing the work.

The stream is a red coded fish bearing stream (salmon/Coho).

No machines in the area at the moment. Believe damage is done.

DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.

AgenciesNotified: DFO and Township of Langley

Hazards: None

From: Aaron Ruhl

Sent: Wednesday, February 01, 2023 5:44 PM

To: Jennifer Elderkin

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Thanks

In the format of a draft response, thanks

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca> Date: 2023-02-01 5:43 p.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Will confirm with staff tomorrow and let you know.

Sent from my Galaxy

----- Original message -----From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-02-01 4:15 p.m. (GMT-08:00) To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Please provide an update as to the work we may have been performing in the area?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag <rzwaag@tol.ca>
Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Patty Jadis <pjadis@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Aaron, can you please review?

Kevin, FYI.

Roeland.

From: s. 22(1

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag < rzwaag@tol.ca >

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

Begin forwarded message:

From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>> **Date:** February 1, 2023 at 12:42:39 PM PST

bate. February 1, 2023 at 12.42.3

To:

Subject: Natural Resource Violation Report 202271

Thank you for submitting Natural Resource Violation Report number 202271. Your report has been received by Natural Resource Officers with the Compliance and Enforcement Branch. We appreciate you taking the time to bring this to our attention as all complaints help inform our enforcement strategies. Emerging priorities and officer capacity may lead to some complaints not being actioned. If more information is required, a Natural Resource Officer may contact you. We have been experiencing system issues which has prevented us from providing you with your natural resource violation report number sooner. We sincerely apologize for this delay.

Please do not reply to this e-mail as email responses are not received at this address.

Danielle

Natural Resource Violation Reporting Line http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1 877-952-7277, option 2

----Original Message-----

From: mailer@a100.gov.bc.ca <mailer@a100.gov.bc.ca>

Sent: January 31, 2023 10:59 AM

To: FOR Compliance and Enforcement Contact Centre FOR:EX

< <u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>> Subject: Report of Natural Resource Violation

Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53.

referer: https://www.for.gov.bc.ca/

remote address: s. 22(1)

ReportDate: 01/31/2023

ReportTime: 10:51

LastName \$.22(1)

FirstName:

EmailAddress: \$.22(1)

DaytimePhone: 2

MailingAddress: 8.22(1

PropertyAddress: \$.22(1

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

BD Developments

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Township of Langley managing watercourses, BD Development Group doing the work.

The stream is a red coded fish bearing

stream (salmon/Coho).

No machines in the area at the moment. Believe damage is done.

DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.

AgenciesNotified: DFO and Township of Langley

Hazards: None

From: Jennifer Elderkin

Sent: Wednesday, February 01, 2023 5:43 PM

To: Aaron Ruhl

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

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Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl <aruhl@tol.ca>

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Danielle

Natural Resource Violation Reporting Line

http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1877-952-7277, option 2

----Original Message-----

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remote address:

ReportDate: 01/31/2023

ReportTime: 10:51

LastName:

FirstName: s. 22(1)

EmailAddress: 8. 22(1)

DaytimePhone:

MailingAddress:

PropertyAddress: 22(1)

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

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stream (salmon/Coho).

No machines in the area at the moment. Believe damage is done.

DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.

AgenciesNotified: DFO and Township of Langley

Hazards: None

From: Aaron Ruhl

Sent: Monday, February 06, 2023 11:32 AM

To: Roeland Zwaag

Cc: Kevin Larsen; Patty Jadis; Jennifer Elderkin

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Have not heard anything, Jennifer will follow-up.

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Roeland Zwaag <rzwaag@tol.ca> Date: 2023-02-06 11:08 a.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>, Patty Jadis <pjadis@tol.ca>, Jennifer Elderkin <jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Hi Aaron,

Can we expect to hear from the Province on this complaint relatively soon or should we be pro-active and initiate contact?

Roeland.

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Saturday, February 04, 2023 11:51 AM

To: Roeland Zwaag <rzwaag@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Patty Jadis <pjadis@tol.ca>; Jennifer Elderkin <jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Roeland,

Staff have been managing beaver dams to mitigate flooding the area, pursuant to direction provided by a qualified professional. They most recently visited the site on January 30, 2023 to inspect and notch the dams by hand. Further work may also include the installation of a pond leveller.

Below is a draft response which could be sent:

From: Roeland Zwaag <<u>rzwaag@tol.ca</u>>

Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen < klarsen@tol.ca >; Patty Jadis < pjadis@tol.ca >

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Aaron, can you please review?

Kevin, FYI. Roeland.

From: s. 22(1)

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag < rzwaag@tol.ca>

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

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Danielle

Natural Resource Violation Reporting Line

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Toll-free number: 1877-952-7277, option 2

----Original Message----

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Sent: January 31, 2023 10:59 AM

To: FOR Compliance and Enforcement Contact Centre FOR:EX

< <u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>>

Subject: Report of Natural Resource Violation

Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53.

referer: https://www.for.gov.bc.ca/

remote address: s. 22(1)

ReportDate: 01/31/2023

ReportTime: 10:51 LastName: S. 22(1)

FirstName: FirstName:

EmailAddress: DaytimePhone: MailingAddress:

PropertyAddress: s. 22(1)

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

BD Developments

ViolationHour_Start: 00 ViolationMinute_Start: 00 ViolationHour_End: 00 ViolationMinute_End: 00

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Township of Langley managing watercourses, BD Development Group doing the work.

. The stream is a red coded fish bearing

stream (salmon/Coho).

No machines in the area at the moment. Believe damage is done.

DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.

AgenciesNotified: DFO and Township of Langley

Hazards: None

From: Aaron Ruhl

Sent: Monday, March 06, 2023 12:16 PM

To: Roeland Zwaag

Cc: Kevin Larsen; Mark Bakken; Stephen Richardson; Patty Jadis

Subject: RE: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates

I have spoken to and confirmed with that:

- 1. We are working under the guidance of a qualified professional when notching and maintaining the beaver dams to mitigate flooding in the area
- 2. We are not notching the beaver dams to assist Beedie with dewatering the wetlands for development
- 3. We are not trapping or killing beavers in the area

I also provided with my direct number for any future concerns

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag <rzwaag@tol.ca>
Sent: Monday, March 06, 2023 10:50 AM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Mark Bakken <mbakken@tol.ca>; Stephen Richardson <srichardson@tol.ca>; Patty Jadis <pjadis@tol.ca>

Subject: FW: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates

Aaron,

Further to the voice mail I forwarded from please see e-mail below.

Let me know if we should meet to discuss or otherwise advise when you have spoken with

Roeland.

From: 5.22(1)

Sent: Monday, March 06, 2023 10:43 AM

To: s. 22(1)

Nichole Marples < Exec_Director@leps.bc.ca; **.22(1)

Cc: State of the control of the cont

Roeland Zwaag <rzwaag@tol.ca>

Subject: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates

Subsequent to our meeting yesterday, this beautiful coho smolt was live trapped and released on March 6th 2023 in Gloucester Industrial Estates. The adjacent ponds and water courses are being drained by the Township of Langley, purportedly for "flood mitigation" and waterfowl habitat is also being severely impacted.

The smolts historically leave for the ocean in mid-April and this habitat destruction must stop now!



From: Aaron Ruhl

Sent: Tuesday, March 07, 2023 2:49 PM **To:** Kevin Larsen; Roeland Zwaag

Subject: RE: Beavers

Attachments: 05-205 Control of Nuisance Animals.pdf

With respect to the work within Gloucester, below is a timeline for the most recent beaver issue staff have been responding to in and around the detention ponds located near 56 Avenue and 272 Street:

- January 19, 2023 Staff received a service request related to a blockage/flooding in the area.
 Upon inspection they found two beaver dams believed to be the cause of the issue. The dams were hand notched to alleviate high water levels.
- January 20, 2023 Staff returned to notch the dams
- January 23, 2023 Staff returned to notch the dams
- January 30, 2023 Staff returned to notch the dams
- February 10, 2023 Staff returned to notch the dams
- February 13, 2023 Staff returned to notch the dams
- February 17, 2023 Staff returned to notch the dams
- February 21, 2023 Staff returned to notch the dams
- March 3, 2023 Staff retuned to notch the dams

Staff are working with a qualified professional to plan for the installation of a pond leveller to mitigate the flooding concerns and reduce the frequency staff are required to attend the site.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Kevin Larsen < klarsen@tol.ca>
Sent: Tuesday, March 07, 2023 1:09 PM

To: Roeland Zwaag <rzwaag@tol.ca>; Aaron Ruhl <aruhl@tol.ca>

Subject: RE: Beavers

Ok, will do. Thanks.

From: Roeland Zwaag < rzwaag@tol.ca Sent: Tuesday, March 07, 2023 1:08 PM

To: Aaron Ruhl <aruhl@tol.ca>; Kevin Larsen <klarsen@tol.ca>

Subject: RE: Beavers

Kevin – please send the e-mail and copy me once you receive the information from Aaron.

Roeland.

From: Aaron Ruhl <aruhl@tol.ca>
Sent: Tuesday, March 07, 2023 1:02 PM

To: Kevin Larsen < klarsen@tol.ca >; Roeland Zwaag < rzwaag@tol.ca >

Subject: RE: Beavers

I can send it and cc the two of you.

I will draft a brief response

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Kevin Larsen < klarsen@tol.ca > Sent: Tuesday, March 07, 2023 12:58 PM

To: Roeland Zwaag <rzwaag@tol.ca>; Aaron Ruhl <aruhl@tol.ca>

Subject: RE: Beavers

I have asked for the most up to date document (fact sheet) from staff.

Aaron, do you want to reply to the Mayor (if yes I will send you the fact sheet) or will you send me the info on beaver activity over the last 3 months and the nuisance animal policy for me to reply to the Mayor?

From: Roeland Zwaag < rzwaag@tol.ca Sent: Tuesday, March 07, 2023 12:51 PM

To: Aaron Ruhl <aruhl@tol.ca>; Kevin Larsen <klarsen@tol.ca>

Subject: RE: Beavers

And also include the Council policy please.

Roeland.

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Tuesday, March 07, 2023 12:24 PM

To: Kevin Larsen <klarsen@tol.ca>; Roeland Zwaag <rzwaag@tol.ca>

Subject: RE: Beavers

I have requested a list of dates for this year

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Kevin Larsen <<u>klarsen@tol.ca</u>>
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To: Roeland Zwaag <<u>rzwaag@tol.ca</u>>
Cc: Aaron Ruhl <aruhl@tol.ca>

Subject: FW: Beavers

I could send him the TOL fact sheet(s), but the question on related activity in Gloucester should go to Aaron / Jennifer?

Please advise.

From: Eric Woodward < ewoodward@tol.ca Sent: Tuesday, March 07, 2023 12:10 PM

To: Kevin Larsen < klarsen@tol.ca>

Cc: Roeland Zwaag <rzwaag@tol.ca>; Mark Bakken <mbakken@tol.ca>

Subject: Beavers

Kevin,

Can I get all current policy documents that government the removal of beaver dams? And a brief outline of any related activities within Gloucester within the last three months?

I have an inquiry I need to get back to, so somewhat time sensitive. Don't need a big report for the second, just a sense of it.

Eric.

Eric Woodward | Mayor Township of Langley

From: Kevin Larsen

Sent: Tuesday, March 07, 2023 1:09 PM **To:** Roeland Zwaag; Aaron Ruhl

Subject: RE: Beavers

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Eric.

Eric Woodward | Mayor Township of Langley

From: Kevin Larsen

Sent: Tuesday, March 07, 2023 1:09 PM

To: Aaron Ruhl
Cc: Roeland Zwaag
Subject: RE: Beavers

Attachments: Beaver Management Guide FINAL.pdf

Please see attached.

From: Aaron Ruhl <aruhl@tol.ca>
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To: Aaron Ruhl <aruhl@tol.ca>; Kevin Larsen <klarsen@tol.ca>

Subject: RE: Beavers

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Subject: RE: Beavers

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Direct Line: 604.532.7301

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Eric Woodward | Mayor Township of Langley

From: Roeland Zwaag

Sent: Tuesday, March 07, 2023 1:08 PM

To: Aaron Ruhl; Kevin Larsen

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Kevin – please send the e-mail and copy me once you receive the information from Aaron.

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Sent: Tuesday, March 07, 2023 1:02 PM

To: Kevin Larsen <klarsen@tol.ca>; Roeland Zwaag <rzwaag@tol.ca>

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From: Kevin Larsen

Sent: Tuesday, March 07, 2023 3:21 PM

To: Eric Woodward

Cc: Roeland Zwaag; Mark Bakken

Subject: RE: Beavers

Attachments: 05-205 Control of Nuisance Animals.pdf; Beaver Management Guide FINAL.pdf

Good afternoon Mayor Woodward.

I have attached two documents for your reference:

- 1) Policy No. 05-205 Control of Nuisance Animals
- 2) Beaver Management Guide

With respect to recent activities within Gloucester, staff responded to a service request on January 19, 2023 related to a blockage / flooding in the area in and around the detention ponds located near 56 Avenue and 272 Street. At that time two beaver dams were identified as the cause of the issue and the dams were hand notched to alleviate high water levels. Staff returned to the site to hand notch the dams on eight occasions since that time on the following dates: January 20, 23, 30, February 10, 13, 17, 21, and March 3.

Staff are currently working with a qualified professional to plan for the installation of a pond leveller to mitigate the flooding concerns and reduce the frequency staff are required to attend the site.

Please let me know if you require any further information at this time.

Regards, Kevin

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Eric Woodward | Mayor Township of Langley

From: Jennifer Elderkin

Sent: Tuesday, March 07, 2023 3:50 PM

To: Aaron Ruhl

Subject: RE: Gloucester Beaver Dams

Scott had been provided a copy of the memo and had discussed parameters/gave direction and guidance to staff. Brad had not received an actual copy of the 2020 memo himself until today (to my knowledge and his recollection).

The stormwater maintenance crews have been regularly notching the beaver dams in Gloucester to manage water levels and prevent flooding at the businesses in the area. Geoff Smart (EBB Environmental Consulting) performed a site visit on January 20, 2023 and suggested we notch the dams regularly to prevent flooding but no written instruction was provided. The technical memo from 2020 does identify this as a management technique as an alternative to complete removal of the dam. An additional pond leveller was also discussed at this time and Geoff is preparing a quote for this work.

Based on discussions with the maintenance crew foremen, the dams have been notched regularly since the January 20 site visit (as backed up by the crew timesheets). Typically, crews were sent on a Friday to ensure businesses would not flood over the weekend then the first working day following the weekend to ensure there would be no issues through the work week. The exact depth the dam was notched at each visit is unknown but based on crew description it was under 30cm each time which exceeds the 20cm maximum outlined in the 2020 memo.

Unfortunately, this regular preventative maintenance was completed by different Stormwater staff members and the dam height was reduced to just above the stream bed.

To avoid issues resulting from our preventative maintenance work in the Gloucester detention pond in the future we propose taking multiple steps:

- 1. Reviewing the 2020 Technical Memo with all foreman to ensure we are following the recommendations and BMPs outlined
- 2. Foreman will visit site before/with OMWs/Laborers to ensure that notching is required and we are not exceeding maximum allowable notching.
- 3. Retain EBB Consulting to provide an update to the 2020 memo to include the north east section of the Gloucester
- 4. Develop quick guide to Beaver dam notching to provide to all staff, ideally with EBB Consulting, that provides key points to ensure notching is completed in a way to complies with both DFO and the Ministry of Water, Land and Resource Stewardship protocols

Township of Langley

Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4 Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>
Sent: Monday, March 06, 2023 5:53 PM
To: Jennifer Elderkin <jelderkin@tol.ca>
Subject: RE: Gloucester Beaver Dams

What happened to working under the general tech memo from a few years ago (see attached)?

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From: Brad Henningson < bhenningson@tol.ca>

Sent: Monday, March 06, 2023 5:01 PM

To: Jennifer Elderkin < jelderkin@tol.ca>; Aaron Ruhl < aruhl@tol.ca>

Cc: Matt Brigden < mbrigden@tol.ca > Subject: Re: Gloucester Beaver Dams

Hi All

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From: Jennifer Elderkin < jelderkin@tol.ca > Sent: Monday, March 6, 2023 12:18 PM
To: Brad Henningson < bhenningson@tol.ca > Subject: FW: Gloucester Beaver Dams

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-06 12:10 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca
Subject: RE: Gloucester Beaver Dams

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Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca>
Sent: Friday, March 03, 2023 4:35 PM

To: Aaron Ruhl < <u>aruhl@tol.ca</u>>

Subject: RE: Gloucester Beaver Dams

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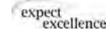
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Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division



4700 - 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570 Web | Facebook | Twitter | YouTube

From: Brad Henningson < bhenningson@tol.ca>

Sent: Friday, March 03, 2023 4:26 PM To: Jennifer Elderkin < jelderkin@tol.ca> Cc: Matt Brigden < mbrigden@tol.ca > Subject: Gloucester Beaver Dams

Hi Jennifer

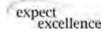
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Regards, **Brad**



Brad Henningson | Foreman II

Stormwater | Engineering Division 4700 - 224 Street, Langley, BC V2Z 1N4



From: Jennifer Elderkin

Sent: Friday, March 03, 2023 4:35 PM

To: Aaron Ruhl

Subject: RE: Gloucester Beaver Dams

Follow Up Flag: Follow up Flag Status: Completed

Yes, they had had Geoff from EBB out the first time we were out responding to recent flooding SRs. Staff is cautious in this sensitive area.

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-03 4:32 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca>
Subject: RE: Gloucester Beaver Dams

Was the technical memo for EBB followed when performing the works?

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca> Date: 2023-03-03 4:27 p.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: FW: Gloucester Beaver Dams

FYI below.



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Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

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Brad Henningson | Foreman II Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

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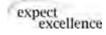
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Regards, Brad



Brad Henningson | Foreman II

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4



Web | Facebook | Twitter | YouTube

Sent: Wednesday, March 08, 2023 10:00 AM

To: Jennifer Elderkin

Subject: RE: Gloucester Beaver Dams

Thank you

Please provide a map displaying the dams, works, existing ponds levellers, future pond levellers, TOL property/SRWs, and anything else we should be aware of.

I will need this by Friday at noon (may be required sooner as this is an evolving situation, I will let you know)

Thanks

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca> Sent: Tuesday, March 07, 2023 3:50 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: Gloucester Beaver Dams

Scott had been provided a copy of the memo and had discussed parameters/gave direction and guidance to staff. Brad had not received an actual copy of the 2020 memo himself until today (to my knowledge and his recollection).

The stormwater maintenance crews have been regularly notching the beaver dams in Gloucester to manage water levels and prevent flooding at the businesses in the area. Geoff Smart (EBB Environmental Consulting) performed a site visit on January 20, 2023 and suggested we notch the dams regularly to prevent flooding but no written instruction was provided. The technical memo from 2020 does identify this as a management technique as an alternative to complete removal of the dam. An additional pond leveller was also discussed at this time and Geoff is preparing a quote for this work.

Based on discussions with the maintenance crew foremen, the dams have been notched regularly since the January 20 site visit (as backed up by the crew timesheets). Typically, crews were sent on a Friday to ensure businesses would not flood over the weekend then the first working day following the weekend to ensure there would be no issues through the work week. The exact depth the dam was notched at each visit is unknown but based on crew description it was under 30cm each time which exceeds the 20cm maximum outlined in the 2020 memo.

Unfortunately, this regular preventative maintenance was completed by different Stormwater staff members and the dam height was reduced to just above the stream bed.

To avoid issues resulting from our preventative maintenance work in the Gloucester detention pond in the future we propose taking multiple steps:

- 1. Reviewing the 2020 Technical Memo with all foreman to ensure we are following the recommendations and BMPs outlined
- 2. Foreman will visit site before/with OMWs/Laborers to ensure that notching is required and we are not exceeding maximum allowable notching.

- 3. Retain EBB Consulting to provide an update to the 2020 memo to include the north east section of the Gloucester
- 4. Develop quick guide to Beaver dam notching to provide to all staff, ideally with EBB Consulting, that provides key points to ensure notching is completed in a way to complies with both DFO and the Ministry of Water, Land and Resource Stewardship protocols



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Monday, March 06, 2023 5:53 PM
To: Jennifer Elderkin < jelderkin@tol.ca >
Subject: RE: Gloucester Beaver Dams

What happened to working under the general tech memo from a few years ago (see attached)?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Brad Henningson < bhenningson@tol.ca >

Sent: Monday, March 06, 2023 5:01 PM

To: Jennifer Elderkin < jelderkin@tol.ca ; Aaron Ruhl < aruhl@tol.ca >

Cc: Matt Brigden < mbrigden@tol.ca > **Subject:** Re: Gloucester Beaver Dams

Hi All

EBB did not send out a technical memo at that time January 20 2023. Discussion with EBB was about installing a pond leveller, we were told verbally at that time we could notch the dams by hand. After talking to the crew, they said they put in not more than a one foot notch into the dams this past Friday March 3. I think what has happened since January 20 is the foreman1 has sent multiple crews multiple times to notch these dams. Small notches over time, along with head pressure have taken these dams very low. Going forward I will talk to the foreman 1 about over notching the dams & Best management practices regarding beaver dams. This afternoon I told both Foreman to stay out of this Gloucester pond.

Regards, Brad

From: Jennifer Elderkin < jelderkin@tol.ca
Sent: Monday, March 6, 2023 12:18 PM
To: Brad Henningson < bhenningson@tol.ca
Subject: FW: Gloucester Beaver Dams

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-06 12:10 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca >
Subject: RE: Gloucester Beaver Dams

It has been reported that staff notched the dams down to the creek bed, please confirm.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca > Sent: Friday, March 03, 2023 4:35 PM

To: Aaron Ruhl < aruhl@tol.ca >

Subject: RE: Gloucester Beaver Dams

Yes, they had had Geoff from EBB out the first time we were out responding to recent flooding SRs. Staff is cautious in this sensitive area.

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To: Aaron Ruhl < aruhl@tol.ca >

Subject: FW: Gloucester Beaver Dams

FYI below.



Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4 Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Brad Henningson < bhenningson@tol.ca>

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To: Jennifer Elderkin < ielderkin@tol.ca >
Cc: Matt Brigden < ielderkin@tol.ca >
Subject: Gloucester Beaver Dams

Hi Jennifer

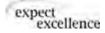
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Regards, Brad



Brad Henningson | Foreman II Stormwater | Engineering Division

4700 – 224 Street, Langley, BC V2Z 1N4



Web | Facebook | Twitter | YouTube

From: Matt Brigden

Sent: Thursday, March 09, 2023 4:30 PM

To: Aaron Ruhl
Cc: Jennifer Elderkin

Subject: RE: Gloucester Detention Ponds **Attachments:** Glouchester Pond -R1.pdf

Updated map.

From: Matt Brigden

Sent: Thursday, March 09, 2023 4:07 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Jennifer Elderkin < jelderkin@tol.ca>
Subject: Gloucester Detention Ponds

Hi Aaron.

The SRW documents and legal plans we discussed can be found <u>here.</u> I placed copies of the main SRW document and associated legal plans in the main folder but all of the various subdivision and cancelled titles can be found in the subfolders.

Map is attached, I believe it has everything you were looking for but let me know if you need any changes.

Regards, Matt



Matthew Brigden, EIT | Engineering Technologist III

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Direct line: 604.532.7567

Web | Facebook | Twitter | YouTube



Sent: Tuesday, March 07, 2023 2:31 PM

To: Jennifer Elderkin
Cc: Matt Brigden

Subject: RE: Gloucester Ponds - Bever Dams

Are there still plans to install pond levellers?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca> Sent: Tuesday, March 07, 2023 2:24 PM

To: Aaron Ruhl <aruhl@tol.ca>
Cc: Matt Brigden <mbrigden@tol.ca>

Subject: RE: Gloucester Ponds - Bever Dams

Filled in below in red.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Tuesday, March 07, 2023 1:25 PM
To: Jennifer Elderkin < ielderkin@tol.ca >
Subject: RE: Gloucester Ponds - Bever Dams

Thanks, I will need it before 4pm

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca > Sent: Tuesday, March 07, 2023 12:45 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: Gloucester Ponds - Bever Dams

We will pull it together.

Sent from my Galaxy

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

From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-07 12:22 p.m. (GMT-08:00)

To: Jennifer Elderkin < jelderkin@tol.ca >, Matt Brigden < mbrigden@tol.ca >

Subject: Gloucester Ponds - Bever Dams

I require all the dates staff have maintained beaver dams in Gloucester this year with a note of the work performed.

I need this ASAP, thanks

Dates I currently have are:

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Notes: Staff typically notched way less than a foot. To prevent businesses from flooding, staff would check before the weekend to ensure no flooding over the weekend.

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Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Matt Brigden

Sent:Tuesday, March 07, 2023 2:42 PMTo:Aaron Ruhl; Jennifer ElderkinSubject:RE: Gloucester Ponds - Bever Dams

We have plans to install at least one more pond leveller. Geoff Smart (EBB) is currently preparing a quote for this work.

From: Aaron Ruhl <aruhl@tol.ca>
Sent: Tuesday, March 07, 2023 2:31 PM
To: Jennifer Elderkin <jelderkin@tol.ca>
Cc: Matt Brigden <mbrigden@tol.ca>
Subject: RE: Gloucester Ponds - Bever Dams

Are there still plans to install pond levellers?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

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Subject: RE: Gloucester Ponds - Bever Dams

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Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

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Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

Sent: Wednesday, March 08, 2023 4:31 PM

To: Jennifer Elderkin

Subject: RE: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

With respect to your question, I will leave it with you to investigate the work and take any steps you deem necessary

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca> Sent: Wednesday, March 08, 2023 4:16 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

See below.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Wednesday, March 08, 2023 3:38 PM
To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

Please advise on the three points below, by 10am tomorrow

I will draft the response based upon your answers

Thanks.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: MediaInquiries < mediainquiries@tol.ca > Sent: Wednesday, March 08, 2023 3:30 PM

To: Aaron Ruhl < aruhl@tol.ca >

Cc: Peter Chevrier < pchevrier@tol.ca>; Roeland Zwaag < rzwaag@tol.ca> **Subject:** Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

Hi Aaron,

Please see this 2nd media inquiry below about 'Beaver dam removal on Munday Creek in

Gloucester'. This is a second inquiry on this topic.

There are specific questions Matthew Claxton is asking noted in red below. Can you provide me the answers.

Thank you.

Media Inquiry details:

Media Inquiry Subject: Beaver dam removal on Munday Creek in Gloucester

Media Outlet: Langley Advance Times | Media Reporter Name: Matthew Claxton

Media Reporter Email Address: <u>matthew.claxton@langleyadvancetimes.com</u>

Media Reporter Phone Number: 604-825-1578

Media Inquiry Description:

Received an email from local environmentalists that several beaver dams have been destroyed recently on East Munday Creek in the Gloucester Industrial Park.

- 1. Can you confirm that Township crews or contractors have been removing these dams? Township staff has been doing maintenance that involved hand notching of dams.
- 2. Have the beavers been trapped as well, lethally or for removal? If so, why? No beavers were trapped.
- 3. Is there a concern that disrupting this area by removing the dams could damage the environment for other wildlife, such as salmon fry, birds, etc? Township staff has been working with a registered environmental professional. *****

Media Deadline: 2023-03-09 3:00 PM

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries

Sent: Wednesday, March 08, 2023 4:28 PM

To: MediaInquiries

Cc: Peter Chevrier; Roeland Zwaag

Subject: RE: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

Attachments: 05-205 Control of Nuisance Animals.pdf; Beaver Management Guide FINAL.pdf

Proposed response:



Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: MediaInquiries <mediainquiries@tol.ca>
Sent: Wednesday, March 08, 2023 3:30 PM

To: Aaron Ruhl <aruhl@tol.ca>

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Media Deadline: 2023-03-09 3:00 PM

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To: Aaron Ruhl

Subject: RE: Media Inquiry: Beaver dam removal on Munday Creek in Gloucester

See below.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

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Media Inquiry Subject: Beaver dam removal on Munday Creek in Gloucester

Media Outlet: Langley Advance Times | Media Reporter Name: Matthew Claxton

Media Reporter Email Address: matthew.claxton@langleyadvancetimes.com

Media Reporter Phone Number: 604-825-1578

Media Inquiry Description:

Received an email from local environmentalists that several beaver dams have been destroyed recently on East Munday Creek in the Gloucester Industrial Park.

- 1. Can you confirm that Township crews or contractors have been removing these dams? Township staff has been doing maintenance that involved hand notching of dams.
- 2. Have the beavers been trapped as well, lethally or for removal? If so, why? No beavers were trapped.
- 3. Is there a concern that disrupting this area by removing the dams could damage the environment for other wildlife, such as salmon fry, birds, etc? Township staff has been working with a registered environmental professional. ****

Media Deadline: 2023-03-09 3:00 PM

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries

Sent: Wednesday, March 08, 2023 9:56 AM **To:** Roeland Zwaag; Peter Chevrier

Cc: Kevin Larsen; Stephen Richardson; Dave Anderson

Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Attachments: 05-205 Control of Nuisance Animals.pdf; Beaver Management Guide FINAL.pdf

Engineering Response:

With the Township's significant land area, it is necessary to manage beaver activity to ensure public safety and protect infrastructure and property. As such staff regularly manage beaver activity within Township owned property, rights-of-way, and road allowances.

Township Council Policy No. 05-205 Control of Nuisance Animals, in conjunction with the Township's Beaver Management Guidelines, both attached, set out the framework for managing beaver activity. Management is based on a progressive regime that begins with non-invasive steps. Non-invasive measures typically include, but are not limited to, monitoring, hand lowering/removal of dams, debris, and blockages, wrapping of trees, installation of exclusion fencing, and installation of pond levelers.

Watercourses within Gloucester Estates are home to many beavers. Staff regularly attend the area to manage the beavers and their dams located within Township owned property, rights-of-way, and road allowances utilizing non-invasive measures listed above to mitigate flooding. Lastly, The Township does not lower beaver dams with the intent to dewater wetlands for developers.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag <rzwaag@tol.ca>
Sent: Wednesday, March 08, 2023 7:17 AM
To: Peter Chevrier <pchevrier@tol.ca>

Cc: Aaron Ruhl <aruhl@tol.ca>; Kevin Larsen <klarsen@tol.ca>; Stephen Richardson <srichardson@tol.ca>; Dave

Anderson < danderson@tol.ca>

Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Good morning Peter,

The response will require input from Engineering (on the beaver management practices) and Community Development (on the development application).

I have attached a recent e-mail on this matter. Mayor Woodward also requested background information yesterday in response to inquiries he had received.

Roeland.

From: MediaInquiries < mediainquiries@tol.ca>
Sent: Tuesday, March 07, 2023 5:04 PM
To: Roeland Zwaag < rzwaag@tol.ca>

Cc: Peter Chevrier cpchevrier@tol.ca>

Subject: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Hi Roeland

Please see the media inquiry below about 'Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street'. I believe this would fall within your area. If this is not accurate, please let me know.

If you would like my assistance to help prepare your response, or if you would prefer that I responded to this inquiry, please let me know and provide me with the information, or a designate to work with. Thank you.

Media Inquiry details:

Media Inquiry Subject: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Media Outlet: Vancouver Sun |

Media Reporter Name: Joanne P Lee-Young

Media Reporter Email Address: ilee-young@postmedia.com

Media Reporter Phone Number: 6042401812

Media Inquiry Description: I am working on a story about the possibility that beaver dams are being dismantled and ponds drained on a property in the West Creek wetlands where a developer is applying for a rezoning for industrial use. The site is at the 5500 block of 268 Street through 276 Street. There's no report to council yet about the plans for this property -- the folder number is SA101305. Is there any chance you could please let me know what might be happening -- It is also the case, I understand, that some beaver dams and water levels are lowered every year to mitigate flooding. Thanks for your help.

Media Deadline: 2023-03-08 12:00

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries **From:** Jennifer Elderkin

Sent: Wednesday, March 08, 2023 9:27 AM

To: Aaron Ruhl

Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Township of Langley

**

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Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Wednesday, March 08, 2023 8:22 AM **To:** Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Importance: High

Jennifer – please review the following, provide any comments, and confirm it is factual.



Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag < rzwaag@tol.ca Sent: Wednesday, March 08, 2023 7:17 AM To: Peter Chevrier < pchevrier@tol.ca

Cc: Aaron Ruhl < aruhl@tol.ca >; Kevin Larsen < klarsen@tol.ca >; Stephen Richardson < srichardson@tol.ca >; Dave

Anderson < danderson@tol.ca>

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Media Reporter Email Address: <u>ilee-young@postmedia.com</u>

Media Reporter Phone Number: 6042401812

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Media Deadline: 2023-03-08 12:00

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Sent: Wednesday, March 08, 2023 7:17 AM

To: Peter Chevrier

Cc: Aaron Ruhl; Kevin Larsen; Stephen Richardson; Dave Anderson

Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street **Attachments:** RE: [EXTERNAL] Re; coho Smolts in the detention pond outflow in Gloucester Industrial Estates

Follow Up Flag: Follow up Flag Status: Completed

Good morning Peter,

The response will require input from Engineering (on the beaver management practices) and Community Development (on the development application).

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Media Reporter Phone Number: 6042401812

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Media Deadline: 2023-03-08 12:00

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries **From:** Peter Chevrier

Sent: Wednesday, March 08, 2023 10:53 AM

To: Kevin Larsen; Stephen Richardson; Dave Anderson **Cc:** Aaron Ruhl; Roeland Zwaag; Peter Chevrier

Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

Importance: High

Hi Kevin, Stephen, and Dave,

Roeland and I feel the info below from Aaron is good. Did you want to add something to this to address the part in the inquiry that specifically references..." about the plans for this property -- the folder number is SA101305". ?

Media deadline is noon today.

Peter Chevrier | Manager, Communications

Corporate Communications | Township of Langley

Office: 604-532-3573

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Wednesday, March 08, 2023 9:56 AM

To: Roeland Zwaag <rzwaag@tol.ca>; Peter Chevrier <pchevrier@tol.ca>

Cc: Kevin Larsen <klarsen@tol.ca>; Stephen Richardson <srichardson@tol.ca>; Dave Anderson <danderson@tol.ca> Subject: RE: Media Inquiry: Removal of beaver dams/pond drainage on site at 5500 block of 268 to 276 Street

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Media Deadline: 2023-03-08 12:00

Media Relations

Township of Langley 20338 – 65 Avenue Langley, BC V2Y 3J1 www.tol.ca/mediainquiries **From:** Jennifer Elderkin

Sent: Friday, March 03, 2023 12:36 PM

To: Aaron Ruhl

Subject: RE: Voice Mail (1 minute and 30 seconds)

I called them (Province) and left a message and they never called me back.

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-03 11:43 a.m. (GMT-08:00) To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: Voice Mail (1 minute and 30 seconds)

Update please

Did you end talking with the province?

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Roeland Zwaag <rzwaag@tol.ca> Date: 2023-03-03 11:21 a.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: FW: Voice Mail (1 minute and 30 seconds)

?

Roeland.

From: Microsoft Outlook <MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@tol.ca> On Behalf Of

Sent: Friday, March 03, 2023 11:15 AM

To: 6163 <6163@tol.ca>

Subject: Voice Mail (1 minute and 30 seconds)

You received a voice message from

Caller-Id:

Voice Mail Preview isn't available for this message.

The message is too long.

Sent: Friday, March 03, 2023 12:42 PM

To: Jennifer Elderkin

Subject: RE: Voice Mail (1 minute and 30 seconds)

Also need an update on the recent work the caller is referring to, thanks

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca> Date: 2023-03-03 12:35 p.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: Voice Mail (1 minute and 30 seconds)

I called them (Province) and left a message and they never called me back.

Sent from my Galaxy

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The message is too long.

Township of Langley

SERVICE REQUEST - 118057

Inspector: Brad Henningson (73108)

Call Date: 19-Jan-2023 8:49 AM

Responsibility: Engineering - Stormwater (ENGSTW)

Resolved: 19-Jan-2023 12:00 AM

Priority: 2-Urgent (URG)

Request Type: Culverts, drains, catch basins - blockage, maintenance and repair (North) (STW

		ENG ZN		i dasins - dio	ckage, maintenant	e and repair (North) (51 W		
Request Locatio	n							
Address:	27413 55 AVE LANGLEY, BC V4W 3Y1							
Cross Street:								
Cross Street:								
Location:								
Asset:								
Customer Information								
Name:	Anonymous				Day Phone:			
Address:					Evening Phone:			
					Mobile:			
Contact Type:					Email:			
Comments								
David Marsh 604.753.7533 (Plumbing contractor for Pacific Western)Says the co worker called us 2 weeks ago about this issue, but has not heard back. (do not see past SR) Drainage issue, he thinks there is a blockage on TOL side. The manhole in cul de sac is full. Dispatched to Brad Henningson								
Other Calls - None								
Call Date	Caller Name		Address			Day Phone		
Service Request Information								
Taken By:	Jennifer Campbell (72554)				Request Date:	19-Jan-2023		
Source:	Initiated by Teleph	none (B`	/TELE)		Project:			
Linked Service R	Requests - None							
SR#	Request Type	Priority			Responsibility	Inspector		
Previous Logs								
Log Type	Log Date	Log By		Comments				
NOTE	19-Jan-2023	Torrey Rouse New code for			or Gloucester pond #2 North beaver dams.			
NOTE	19-Jan-2023	Torrey Rouse Notched two			o dams in pond #2 North			

Field Logs (Please fill in details)								
Log Type	Log Date	g Date Log By		Comments				
Service Request Log Types (Please indicate a log type when filling out a Field Log)								
CAPITAL - Capita	· · · · · · · · · · · · · · · · · · ·		NOTE - General Work Notes					
EXTERNAL - Cor	ntractor-Related Is:	sue	NOTIFY - Customer Notified					
			REASGN - Service Request Reassigned					
Service Request Result (Please select one)								
Check	Description No.19	ave Found (CANCEL)						
		sue Found (CANCEL)						
	New Work Order Required (NEWWO) Private Property Issue (PRIV)							
	Service Request Complete (COMP)							
Completion Information								
Completed Date:	1		Completed By:					
Completed Bate.		mmm-yyyy	Completed By:	Employee #				
		,,,,		. ,				
Approval Signature:								
Signature and Employee #								

Printed: 02-Feb-2023 SERVICE REQUEST - 118057 Page 2 of 2



MEMORANDUM

DATE: October 7, 2020

TO: Matt Brigden, Township of Langley

FROM: Geoff Smart, EBB Environmental

RE: BEAVER ASSESSMENT AND IMPACT MITIGATION RECOMMENDATIONS

Hello Matt;

The following memorandum summaries field observations and recommendations for the management of beavers within the Gloucester Stormwater Facility.

Management Objectives and Scope of Work

Based on the provided Stantec report¹ and our field meeting on May 29, 2020, the primary concern with beaver activities within the stormwater detention pond facilities is the decreased available storage capacity, which has contributed to roadway flooding on 272 Street. The purpose of this assessment is to evaluate beaver activity within the detention pond and provide technical guidance on the maintenance of existing stormwater infrastructure, the maintenance and removal of beaver dams, and the feasibility of installing pond levellers to maintain storage capacity.

Observations

A detailed site assessment was undertaken on June 26, 2020, to assess beaver activity, document dams, and assess the feasibility of pond leveller installation. Follow up assessments wer undertaken on September 2 and 22, 2020. Assessments involved traversing the channels and ponded areas to visually assess and verify the presence of beaver activity. Observations were from the upstream extent of the detention pond and down towards the intersection of 272 Street and 56 Avenue, where the stream continues north.

A total of seven dams were observed throughout the assessed area, three were located upstream of the detention pond control structure, and four downstream (Table 1). Of the upstream dams, only Dam 1 was located downstream of an identified lodge structure and is the primary dam structure responsible for the impoundment of water within the detention ponds. Observations of the control structure and its associated trash rack did not identify any current beaver activity on this structure, and the built-up debris was predominately cattails and other floating debris.

GLOUCHESTER STORMWATER DETENTION POND

¹ Stantec (2020) Glouchester Detention Pond Analysis, East Detention Pond Review: Technical Memorandum. Unpublished report prepared for the Townshhip of Langley. TOWNSHIP OF LANGLEY PAGE 1 OF 11

FOI 23-026



Table 1. Summary of observed beaver dams, measured heights and lengths.

ID	Dam Type	Location	Length	Height
DAM 1	Primary	Downstream of lodge structure	8.7 m	1.1 m
DAM 2	Secondary	Upstream of lodge structure	3.1 m	0.5 m
DAM 3	Secondary	Upstream of lodge structure	8.1 m	0.5 m
DAM 4	Secondary	Downstream of control structure	14.2	0.6 m
DAM 5	Secondary	Downstream of control structure	26.1	0.4 m
DAM 6	Secondary	Downstream of control structure	17.0 m	0.75 m
DAM 7	Secondary	Downstream of control structure	2.0 m	1.3 m
Total Downstream Dam Height			4.2 m	

Field observations of beaver activity within the indicates recent activity within the detention pond; however, the extent of occupancy, particularly at the primary dam and lodge, was inconclusive. Confirmation of occupancy, particularly of the lodge structure, is important to inform further management strategies. Three weeks of infrared camera trapping of the identified lodge and dam were undertaken to confirm occupancy. While the imagery did not conclusively verify beaver occupancy of the lodge, field observations did confirm active maintenance of the dam and recent cutting of alder adjacent to the lodge, suggestive that the colony is active.



Figure 1. Field evidence of recent foraging on a red alder, circled.

FOI 23-026





TOWNSHIP OF LANGLEY GLOUCHESTER STORMWATER DETENTION POND BEAVER ASSESSMENT AND IMPACT MITIGATION RECOMMENDATIONS PAGE 3 OF 11

OCTOBER 2020



Regulatory Considerations

Active management of both beaver dams and the maintenance of existing stormwater infrastructure (i.e., culverts) are regulated by both Fisheries and Oceans Canada (DFO) and the B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD). Appropriate steps to notify both the federal and provincial ministries is necessary for any instream works.

Fisheries and Oceans Canada

DFO has developed interim codes of practice (ICOP) for both the removal of beaver dams² and the maintenance of culverts³. DFO defines culvert maintenance as the manual or mechanical removal of accumulated debris (e.g. logs, sediment, boulders, garbage, ice build-up) that prevents the efficient passage of water and fish through the structure. The routine maintenance of the existing trash racks within the Glouchester stormwater detention ponds fall under this definition. For the breaching or removal of beaver dams, the ICOP allows for the removal of a beaver dam where the impoundment of water may cause imminent threat of damage to nearby infrastructure, or is obstructing fish passage.

DFO's ICOP outlines measures and best practices that must be implemented for the protection of fish and fish habitat and require that notification of works⁴ be submitted to the regional office no less than 10 days before the initiation of works. For B.C., notifications can be submitted via email to the Triage and Planning Unit, ReferralsPacific@dfo-mpo.gc.ca.

The installation of pond levellers does not fall under a DFO defined ICOP, therefore before installation, a request for project review (RFR) is required.

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

The management of beaver dams and the maintenance of culverts are regulated under both the *Wildlife Act* and the *Water Sustainability Act*. Section 9 of the *Wildlife Act* prohibits any actions that disturb, molests, or destroys a beaver lodge or dam unless the activity is undertaken by a licensed trapper, undertaken to provide irrigation or drainage under lawful authority for the protection of property, or authorized by permit (*Wildlife Act*, Section 9 (2)). The removal of a beaver dam under the *Water Sustainability Act* is regulated under Section 39 (1)(u) of the Water Sustainability Regulation and requires a Change Notification to be submitted 45-days before undertaking the dam removal. For routine maintenance of a beaver dam, communications with the province indicate that a formal Change Notification under the *Water Sustainability Act* is required.

For debris removal from a culvert, the regulatory requirements are dependant on the methods used to remove the debris. Should machinery be utilized (e.g., excavators, winches, and hook and cable), the province may consider this to be debris removal by machine and may require a Change Approval. Where spot removal of

GLOUCHESTER STORMWATER DETENTION POND

TOWNSHIP OF LANGLEY

PAGE 4 OF 11

² Interim Code of Practice: Beaver Dam Removal: https://www.dfo-mpo.gc.ca/pnw-ppe/codes/beaver-dam-barrage-castor-eng.html

³ Interim Code of Practice: Culvert Maintenance: https://www.dfo-mpo.gc.ca/pnw-ppe/codes/culvert-maintenance-entretien-ponceaux-eng.html

⁴ DFO Project Notification Form: https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/forms-formes/notification-eng.pdf



debris is being done by hand, no formal Change Notification is required, but best practices to minimize the input of sediment into the system must be implemented.

The Water Sustainability Regulation does not identify the installation of a pond leveller as an authorized activity under Section 39. Dialogue with the Water Authorizations Section Head for the South Coast has confirmed that, at this time, a Change Notification is required for the installation of a pond leveller. It was also indicated that flow conveyance devices to manage beaver-caused water impoundments might require a water license depending on an internal policy review. Furthermore, to facilitate the installation of a pond leveller, it is likely that a Section 9 Wildlife Act permit, authorizing the disturbance of a beaver dam to be obtained.

It is understood that the Glouchester Stormwater Detention Pond requires a provincial water license for its longterm operation. The maintenance of any installed pond leveller(s) trash racks or other built structures can be incorporated into the overarching maintenance plan under the water license, thereby avoiding the requirements for permits, Change Approvals and Change Notifications within the facility.

Best Management Practices for Maintaining Stormwater Infrastructure

Best management practices (BMPs) for both culvert and beaver dam maintenance have been established by both DFO and the province to minimize the impacts to fish and fish habitat. These include broad measures to protect fish and fish habitat⁵ and activity-specific measures.

Measures to Protect Fish and Fish Habitat

DFO has developed a series of measures to protect fish and fish habitat, which includes broad guidance on:

- Preventing the death of fish;
- Maintaining riparian vegetation;
- Carrying out works, undertakings and activities on land;
- Maintaining fish passage;
- Ensuring proper sediment control; and,
- Preventing the entry of deleterious substances in water.

DFO does not require a formal review of works provided that the measures to protect fish and fish habitat are implemented. It is therefore expected that these measures are implemented during any culvert maintenance and beaver dam removal activity.

PAGE 5 OF 11

⁵ https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html



Timing

Generally, all instream works are to be completed during the appropriate timing windows to minimize the impacts on fish and beavers. Within the south coast region, the approved timing window for fish is between July 15 and September 15; for beaver dam removal, the timing window is between April 15 and September 15.

With respect to the above timing windows, it is noted that recent fish inventories by Dillon Consulting Ltd. (2012) and Environmental Consultants Ltd. (2018) have not document the occurrence of salmonids (i.e., coho salmon) within the stormwater detention pond.

Timing Exceptions for Debris Removal

The hand removal of debris from culvert trash racks may proceed outside of the general reduced risk window provided that the proposed works can proceed provided that measures to protect fish and fish habitat are implemented and that the works will not result in a harmful alteration, disturbance, or descriction of habitat. The removal of debris by hand from the existing trash rack is, in EBB's opinion, a low-risk activity and does not contribute to the loss of habitat and measures to avoid causing harm to fish or fish habitat can be implemented. The removal of debris, particularly during spawning windows, will untimately benefit fish populations by removing barriers that restrict or delay upstream migration. Extra care must be taken when removing debris outside of the standard reduced risk window to avoid sedimentation, to prevent the death of fish, and to prevent the release of deleterious substances into water.

In instances where debris removal requires machinery or equipment beyond hand tools to remove debris accumulation, it is recommended that the Township engage a qualified environmental professional to advise on timing of the works and whether a formal request for review would be required.

Culvert Maintenance

In addition to the identified measures to protect fish and fish habitat, DFO requires the following measures to be implemented during any culvert maintenance activity.

- Limit the removal of accumulated material and debris (e.g., branches, stumps, other woody materials, garbage, etc.) to the area within the culvert and immediately upstream and downstream of the culvert.
 - o Remove accumulated materials and debris slowly to allow clean water to pass, to prevent downstream flooding and to reduce the amount of sediment-laden water going downstream.
 - o If maintenance activities reduce the water level within the culvert, take appropriate measures to restore previous streambed elevation/conditions.
- If replacement rock reinforcement/armouring is required to stabilize eroding inlets and outlets, the following measures should be implemented:
 - o Place appropriately-sized, clean rocks into the eroding area.
 - Do not obtain rocks from below the ordinary high-water mark of any water body.
 - Ensure that acid-generating rock is not used.
 - Avoid the use of rock that fractures and breaks down quickly when exposed to the elements.
 - o Install rock at a similar slope to maintain a uniform stream bank and natural stream alignment.

Beaver Dam Maintenance and Removal

TOWNSHIP OF LANGLEY
GLOUCHESTER STORMWATER DETENTION POND
BEAVER ASSESSMENT AND IMPACT MITIGATION RECOMMENDATIONS

PAGE 6 OF 11



Any beaver dam removal must be done in such a manner that it minimizes the impacts on the aquatic environment and fish and fish habitat. Both DFO and the province have developed protocols to guide the removal of beaver dams in a manner that minimizes the impacts on fish and fish habitat. The complete removal of a beaver dam should only be undertaken where (1) confirmation has been made that the dam is inactive and no beavers occupy the upstream habitat or (2) that any individuals are removed (i.e., live trapping and relocation or lethally trapped). The removal of a dam should only occur between April 15 and September 15 of any given year to minimize the impacts on the beavers.

Generally, the complete removal of a beaver dam is not necessary and can be managed through routine breaching, particularly ahead of forecasted rainfall events. Applicable BMPs, as detailed by both DFO and the province, are to be implemented during any beaching and maintenance of dams. Of particular note, the gradual release of water from the upstream impoundment and the sidecasting of materials associated with the dam.

DFO Best Management Practices, Beaver Dam Removal

- Remove beavers prior to undertaking the removal of the beaver dam. Their removal must be undertaken in compliance with all relevant Acts and Regulations.
- When a series of dams is to be removed, this should be done from downstream to upstream in order to avoid severe flooding and damage to fish habitat.
- Removing a beaver dam by non-mechanical methods (by hand) is preferred over using industrial equipment.
- When dewatering beaver impoundments:
 - Remove the dam gradually to prevent sediment at the bottom of the pond from being released downstream.
 - Ensure the width of the breach opening of the beaver dam does not exceed the width of the original stream channel.
 - As the water levels drop in the upstream pond, increase the size of the opening to drain the pond to the desired water level.
 - The original watercourse bed and bank material and/or the beaver lodge(s) may not be removed or disturbed.
- Relocate any fish that become trapped in isolated pools or stranded in newly flooded areas to the main channel of the watercourse.
 - Relocate any fish as per applicable permits for capturing and relocating fish

FLNRORD Specifications for Beaver Dam Removal

- Use Beaver Dam Best Management Practices as outlined in the Standards and Best Practices for Instream Works⁶, Section 7.6.3.
- The removal of the dam(s) must be completed in a controlled manner and undertaken in a series of 20 cm drops in dam height. After each drop in dam height, the subsequent water level and sediment plume must be allowed to stabilize prior to the next level drop, thereby allowing for a controlled breach and controlled flows downstream
- When the water level in the reservoir has been lowered to the extent that no undue scour of the stream channel may occur, the dam may be breached and the dam debris removed with mechanical equipment or by hand.
- All water users in downstream areas must be notified prior to the removal of the beaver dam.
- All material excavated from the dam(s) must be sidecast/removed from the area in such a manner that it is prevented from reentering the watercourse.
- Machinery (when used) must be free of excess oil and grease and have no hydraulic fluid leaks; only the digging bucket from the machinery arm may enter any watercourse.
- Care must be exercised during all phases or removal of the dam(s) to minimize sediment introduction to any watercourse.
- All reasonable care must be exercised to avoid damaging any land, works, trees, stream banks, or other property.
- Written permission for access to or travel through any private lands must be obtained from all property owners prior to beginning any dam removal.
- Where there is a series of dams, only one dam at a time may be removed, starting from the most downstream dam and progressing upstream.

⁶Standards and Best Practices for Instream Works, 2004: https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/best-management-practices/iswstdsbpsmarch2004.pdf

TOWNSHIP OF LANGLEY
GLOUCHESTER STORMWATER DETENTION POND

PAGE 7 OF 11



Recommendations for Flow Management

The primary dam (DAM 1) is located within the stormwater detention pond and at the upstream extent of the outflow channel to the downstream pond control structure. Based on both the Stantec memorandum and field observations, it is likely that this dam is substantially contributing to the reduced stormwater storage capabilities of the detention pond. Stantec has recommended the installation of a pond leveller, specifically a Clemson pond leveller, to manage water levels within the detention pond. Two concerns with the Stantec recommendations are:

- (1) Clemson pond levellers have been documented to be most effective in low-flow installations (Taylor and Taylor and Singleton, 2014⁷) and may not be as effective in conveying flows during storm events.
- (2) The schematics shown in the memorandum suggest placement at the bottom of the detention pond channel; this is inconsistent with general practices that limit the pond height drops to a maximum of 60 cm to discourage beavers from establishing new dams upstream of the leveller.

While several other dams were noted within the downstream reaches of the outflow creek, only DAM 1 was identified as substantially impacting water levels within the detention pond. All remaining dams were of low heights or in confined areas unlikely to contribute to the elevated water levels within the detention ponds. Similarly, debris accumulations on the control structure trash rack were not believed to be beaver related at the time of assessment. At present, no specific mitigation measure is necessary; however, routine monitoring, particularly with any upstream mitigation, should be undertaken to identify any subsequent impacts.

RECOMMENDATION

Monitor both the type and form of debris accumulation on the control structure trash rack and downstream dams for active beaver activity and water levels. Should beaver activity be adversely impacting flows within to the control structure or through the downstream reaches, additional flow conveyance measures, including pond levellers and culvert fencing, should be considered.

As the site has been confirmed active, then the installation of a flexible pond leveller is recommended (Figure 1); the modification of the intake to include a one-way fish gate may be added to the leveller to facilitate upstream migration of adult fish (Figure 2).

RECOMMENDATION

Install a modified flexible pond leveller through Dam 1 to improve the capacity of the leveller to convey flows through the dam and maximize the storage capacity of the upstream detention pond. Generally, pond levellers function to control water levels within a pond and are not specifically designed to convey stormwater flows. To maximize flow

TOWNSHIP OF LANGLEY PAGE 8 OF 11

GLOUCHESTER STORMWATER DETENTION POND

OCTOBER 2020

⁷ Taylor, J.D. and Singleton, R.D. (2014) The evolution of flow devices used to reduce flooding by beavers: A review. Wildlife Society Bulletin. 38 (1), 127–133.

FOI 23-026



conveyance during stormwater events, a leveller with a double pipe configuration is recommended (Figure 3).

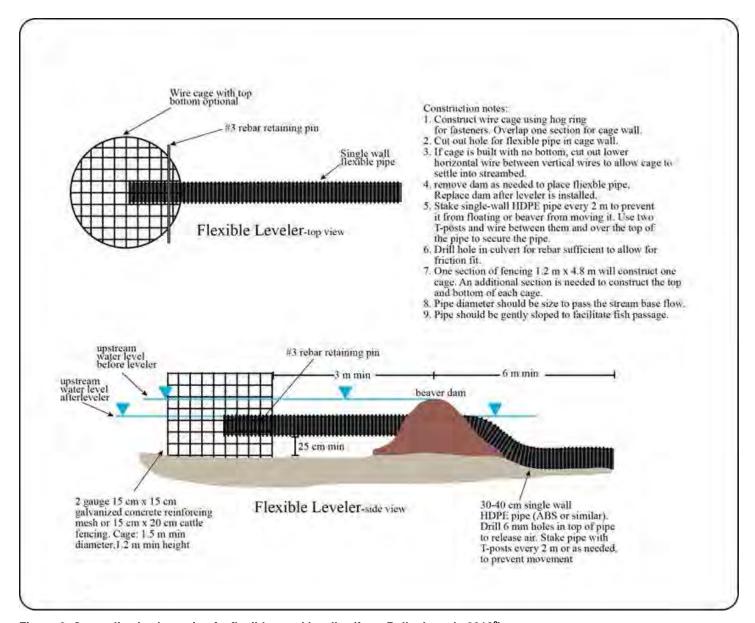


Figure 2. Generalized schematic of a flexible pond leveller (from Polluck et al., 20188).

TOWNSHIP OF LANGLEY
GLOUCHESTER STORMWATER DETENTION POND

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⁸ Pollock, M.M., G.M. Lewallen, K. Woodruff, C.E. Jordan and J.M. Castro (Eds.) (2018) The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. Version 2.01. United States Fish and Wildlife Service, Portland, Oregon. 189 pp. [online] Available from: http://www.fws.gov/oregonfwo/ToolsForLandowners/RiverScience/Beaver.asp





Figure 3. Examples of a modified flexible pond leveller with a one-way fish gate (images from the Beaver Institute).



Figure 4. Examples of a flexible pond leveller with a double pipe configuration (images from Washington State Parks).

Pond Leveller Installation

Generally, pond levellers function best when the pond level drop is no more than 60 cm, and the pond is maintained at a minimum depth of 90 cm. More substantial drops and lower pond depths will likely result in site abandonment or shifts in dam placement, rendering the pond leveller ineffective over the long-term. The proximity of the lodge to the primary dam impacting water levels within the stormwater ponds problematic as excessive reductions in pond levels can lead to exposure of the lodge entrance and force the beavers to relocate and establish a new lodge and dams areas that may not be located in manageable areas.



RECOMMENDATION

Install the flexible pond leveller to a maximum pond level drop of 30 cm to avoid exposing the lodge entrance and forcing site abandonment.

Pond Leveller Effectiveness, Longevity and Maintenance

While long-term data documenting the longevity of pond levellers is generally not available, analysis by Hood, Manaloor and Dziboa (20189) suggests ongoing effectiveness of 7+ years. Properly installed and maintained, it is expected that the pond leveller can, and will, maintain the stormwater detention pond at a manageable level, provided that routine (e.g., annual), maintenance of the pond leveller is undertaken.

RECOMMENDATION

Annual monitoring and maintenance of the pond leveller is to be undertaken to address any deficiencies in the leveller and to remove any debris accumulations.

Closure

Should you have any questions regarding this memorandum, please contact the undersigned.

Regards;

ORIGINAL SIGNED AND SEALED

Geoff Smart, B.Sc., RPBio, **Biologist** EBB Environmental Consulting, Inc.

I certify that the work described herein fulfills standards acceptable of a

Professional Biologist.

TOWNSHIP OF LANGLEY

PAGE 11 OF 11

⁹ Hood, G.A., Manaloor, V. and Dziboa (2018) Mitigating infrastructure loss from beaver flooding: A cost-benefit analysis, Human Dimensions of Wildlife, 23:2, 146-159, DOI: 10.1080/10871209.2017.1402223



COUNCIL POLICY

Subject: Control of Nuisance Animals Policy No: 05-205

 Previous Policy No:
 05-745

 Approved by Council:
 1998-09-21

 Revised by Council:
 2016-05-30

 Revised by Council:
 2017-03-06

 Revised by Council:
 2020-07-13

1. Purpose

1.1. To provide direction for Township staff in resolving drainage problems resulting from activities of animals including, but not limited to, beavers and muskrats.

2. Background

- 2.1. Flooding of municipal and private property and damage to culverts, roads and dykes has resulted from activities of animals such as beavers and muskrats.
- 2.2. It is important to manage the activities of animals to protect municipal infrastructure and public safety.
- 2.3. Managing the activities of wildlife must reflect a balanced approach to protecting infrastructure, public safety and the environment.

3. Related Policy

3.1. 05-002 Private Property - Entering and Working On

4. Policy

- 4.1. Township property, including roads and gravel pits, and private property has been subject to flooding by activities of beavers. Culverts and watercourses of various sizes have been obstructed by these animals resulting in potential liability from flooding, and road damage from overtopping and erosion. Significant costs are incurred in clearing these obstructions.
- 4.2. Dykes are subject to damage from burrowing by animals including, but not limited to, muskrats and beavers. Burrowing can result in weakening of the dykes, and can provide a passage for flood waters that could eventually compromise the structural integrity of the dyke and flood public and private land and improvements.

- 4.3. Management of beavers shall be performed in accordance with applicable acts and regulations; as well as, Township of Langley's Beaver and Beaver Management Guidelines, as amended from time to time, to reflect best management practices, industry standards and latest technology.
- 4.4. Management of beavers shall consist of a series of progressive, coordinated steps starting with the least invasive. Steps may include, but are not limited to, the following:
 - i. Monitoring
 - ii. Tree protection
 - iii. Installing pond levelers or culvert protection
 - iv. Installing exclusion fencing
 - v. Hand removal of dams, debris and blockages
- 4.5. If other less invasive options prove unsuccessful, machine removal of dams, debris and blockages, as necessary.
- 4.6. When no other effective means of preventing or controlling the potential risk to public safety and damage to property and infrastructure is available, due to the activities of these animals, they may be removed by trapping.
- 4.7. A trapper, duly licensed under the provisions of Provincial and/or Federal legislation, must be contracted to remove the nuisance animals.

From: Matt Brigden

Sent: Friday, October 16, 2020 10:06 AM
To: Jennifer Elderkin; Aaron Ruhl
Cc: Frank Tortora; Scott Neil

Subject: FW: [EXTERNAL] Glouchester Beaver Assessment and Pond Levellers

Attachments: TOL_2020_Glouchester_BeaverAssessment_R1_FINAL.pdf

Jen and Aaron,

Attached is the updated memo which includes specific wording on maintenance work in Gloucester Pond outside ISW.

I will provide a copy of the memo to Scott and Frank and we will continue to notify Aaron whenever we do any work in the pond.

I also updated Geoff regarding the potential for dredging/expansion of the pond and he will include that in the application.

Regards, Matt

From: Geoff Smart <gsmart@ebbconsulting.ca>
Sent: Friday, October 16, 2020 10:00 AM

To: Matt Brigden <mbrigden@tol.ca>

Cc: Oliver Busby <busby@ebbconsulting.ca>

Subject: RE: [EXTERNAL] Glouchester Beaver Assessment and Pond Levellers

Hi Matt;

Thanks for the feedback on the maintenance/monitoring plan. I'll add that to the application and will submit it shortly.

I have attached the updated memo, which includes more specific wording on working outside the reduced risk window.

Cheers;



GEOFF SMART BSc, RPBio

Biologist

PO Box 18180 1215C 56th Street, Delta, B.C., V4M 2L4

tel (604) 943-3209 | mobile (604) 833-8372 | fax (604) 948-3273 | toll-free (877) 943-3209

www.ebbconsulting.ca | gsmart@ebbconsulting.ca

Confidentiality Note: This email may contain confidential and private information. If you received this email in error, please delete and notify the sender.

From: Matt Brigden < mbrigden@tol.ca >

Sent: October 16, 2020 9:04 AM

To: Geoff Smart < gsmart@ebbconsulting.ca>

Cc: Oliver Busby <busby@ebbconsulting.ca>

Subject: RE: [EXTERNAL] Glouchester Beaver Assessment and Pond Levellers

Hi Geoff,

The Township is willing to commit to a minimum 3-year maintenance/monitoring plan for the leveller. Please note that there is potential that the developer or the Township may apply to dredge or expand the pond in the next 3 years. I'm not sure if that needs to be included on the application but depending on how plans unfold that may be something that occurs.

Could you also please advise when the updated memo will be sent over?

Thanks, Matt

From: Geoff Smart <<u>gsmart@ebbconsulting.ca</u>>
Sent: Thursday, October 15, 2020 1:30 PM
To: Matt Brigden <<u>mbrigden@tol.ca</u>>
Cc: Oliver Busby <<u>busby@ebbconsulting.ca</u>>

Subject: RE: [EXTERNAL] Glouchester Beaver Assessment and Pond Levellers

Hi Matt;

I'll have to defer to Oliver on that question, but I suspect that we could add the effort for the camera trapping to the estimated fees.

I've also included a copy of the draft application for the change notification for your review. I have just received feedback from the province that indicates that they will expedite the review for us, which should allow us to get the leveller installed the week of November 2, if that works for you.

The province has requested that the Township commits to a "minimum 3-year maintenance/monitoring plan" for the leveller. Based on information from the US and my own experience, this generally requires 1-4 visits a year to inspect and maintain the leveller. I would recommend two visits, one in the autumn and one in the spring, to clear any accumulations of leaves and other debris from the intake caging. I suspect that this could be tied in with regular monitoring of the trash screen (which likely will be done in perpetuity on this site!)

If this is acceptable, I'll write this into the application and send it off today.

Regards;			

GEOFF SMART BSc, RPBio

Biologist

PO Box 18180 1215C 56th Street, Delta, B.C., V4M 2L4 tel (604) 943-3209 | mobile (604) 833-8372 | fax (604) 948-3273 | toll-free (877) 943-3209 www.ebbconsulting.ca | gsmart@ebbconsulting.ca

Confidentiality Note: This email may contain confidential and private information. If you received this email in error, please delete and notify the sender.

From: Matt Brigden < mbrigden@tol.ca Sent: October 15, 2020 1:00 PM

To: Geoff Smart <gsmart@ebbconsulting.ca>

Cc: Oliver Busby <busby@ebbconsulting.ca>

Subject: RE: [EXTERNAL] Glouchester Beaver Assessment and Pond Levellers

Hi Geoff,

Not sure if you guys have already put together an invoice for the camera deployment work or not.

If you haven't, could you add a line to the estimated fees for that work? That way I can capture it all on one PO.

Thanks, Matt

From: Geoff Smart <<u>gsmart@ebbconsulting.ca</u>>
Sent: Friday, October 09, 2020 11:44 AM
To: Matt Brigden <<u>mbrigden@tol.ca</u>>

Cc: Oliver Busby < busby@ebbconsulting.ca>

Subject: [EXTERNAL] Glouchester Beaver Assessment and Pond Levellers

Hi Matt;

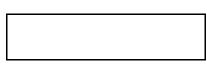
As discussed earlier this week, please see attached for the finalized copy of the Glouchester beaver assessment, with the inclusion of the camera trapping effort.

In terms of the supply and installation of the modified flexible pond leveller, the anticipated fees associated are detailed below. I have priced this based on using two 12" pipes at a length of 60' to ensure that there is suitable flow conveyance, particularly during storm events, and that the pipes extend far enough both upstream and downstream to promote fish passage through the dam.

Item	Estimated Fees	
Supply and Build Modified Flexible Pond Leveller (twin 12" pipes)	s. 21(1)	
Prepare and submit regulatory agency notifications		
Installation of leveller (2 personnel)		
Total (excluding GST)		

Please let me know if you have any questions with the above quote or with the pond leveller configuration.

Regard:	s;
---------	----



GEOFF SMART BSc, RPBio

Biologist

PO Box 18180 1215C 56th Street, Delta, B.C., V4M 2L4 tel (604) 943-3209 | mobile (604) 833-8372 | fax (604) 948-3273 | toll-free (877) 943-3209 www.ebbconsulting.ca | gsmart@ebbconsulting.ca

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Beaver and Beaver Dam Management

Managing Beaver Activity and Habitat on Municipal and Private Land

Township of Langley | Engineering Division

External Guide

In this guide, learn about:

- The Need for Beaver and Beaver Dam Management
- Government Regulations
- Township of Langley's Approach
- Management on Private Lands
- Tools to Manage Beaver Activity
- Beaver Dam Removal
- Helpful Links, Contacts and Resources

The Need for Beaver and Beaver Dam Management

Managing beavers and their dens and dams is necessary to reduce negative impacts on property and risks to public safety.

In nature, beavers build dams to create habitats for themselves. In urban environments, their activities can cause flooding, damage to infrastructure (e.g., culverts and roads), loss of trees, and other hazards and risks to private and public property and public safety.

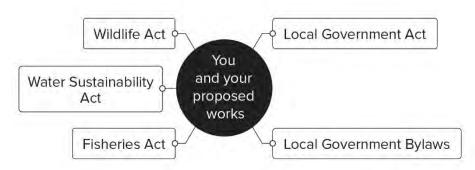
To reduce these negative impacts and risks to public safety, the management of beavers, dens, and dams is a necessary part of municipal operations. However, it is important to note that beavers, through the construction of dams and the ponds that form behind them, create some excellent summer and winter habitats for fish and other wildlife.





Government Regulations

Acts and regulations exist at both the provincial and federal levels to protect fish and wildlife and their habitats. Local governments may also have bylaws to regulate works in and around water. This means approvals and/or permits are generally required to conduct beaver and beaver dam management.



Under the <u>BC Wildlife Act</u>, it is an offence to "disturb, molest, or destroy" a beaver den, house, or dam unless you are a trapper as licensed under the Act. Alteration or removal of a dam is permitted under the Act "to provide irrigation or drainage under lawful authority for the protection of property" and under the <u>BC Water Sustainability Act</u> "for drainage purposes with specific restrictions."

Before a beaver dam can be removed, landowner permission and applicable Wildlife Act permits and Water Sustainability Act notifications are required prior to the commencement of works.

The federal <u>Fisheries Act</u> regulates fish and fish habitat in Canada. Section 35 of the Act prohibits "harmful alteration, disruption or destruction of fish habitat (HADD)" unless authorized by Fisheries and Oceans Canada (DFO). For works that may result in HADD, DFO must be notified prior to the commencement of works.

Township of Langley's Approach

Various Township policies dictate how, when, why, and where beaver management is conducted. When a problem beaver dam is identified on Township property, staff only consider complete removal of the dam or other structures if the situation presents a significant risk to public safety and infrastructure of private property, and after all other management tools and options have been reviewed. The Township follows all municipal, provincial and federal regulations, and best practices when beaver management is necessary.

To remove a beaver dam, the Township follows the Requirements and Best Management Practices for Making Changes In and About a Stream in BC. This involves the Township working with a Qualified Environmental Professional (QEP) to assess the proposed works. In some cases, the QEP will also monitor the works and submit notifications and reports to the Province (and DFO, if applicable).

If the removal of a beaver is deemed necessary (i.e. immediate threat to public safety), beaver trapping is undertaken by a licensed trapper. All trapping is conducted in accordance with municipal, provincial, and federal regulations. In all instances the Township tries to work with area landowners and residents to accept a certain level of flooding caused by beavers; thereby reducing the need for dam removals, habitat alterations, or trapping.

Management on Private Lands

According to Township of Langley (Township) policies No. 05-002 Private Property – Entering and Working On, and No. 05-205 Control of Nuisance Animals (both of which may be revised from time to time), the Township will typically only undertake works on Township property – except in specific circumstances (i.e. risk to public safety).

Township property includes parcels of land and/or improvements as well as roads, rights-of-way, or works owned or operated by the Township, including those held in trust by the Township.

For beaver management issues on private lands, the landowner is responsible for all management activities and notifying the appropriate regulatory agencies. To remove a beaver structure, the Province of BC must be contacted prior to the start of works to obtain applicable permits/approvals for said works. Fisheries and Oceans Canada (DFO) must also be contacted if the project could result in "harmful alteration, disruption or destruction of fish habitat" (HADD). If beaver trapping works are necessary, the owner may be required to hire a licensed professional trapper.

Tools to Manage Beaver Activity

To maintain desired water levels and protect surrounding vegetation, consider these tools:

- Install fences and/or barriers around culverts, drains, structures, and trees to keep beavers away.
- Wrap heavy-gauge wire mesh around trees to prevent beavers from 'working' on them.
- Use low-voltage electric fencing to isolate areas or stands of vegetation from the beavers.
- Install a beaver pond leveler or other devices in the dam to maintain desired water levels upstream and downstream of the dam. This action may require Provincial and possibly DFO notification/permits.



Wire caging for tree protection from beavers (Township of Langley, 2020)



Pond Leveler Installation (Township of Langley, 2020)

Landowners can also work with local stewardship groups or engage environmental/wildlife professionals to assess the situation and provide further advice on management options.

Beaver Dam Removal

Beaver dam removal may occur under applicable notifications/permits which are in place to prevent improper removal methods that can negatively impact fish and wildlife and their habitat, channel stability, downstream water users, and landowners. When possible, consider options other than the complete removal of a dam. Partial removal of the dam (notching) may provide adequate drainage conveyance. Alternatively, various products are available to help beavers and people coexist (e.g. installation of a pond leveler).

If dam removal is necessary, it is important to ensure that accumulated sediment upstream of the dam is not released in a concentrated pulse and that flow velocities will not erode the banks of downstream reaches.

Removing or altering a beaver dam using powered machinery requires Provincial (and potentially, DFO) notifications/permits. Typically, notifications must be submitted to the agencies at least 45 days prior to works.

Under their trapping license, a registered trapper may have a standing agreement with appropriate regulatory agencies to use hand tools or non-mechanized methods for the selective removal of beaver dams and related debris. If this is the case, the trapper may be allowed to conduct these works without prior notification or approval from the Province. Alternatively, the owner may use this method of dam removal if they notify the appropriate regulatory agencies prior to works (see Management on Private Lands section).

Best management practices for dam removal:



Beaver dam located in a roadside ditch (Township of Langley, 2020)

- Remove the dam SLOWLY. Notch the dam in steps, allowing water levels to equalize before notching again to a lower level. This will minimize both the risk of releasing a sudden flush of sediment downstream and the potential for stranding fish/amphibians upstream.
- Remove all dam materials from the site to ensure the material does not end up in the watercourse where it could impede flow, cause flooding, and prevent other beavers from reusing the material.
- Install sediment control measures downstream of the dam to contain sediment stored behind the dam.

It may be prudent to install some type of beaver exclusion method or consider hiring a licensed trapper to physically remove the beaver(s) before undertaking dam removal activities because the beaver(s) will try to rebuild the dam and any other removed or disturbed structures within their territory.

Helpful links

- BC's Requirements and Best Management Practices for Making Changes In and About a Stream
- Fisheries and Oceans Canada Code of Practice: Beaver Dam Removal
- Township of Langley: Instream Works and Watercourse Maintenance

Contacts and Resources

Front Counter BC

(BC Permitting and Licensing)

phone: 1-877-855-3222

email: FrontCounterBC@gov.bc.ca

website: http://www.frontcounterbc.gov.bc.ca/

Permit Regulation for Dens and Dam

Management:

https://portal.nrs.gov.bc.ca/web/client/-/dens-and-

dam-management#related-links

Fisheries and Oceans Canada (DFO)

British Columbia Regional Office (Vancouver)

phone: 1-866-845-6776

email: ReferralsPacific@dfo-mpo.gc.ca

website: Fisheries and Oceans Canada in the

Pacific Region (dfo-mpo.gc.ca)

Langley Environmental Partners Society (LEPS)

phone: 604-532-3511

website: http://www.leps.bc.ca/

Animals (The Fur-Bearers)

email: info@thefurbearers.com

website: https://thefurbearers.com/

phone: 604-435-1850

and Landowners Guide

wildlife/solutions/beavers/

The Association for the Protection of Fur-Bearing

Beavers: Coexistence Strategies for Municipalities

https://thefurbearers.com/our-work/living-with-

Professional Trappers:

Trapping in BC (government website)

BC Trappers Association (www.bctrappers.ca)

Search 'Wildlife Trappers in BC' online for additional companies/services.

#K009037 96 JAN 10 13 391 LAND THE CEFICE LAND TITLE ACT American Contract Con-FORM C (Section 219.81) Province of British Columbia GENERAL INSTRUMENT - PART 1 PAGE 1 of 9 pages APPLICATION: Douglas, Symes & Brissenden, Barristers and Solicitors, 2100 One Bentall Centre, 505 Burrard Street, Vancouver, B.C., V7X 1R4, 683-6911 16-833-201 1/00100 Authorized Agent - HELEN / BK9019 16 16-832-074 THOMAS PARCEL IDENTIFIER AND LEGAL DESCRIPTION OF LAND: * PX9033 (PID) (LEGAL DESCRIPTION) FL 333680 SEE SCHEDULE 01/10/96 A6052d CHARGE 50.00NATURE OF INTEREST: * DESCRIPTION DOCUMENT REFERENCE PERSON ENTITLED TO INTEREST (Page & Paragraph) Statutory Right of Way 6) Entire Instrument Transferee as to parts shown on IN Pax D Pages 4 - 9 DESC. DECTION 214 en Sas 14 TERMS: Part 2 of this instrument consists of (select one only) SE TOTAL Filed Standard Charge Terms D.F. No. (b) Express Charge Terms Annexed as Part 2 (c) Release _____ There is no Part 2 of this instrument A selection of (a) includes any additional or modified terms referred to in Item 7 or in a schedule annexed to this instrument. If (c) is selected, the charge described in Item 3 is released or discharged as a charge on the land described in item 2. Release PARK TRANSFEROR(S):* 161884 CANADA INC., (Reg. No. 28204A), 300-1001 West Broadway, Vancouver, B.C., V6H 4B1 TRANSFEREE(S):* THE CORPORATION OF THE TOWNSHIP OF LANGLEY, 4914-221st Street, Langley, B.C., V3A 3Z8 7. ADDITIONAL OR MODIFIED TERMS: * NIL EXECUTION(S): ** This instrument creates, assigns, modifies, enlarges, discharges or governs the priority of the interest (s) described in Item 3 and the Transferor(s) and every other signatory agree to be bound by this instrument, and acknowledge(s) receipt of a true copy of the filed standard charge terms, if any. Execution Date Officer Signature(s Party(ies) Signature(s) Y D 161884 CANADA INC. by its 95 authorized signatories MARK P. TINDLE $\mathcal{B}omists$ MATTHEW M. MCKECHNIE 2100 ONE BE

[as to both signatures]
OFFICER CERTIFICATION:

505 - BUTTMARD STREET VANCOUVER, B.C. VZX 1R4 (604) 683-5911

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C. 1979, c. 116, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.

Name:

STANCES IM

Land Title Act

EXECUTIONS CONTINUNED

Page 2

EXECUTION DATE

Officer Signature(s)

95 12 4

Parties Signatures

THE CORPORATION OF THE TOWNSHIP OF LANGLEY by its authorized signatory

RODNEY EDWARDS

4914 - 221 Street, Langley, B.C. A Communication for taking Affided to the Entish Columbia

as to the Authorized Signature of The Township of Langley

OFFICER CERTIFICATION: Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C. 1979, c. 116, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.

Land Title Act Form E

SCHEDULE

Page 3

Enter the required information in the same order as the information must appear on the Freehold Transfer Form, Mortgage Form or General Document Form.

2. PARCEL IDENTIFIER AND LEGAL DESCRIPTION OF LAND:*

(PID) (LEGAL DESCRIPTION)

Lot 1, Sec 5, Tp 14, NWD, Plan 26792

Lot 15, Sec 5, Tp 14, NWD, Plan 26792

Lot 1, Except: Part Dedicated Road on Plan LMP5680, Sec 5 and 6, Tp 14, NWD, Plan NWP87490

Page 4

TERMS OF INSTRUMENT - PART 2

STATUTORY RIGHT OF WAY FOR SANITARY STORM SEWER SYSTEM AND ACCESS

THIS AGREEMENT made the 29th day of ANNON 1995

BETWEEN:

161884 CANADA INC., (Reg. No. 28204A), of 300-1001 West Broadway, Vancouver, B.C., V6H 4B1

(the "Grantor")

OF THE FIRST PART

AND:

THE CORPORATION OF THE TOWNSHIP OF LANGLEY, a Municipal Corporation under the "Municipal Act", R.S.B.C. 1979, and having its municipal offices at 4914-221st Street, Langley, B.C., V3A 3Z8

(the "Grantee")

OF THE SECOND PART

WHEREAS:

A. The Grantor is the owner in fee simple of those certain parcels or tracts of land and premises situate, lying and being in the Municipality of Langley, in the Province of British Columbia, and being more particularly known and described as follows:

Lot 1
Section 5
Township 14
New Westminster District
Plan Lmp 36793

Lot 15
Section 5
Township 14
New Westminster District
Plan LMP 26792

Page 5

Lot 1
Except: Part dedicated Road on Plan LMP5680
Section 5 and 6
Township 14
New Westminster District
Plan NWP87490

(the "lands");

- B. To facilitate the construction, improvement, extension, alteration, repair, maintenance and operation of a sanitary sewer and storm sewer system (the "said works"), the Grantor has agreed to permit the carrying out of the said works on the lands by the Grantee and to grant for that purpose the statutory right-of-way hereinafter mentioned;
- C. It is the intention of the parties that the Grantor will construct a sanitary sewer and storm sewer system and related facilities upon or through those portions of the lands shown outlined in bold black on Plan No. lmf" 26793. prepared by H. David Liddle, B.C.L.S., dated the 18th day of September, 1995 and headed Plan of Statutory Rights of Way over portions of Lot 1 Except: Part Dedicated Road on Plan LMP5680, Sections 5 and 6, Plan NWP87490, Lots 1 and 15, Section 5, Plan LMP 26792 all of Township 14, New Westminster District and upon completion of construction of the said sanitary sewer and storm sewer system the Grantor shall maintain the same as hereinafter provided;
- D. A Statutory Right-of-Way is essential to the operation and maintenance of the Grantee's undertaking.

NOW THEREFORE THIS AGREEMENT WITNESSES that in consideration of the premises and the mutual covenants and agreements herein contained and the sum of One (\$1.00) now paid by the Grantee to the Grantor (receipt and sufficiency whereof is hereby acknowledged) and for other valuable consideration:

- The Grantor, for itself, its heirs, executors, administrators, successors and assigns, does hereby give and grant unto the Grantee, its successors and assigns:
 - (a) a Statutory Right-of-Way and the full, free and unrestricted right and liberty to enter in, over and upon ALL AND SINGULAR those certain parcels or tracts of land and premises situate, lying and being in the Municipality of Langley, in the Province of British Columbia, and being more particularly known and described as:

Page 6

All that portion of:

Lot 1
Section 5
Township 14
New Westminster District
Plan Lmp 26792

Doc #: BK9037

Lot 15
Section 5
Township 14
New Westminster District
Plan Lmp 26792

Lot 1
Except: Part dedicated Road on Plan LMP5680
Section 5 and 6
Township 14
New Westminster District
Plan NWP87490

shown boldly outlined on Statutory Right-of-Way Plan Lmp >679

(the "Statutory Right-of-Way")

for the purpose of constructing, maintaining, repairing, cleaning, protecting, enlarging, reconstructing and otherwise servicing all or any part of the said works;

- (b) free and uninterrupted access to the statutory rightof-way, with or without workman, vehicles and equipment, for the purpose of carrying out the said works; and
- (c) full and uninterrupted access at all times over, through and under the said Statutory Right of Way with or without workmen, vehicles and equipment, for the purpose of repairing, cleaning and otherwise servicing the aforementioned sanitary sewer and storm sewer system, or for grading the surface of the Statutory Right of Way to permit proper drainage of surface waters into the storm sewer system.

TO HAVE AND TO HOLD unto the Grantee, its successors and assigns forever.

2. THE GRANTOR HEREBY COVENANTS AND AGREES with the Grantee:

Page 7

- (a) That the Grantor will not erect, place or maintain any building, structure, concrete driveway or concrete patio on any portion of the Statutory Right-of-Way;
- (b) That the Grantor will not do or knowingly permit to be done any act or thing which will interfere with or injure the said works and, in particular, will not carry out blasting on or adjacent to the Statutory Right-of-Way, without the consent in writing of the Grantee, provided that such consent shall not be unreasonably withheld;
- (c) That the Grantor will not diminish nor increase the soil cover over any pipe installed within the Statutory Right-of-Way without the consent in writing of the Grantee;
- (d) That any and all chattels and fixtures installed by the Grantee within the Statutory Right-of-Way shall be and remain chattels, any rule at law to the contrary notwithstanding, and shall belong solely and exclusively to the Grantee;
- (e) To allow the Grantee, its agents and servants, to enter upon the lands as aforesaid to install, repair, maintain, inspect, and service the said works, and not to interfere with in any way nor prevent any such person coming on the lands for such purposes;
- (f) The Grantor will, at its expense, do or cause to be done all acts reasonably necessary to grant priority to this Agreement over all charges and encumbrances which have been registered against the title to the lands in the New Westminster Land Title Office save and except those specifically exempted in writing by the Grantee or those in favour of the Grantee.
- THE GRANTEE HEREBY COVENANTS and agrees with the Grantor that the Grantee:
 - (a) Will not bury debris or rubbish of any kind in excavations or backfill, and will remove shoring and like temporary structures as backfilling proceeds;
 - (b) Will thoroughly clean the site, raking up all rubbish and construction debris and leave the site in a neat and clean condition;
 - (c) Will, as soon as weather and soil conditions permit and insofar as it is practicable so to do, bury, maintain,

Page 8

repair and/or replace and remove all underground works so as not to interfere unduly with the drainage of the lands;

- (d) Will, as far as reasonably necessary, carry out the construction, maintenance, repair and/or replacement and removal of the said works in a proper and workmanlike manner so as to do as little injury as possible; and
- (e) Will indemnify and save harmless the Grantor and his heirs, executors, administrators, successors and assigns from any and all loss, damages or other expenses in any way arising from or caused by anything done hereunder.
- 4. IT IS MUTUALLY UNDERSTOOD, agreed and declared by and between the parties hereto that:
 - (a) This Agreement shall be construed as a covenant running with the lands and that none of the covenants herein contained shall be personal or binding upon the parties hereto, save and except during the Grantor's seisin or ownership of any interest in the lands and with respect only to that portion of the lands of which the Grantor shall be seised or which he shall have an interest, but that the lands shall, nevertheless, be and remain at all times charged therewith;
 - (b) Save as aforesaid, nothing in this Agreement shall be interpreted so as to restrict or prevent the Grantor from using the Statutory Right-of-Way in any manner which does not interfere with the security or efficient functioning of or unobstructed access to the said works;
 - (c) All expenses incurred in the initial installation of the said works and the maintenance and repair thereof for a period of one year from the date of completion thereof, as certified by or on behalf of the Grantee, shall be borne and paid for by the Grantor; and thereafter all expenses incurred in the maintenance, repair and replacement of the said works and the performing of any and all covenants herein made by the Grantee shall be borne and paid for by the Grantee;
 - (d) This Agreement shall enure to the benefit of an be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns; and

Page 9

(e) Wherever the singular or the masculine is used in this Agreement the same shall be construed as meaning the plural or the feminine or the body corporate or politic where the context or the parties hereto so require.

EXECUTION DATE

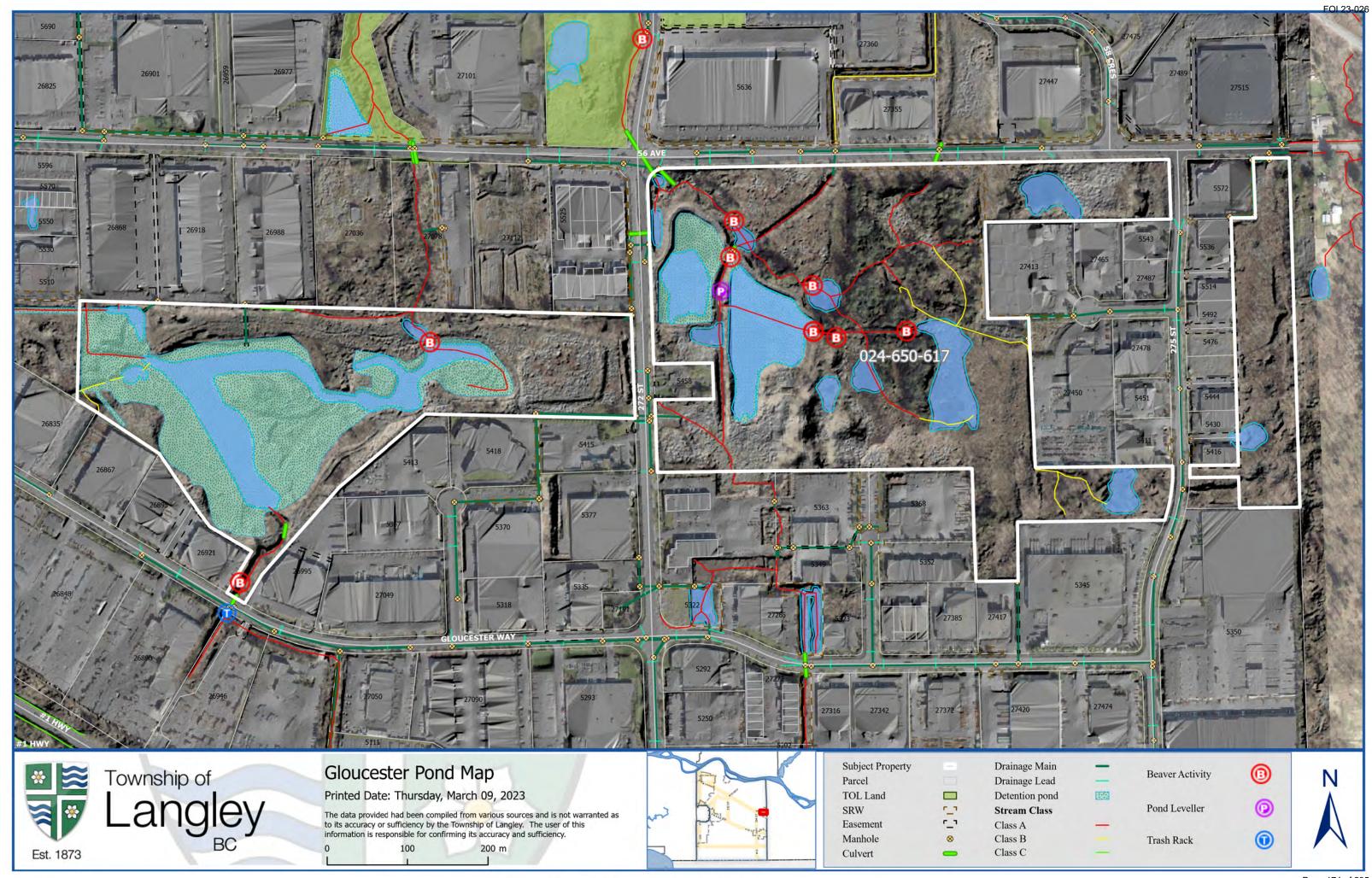
MARK P. TINDLE Benister & A. W. D. A. 2100 ONE BENIALL CENTRE 505 - BURRARD STREET VANCOUVER, B.C. VIX 1R4 [as to beth sighatures]	95	M	29	Parties Signatures 161884 CANADA INC. by its authorized signatories MATTHEW M. MCKECHNIE
VERLE CLARK 4914 - 221 Street, Famility, B.C. A Consideration taking Affidable of demands Golumbia as to the supported Signature	95	12	4	THE CORPORATION OF THE TOWNSHIP OF LANGLEY by its authorized signatory Add Edocade RODNEY EDWARDS

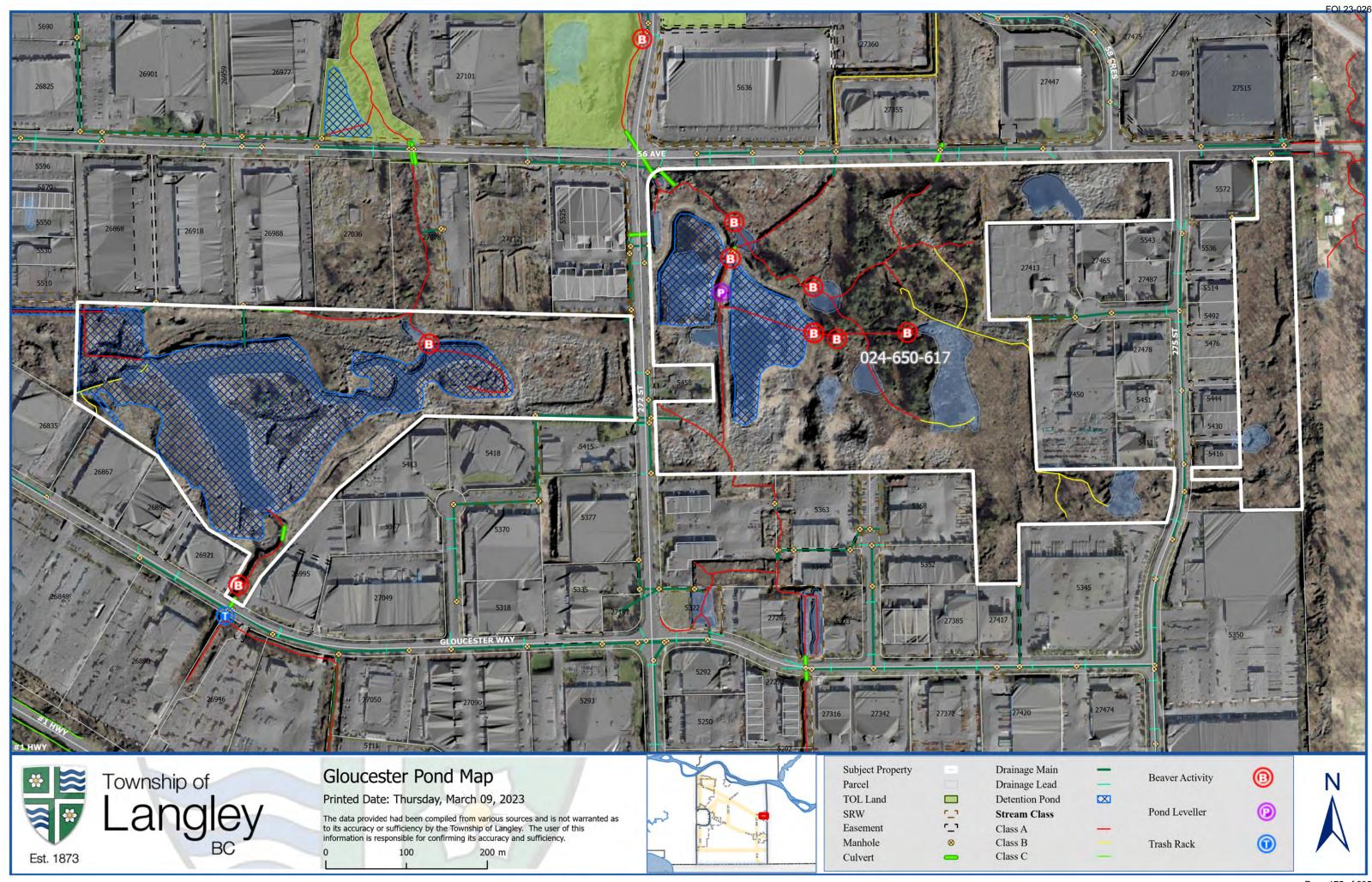
OPFICER CERTIFICATION: Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C. 1979, c. 116, to take affidavits for use in British Columbia and certifies the matters act out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.

END OF DOCUMENT

A/17214.106/63942

of The Township of Langley





PLAN OF STATUTORY RIGHTS OF WAY OVER PORTIONS OF, PLAN LMP 26793 - LOT 1 EXCEPT: PART DEDICATED ROAD ON PLAN LMP 5680, SECTIONS 5 AND 6, PLAN NWP 87490, DEPOSITED IN THE LAND TITLE OFFICE - LOTS 1, 9, 10, 11 AND 15, SECTION 5, PLAN LMP 26792, AT NEW WESTMINSTER ,B.C. ALL OF TOWNSHIP 14, NEW WESTMINSTER DISTRICT THIS 10 DAY OF TANUARY, 1996. B.C.G.S. 92G.018 REF: BK9036 56 TH AVENUE *358 41 45"* EXP. PLAN LMP 1416 LOT 1 PURSUANT TO SECTION 113 OF THE LAND TITLE ACT ACCORDING TO PLAN LMP SECTION 5 PLAN NWP 87490 FOR PUBLIC UTILITIES PURPOSES UNLESS OTHERWISE INDICATED, ALL DIMENSIONS ARE IN METRES AND ALL AREAS ARE EXPRESSED AS SQUARE METRES. _ 0.106 ha BEARINGS ARE ASTRONOMIC, REFERRED TO PLAN LMP 34793-709 m² ~ DENOTES STANDARD IRON POST FOUND O DENOTES STANDARD IRON POST SET ha DENOTES HECTARES m² denotes square metres r DENOTES RADIUS C DENOTES ARC LOT 1 55 TH AVENUE PLAN NWP 87490 SEE DETAIL "B" 13 S LOT 1 PLAN LMP QUITA. PLAN NWP 87490 14 PLAN NWP 87490 DETAIL "B" NOT TO SCALE TOWNSHIP DETAIL "A" NOT TO SCALE

REM. LOT 2

PLAN NWP 87490

THIS PLAN LIES WITHIN THE GREATER VANCOUVER REGIONAL DISTRICT

(MUNICIPALITY OF LANGLEY)

MURRAY & ASSOCIATES
201-12448 82nd AVENUE

SURREY, B.C.

(604) 597-9189

V3W 3E9

I, H. DAVID LIDDLE, A BRITISH COLUMBIA LAND SURVEYOR

OF MATSQUI, IN BRITISH COLUMBIA, CERTIFY THAT

I WAS PRESENT AT AND PERSONALLY SUPERINTENDED THE

SURVEY REPRESENTED BY THIS PLAN, AND THAT THE SURVEY

AND PLAN ARE CORRECT. THE SURVEY WAS COMPLETED

ON THE 18th DAY OF SEPTEMBER, 1995.

FILE 8364-2

Page 176 of 295

B. C. L. S.

From: Ashleigh Gilbert To: Teresa Hanson

Subject: FW: 14-05-0105 Comments

Date: Thursday, February 23, 2023 4:24:00 PM

Attachments: image001.png

image005.png

I had the wrong project

Ashleigh Gilbert M.Sc., P.Ag., R.B.Tech | Environmental Coordinator II

Development Planning Department | Community Development Division

From: Ashleigh Gilbert

Sent: Thursday, January 19, 2023 10:51 AM **To:** Teresa Hanson <thanson@tol.ca> Subject: 15-05-0105 Comments

Hi Teresa,

Please see below my comments regarding the recent golf course lands proposal:

- Connectivity between habitat areas required (pedestrian greenway with trees and other vegetation is ok)
 - Lot 3 (east to west)
 - East pond complex to Abbotsford border (possible?)
- How are flows to be maintained in ponds (E10) on Lot 8?
- Provide a figure showing flow directions of the various waterbodies.
- Provide a list of the Site Development level studies and surveys to be conducted (e.g., hydrological, nest/cavity, SAR).
- Provide a list of anticipated Site Development level management plans to be developed (e.g., breeding bird, MBCA Schedule 1 nests/cavities- GBH and PW observed onsite, SAR).
- Location of proposed constructed watercourse and water features adjusted to avoid sensitive or unique ecological features (i.e. ponds proposed between W1-W3 and NE of W1 constructed to avoid impacts to existing trees).
- 27036 56 Avenue is identified as Protected Greenspace- provide explanation why this property has been designated as PG.
- Who will be engineering/designing the constructed water features? This can have a significant impact on the ecological function of the features. Habitat should not be constructed in the same ways as stormwater infrastructure. Often, we see habitat features designed by civil engineers that are just smaller detention ponds, these lack habitat and ecosystem diversity. The creation of a wet meadow vs a pond vs a swamp is more complex than vegetation selection. Detailed design and specs should be reviewed.
- Given the size and anticipated timeline of the habitat project, has planting of nursery

- grown SAR (e.g., Vancouver Island beggarticks) been considered? NATS nursery will propagate SAR, if seeds are available, for habitat works.
- I anticipate this will be addressed at the Site Development level- but 'restoration' of fully functioning habitat just because xxm² of restoration area is required, should be avoided.

Please feel free to edit, not include or let me know if you have any questions. Thanks!

Ashleigh Gilbert M.Sc., P.Ag. R.B.Tech | Environmental Coordinator II

Development Planning Department | Community Development Division

20338 65 Avenue, Langley, BC V2Y 3J1

Web | Facebook | Twitter | YouTube

From: Ashleigh Gilbert Snook, Roxanne FOR:EX Subject: Gloucester Beaver works

Date: Wednesday, February 22, 2023 2:46:00 PM

Attachments:

image001.png IMG 0439.JPG image002.png image004.png image011.png

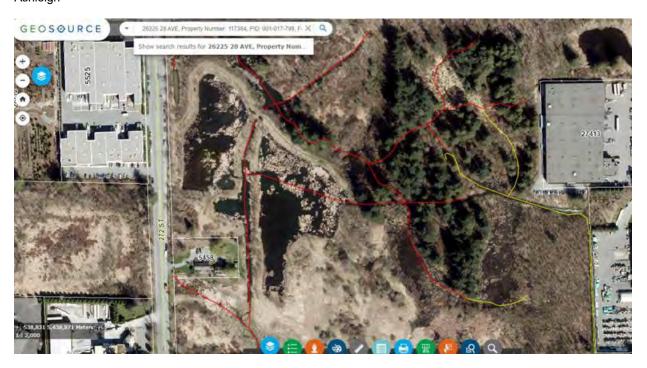
Hi Roxanne,

Please see attached photos of Gloucester taken on Tuesday, February 21, 2023.

Photo 0440 is of a beaver dam on the Gold Course Lands, east of 272nd at 56 Ave (green circle). A section of the dam was removed to allow flow from the left side of the dam (east) to the right side (west). Scour marks on the left side of the dam provide indications of water level in the channel before mitigation.

Photo 0439 is a photo a 'beaver deceiver' devise (black corrugated pipes) that bypass a dam and allow from detention pond to the channel that connects to West Creek (located in the purple circle).

Cheers, Ashleigh



Ashleigh Gilbert M.Sc., P.Ag. R.B.Tech | Environmental Coordinator II Development Planning Department | Community Development Division

20338 65 Avenue, Langley, BC V2Y 3J1

Web | Facebook | Twitter | YouTube









From: <u>Teresa Hanson</u>
To: <u>Ashleigh Gilbert</u>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Date: Wednesday, February 01, 2023 3:32:39 PM

I think probably already knows given that Kevin Larsen and Roeland Zwaag are in this chain. They have my email because of previous applications.

Teresa

Teresa Hanson | Senior Development Planner

Direct Line: 604.533.6021

From: Ashleigh Gilbert <agilbert@tol.ca>
Sent: Wednesday, February 01, 2023 3:20 PM

To: Teresa Hanson < thanson@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Thanks, this sounds like the ongoing beaver management that Aaron Rhul has been overseeing. Should we share with him?

Ashleigh Gilbert M.Sc., P.Ag., R.B.Tech | Environmental Coordinator II

Development Planning Department | Community Development Division

From: Teresa Hanson < thanson@tol.ca>

Sent: Wednesday, February 01, 2023 3:07 PM

To: Ashleigh Gilbert agilbert@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

FYI – this looks like it is in the neighbourhood of the golf course lands.

Teresa

Teresa Hanson | Senior Development Planner

Direct Line: 604.533.6021

From: s. 22(1)

Sent: Wednesday, February 01, 2023 3:04 PM

To: Kevin Larsen < klarsen@tol.ca > Cc: Teresa Hanson < thanson@tol.ca >

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Sent from my iPad

Begin forwarded message:

From: 8. 22(1)

Date: February 1, 2023 at 3:01:59 PM PST

To: Roland Zwaag < rzwaag@tol.ca>

Subject: Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

Begin forwarded message:

From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>>

Date: February 1, 2023 at 12:42:39 PM PST

To: s. 22(1)

Subject: Natural Resource Violation Report 202271

Thank you for submitting Natural Resource Violation Report number 202271. Your report has been received by Natural Resource Officers with the Compliance and Enforcement Branch. We appreciate you taking the time to bring this to our attention as all complaints help inform our enforcement strategies. Emerging priorities and officer capacity may lead to some complaints not being actioned. If more information is required, a Natural Resource Officer may contact you.

We have been experiencing system issues which has prevented us from providing you with your natural resource violation report number sooner. We sincerely apologize for this delay.

Please do not reply to this e-mail as email responses are not received at this address.

Danielle

Natural Resource Violation Reporting Line

http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1 877-952-7277, option 2

----Original Message----

From: mailer@a100.gov.bc.ca <mailer@a100.gov.bc.ca>

Sent: January 31, 2023 10:59 AM

To: FOR Compliance and Enforcement Contact Centre FOR:EX

< <u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>> Subject: Report of Natural Resource Violation

Below is the result of your feedback form. It was submitted on Tuesday,

January 31, 2023 at 10:58:53.

referer: https://www.for.gov.bc.ca/

remote address:

ReportDate: 01/31/2023

ReportTime: 10:51

LastName: s. 22(1)

FirstName: s. 22(1)

EmailAddress:

DaytimePhone

MailingAddress:

PropertyAddress: 8.22(1)

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

BD Developments

ViolationHour_Start: 00

ViolationMinute_Start: 00

ViolationHour_End: 00

ViolationMinute_End: 00

NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands, concerns about wildlife (already reported to RAPP) but wanted

to report concern of diversion water and impact on the wetlands.

Township of Langley managing watercourses, BD Development Group doing the work.

The stream is a red coded fish bearing stream (salmon/Coho).

No machines in the area at the moment. Believe damage is done. DFO has been advised and has made an appointment to attend. Other agencies have been advised of concerns as well.

AgenciesNotified: DFO and Township of Langley

Hazards: None

From: Snook, Roxanne FOR:EX

To: <u>Jennifer Elderkin</u>; <u>Sutherland</u>, <u>Barbara FOR:EX</u>; <u>Justin St Andrassy</u>

Cc: Lovena Morton; Ashleigh Gilbert

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval Application

2010025

Date: Tuesday, March 14, 2023 3:00:24 PM

Attachments: <u>image001.png</u>

image002.png image004.png image007.png image005.png

Hi Jennifer,

Thanks for reaching out. I have no concerns with these works. It came to my attention from a concerned group over an application that's under review with our team (a Natural Resource Violation report). As far as I understand, there's been no non-compliance under the WSA, so no need for my involvement. Thanks again,

Roxanne



Roxanne Snook, MSc., RPBio (She/her/hers)

Surface Water Protection Officer

South Coast Natural Resource Region

Ministry of Forests

200 -10428 153 Street, Surrey BC, V3R 1E1

Email: Roxanne.Snook@gov.bc.ca | Ph: (236) 468-3941

Report a Natural Resource Violation

"Anthropocene rivers are largely imprisoned in the banks of their history." -Brown et al. (2018)

From: Jennifer Elderkin < jelderkin@tol.ca>
Sent: Friday, March 10, 2023 3:50 PM

To: Sutherland, Barbara FOR:EX <Barbara.Sutherland@gov.bc.ca>; Justin St Andrassy

<jstandrassy@tol.ca>; Snook, Roxanne FOR:EX <Roxanne.Snook@gov.bc.ca>

Cc: Lovena Morton lmorton@tol.ca; Ashleigh Gilbert agilbert@tol.ca

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water Approval Application 2010025

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Good afternoon,

This email chain came to my attention yesterday and I just wanted to reach out to see if you had any questions or concerns for our Stormwater department. Please don't hesitate to reach

out via email or phone call if there is anything you'd like to discuss.

Regards,

Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Sutherland, Barbara FOR:EX < Barbara.Sutherland@gov.bc.ca>

Sent: Monday, February 27, 2023 12:22 PM

To: Justin St Andrassy < <u>istandrassy@tol.ca</u>>; Snook, Roxanne FOR:EX < <u>Roxanne.Snook@gov.bc.ca</u>>

Cc: Lovena Morton < lmorton@tol.ca >; Ashleigh Gilbert < agilbert@tol.ca >

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water

Approval Application 2010025

Thanks Justin.

From: Justin St Andrassy <<u>istandrassy@tol.ca</u>>

Sent: February 27, 2023 11:59 AM

To: Snook, Roxanne FOR:EX <<u>Roxanne.Snook@gov.bc.ca</u>>; Sutherland, Barbara FOR:EX

<<u>Barbara.Sutherland@gov.bc.ca</u>>

Cc: Lovena Morton < lmorton@tol.ca >; Ashleigh Gilbert < agilbert@tol.ca >

Subject: RE: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water

Approval Application 2010025

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Roxanne and Barb, my department is not directly involved in the current beaver mitigation activities by TOL Stormwater department in the Gloucester detention ponds. However, we are aware of on-going maintenance efforts to keep the area's ToL stormwater system / flooding to a safe level, and that the Stormwater dep. conducts various beaver dam / blockage mitigation works in order to maintain the systems (they work in association with a QEP - EBB Consulting - under applicable Prov. Notifications).

To my knowledge, these works are completely unrelated to whatever development is being discusses/proposed for the area.

From what I understand, for years now these calls come in every time maintenance is conducted. But I will send the stormwater department a message to ensure that they are aware of new calls (in case they are not aware already)

Justin St. Andrassy, EP, TAg | Environmental Coordinator II

Township of Langley | Engineering Division Water Resources and Environment Department (WRE) 20338 65 Ave, Langley, BC, V2Y 3J1 jstandrassy@tol.ca

Direct Line: 604.532.7528

Web | FaceBook | Twitter | YouTube

From: Snook, Roxanne FOR:EX < Roxanne.Snook@gov.bc.ca>

Sent: Monday, February 27, 2023 11:24 AM

To: Sutherland, Barbara FOR:EX < <u>Barbara.Sutherland@gov.bc.ca</u>>; Justin St Andrassy

<<u>istandrassy@tol.ca</u>>; Ashleigh Gilbert <<u>agilbert@tol.ca</u>>

Subject: [EXTERNAL] RE: Potential Unauthorized works on Gloucester Golf course Property - Water

Approval Application 2010025

Hi Barb,

I chatted with Ashleigh last week and asked her about the flood mitigation/instream works being done at Gloucester wetlands. She confirmed it was the TOL doing the flood mitigation to ensure flows reach downstream sections of West Creek. I have attached the email correspondence with her, as she had gone out to the site the week previous so there are some recent photos in there too. I hadn't realized these were the same properties that the complaints were coming in for.

I won't be going out to this site unless Justin and Ashleigh have anything else to add or have additional concerns.

Just as an FYI, Ashleigh, and Justin, we've received several complaints regarding these works. Is there any public outreach that the TOL does in this area? I don't mind responding these complainants, but they are more concerned that the works are being done to reduce the setbacks and push forward development at this location. Sounds messy and political

Hope you all had a nice weekend, Sincerely, Roxanne



Roxanne Snook, MSc., RPBio (She/her/hers)

Surface Water Protection Officer

South Coast Natural Resource Region

Ministry of Forests

200 -10428 153 Street, Surrey BC, V3R 1E1

Email: Roxanne.Snook@gov.bc.ca | Ph: (236) 468-3941

Report a Natural Resource Violation

"Anthropocene rivers are largely imprisoned in the banks of their history." -Brown et al. (2018)

From: Sutherland, Barbara FOR:EX < <u>Barbara.Sutherland@gov.bc.ca</u>>

Sent: Monday, February 27, 2023 11:14 AM

To: Justin St Andrassy < <u>istandrassy@tol.ca</u>>; Ashleigh Gilbert < <u>agilbert@tol.ca</u>>

Cc: Snook, Roxanne FOR:EX <<u>Roxanne.Snook@gov.bc.ca</u>>

Subject: Potential Unauthorized works on Gloucester Golf course Property - Water Approval Application

2010025

Hi Justin and Ashleigh,

We have had a report of works being done by the ToL on the Gloucester Golf course site.

Do you know anything about it?



Thanks,



Barbara Sutherland, BSc (Eng), BSc (EnvP)

Senior Authorizations Specialist - Water

Stream Management Authorizations

South Coast Natural Resource Region

Ministry of Forests

200-10428 153 Street, Surrey BC, V3R 1E1 | Phone: 778-572-2199 | Fax: 604-586-

4444

Our Vision: Economic prosperity and environmental sustainability

From: <u>Aaron Ruhl</u>
To: <u>Kim Garma</u>

Cc: <u>Ashleigh Gilbert</u>; <u>Teresa Hanson</u>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Date: Saturday, January 28, 2023 9:42:31 AM

Kim,

EBB is our main consultant for beaver management, and they have developed an extensive plan for the golf course lands. We have no further comments.

Thank you for the opportunity to review

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Aaron Ruhl

Sent: Wednesday, January 25, 2023 4:40 PM

To: Kim Garma <kgarma@tol.ca>

Cc: Ashleigh Gilbert <agilbert@tol.ca>; Teresa Hanson <thanson@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands -

Engineering Referral

Will do. I will get you, our comments.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Kim Garma < kgarma@tol.ca > Sent: Friday, January 20, 2023 12:18 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Ashleigh Gilbert agilbert@tol.ca; Teresa Hanson thanson@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands -

Engineering Referral

Hi Aaron,

I was told you have been overseeing the beaver activity in the Gloucester Golf Course Lands. The Beaver Management Strategy by EBB Environmental Consulting Inc. starts on page 60.

Please review and provide any comments you may have. Let me know if you would like to discuss further.

Thanks,

Kim Garma | Development Engineering Technologist

Direct line: 604.533.6049

From: Kim Garma

Sent: Monday, December 05, 2022 12:16 PM

To: James Sun < jsun@tol.ca>; Brian Edey < bedey@tol.ca>; Jennifer Elderkin < jelderkin@tol.ca>; Richard Welfing < rwelfing@tol.ca>; Jocelyn Ramsey < jramsey@tol.ca>; Dave McCormick < dmccormick@tol.ca>; Dave Jarvis < djarvis@tol.ca>; Rick Campagna < rcampagna@tol.ca> Subject: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hello,

Please see the attached Engineering Referral Form and proposed plan(s).

Let me know if you need further information.

Thanks,

Kim Garma | Development Engineering Technologist

Direct line: 604.533.6049

From: Jocelyn Ramsey

Sent: Tuesday, February 14, 2023 1:07 PM

To: Jennifer Elderkin

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering

Referral

Not this one specifically, thanks for fwd. I have looked that the stormwater modelling report. Perhaps we should chat about this?

From: Jennifer Elderkin <jelderkin@tol.ca> Sent: Tuesday, February 14, 2023 9:24 AM To: Jocelyn Ramsey <jramsey@tol.ca>

Subject: FW: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Have you seen this?



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Wednesday, January 25, 2023 4:45 PM

To: Scott Neil <sneil@tol.ca>; Matt Brigden <mbrigden@tol.ca>

Cc: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hey Guys,

Over to you for comments. Send them to me and I will forward them to Kim.

Let me know if we should discuss

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Kim Garma < kgarma@tol.ca > Sent: Friday, January 20, 2023 12:18 PM

To: Aaron Ruhl < aruhl@tol.ca >

Cc: Ashleigh Gilbert <agilbert@tol.ca>; Teresa Hanson <thanson@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hi Aaron,

I was told you have been overseeing the beaver activity in the Gloucester Golf Course Lands. The Beaver Management Strategy by EBB Environmental Consulting Inc. starts on page 60.

Please review and provide any comments you may have. Let me know if you would like to discuss further.

Thanks,

Kim Garma | Development Engineering Technologist

Direct line: 604.533.6049

From: Kim Garma

Sent: Monday, December 05, 2022 12:16 PM

To: James Sun < <u>isun@tol.ca</u>>; Brian Edey < <u>bedey@tol.ca</u>>; Jennifer Elderkin < <u>jelderkin@tol.ca</u>>; Richard Welfing < <u>rwelfing@tol.ca</u>>; Jocelyn Ramsey < <u>iramsey@tol.ca</u>>; Dave McCormick < <u>dmccormick@tol.ca</u>>; Dave Jarvis < <u>djarvis@tol.ca</u>>; Rick Campagna < <u>rcampagna@tol.ca</u>>

Subject: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hello,

Please see the attached Engineering Referral Form and proposed plan(s).

Let me know if you need further information.

Thanks,

Kim Garma | Development Engineering Technologist

Direct line: 604.533.6049

From: Jennifer Elderkin

Sent: Wednesday, February 08, 2023 8:26 AM **To:** Matt Brigden; Aaron Ruhl; Scott Neil

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering

Referral

Sorry that original email did not include this document. We had all asked for more details. Not sure if Jocelyn has seen this.

Township of Langley

Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Jennifer Elderkin

Sent: Wednesday, February 08, 2023 8:24 AM

To: Matt Brigden <mbrigden@tol.ca>; Aaron Ruhl <aruhl@tol.ca>; Scott Neil <sneil@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Oh, I see that Jocelyn was included in the original email.

Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Jennifer Elderkin

Sent: Wednesday, February 08, 2023 8:23 AM

To: Matt Brigden <mbrigden@tol.ca>; Aaron Ruhl <aruhl@tol.ca>; Scott Neil <sneil@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Nothing further from me. Not sure if you want WRE to also review and comment?

Township of Langley

Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Matt Brigden < mbrigden@tol.ca > Sent: Thursday, January 26, 2023 4:13 PM

To: Aaron Ruhl <aruhl@tol.ca>; Scott Neil <sneil@tol.ca>

Cc: Jennifer Elderkin < jelderkin@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

No comments on my end about the beaver management. Pretty much the same as what EBB provided us in their report to us about beaver management in east Gloucester pond.

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Wednesday, January 25, 2023 4:45 PM

To: Scott Neil < sneil@tol.ca >; Matt Brigden < mbrigden@tol.ca >

Cc: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hey Guys,

Over to you for comments. Send them to me and I will forward them to Kim.

Let me know if we should discuss

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Kim Garma < kgarma@tol.ca > Sent: Friday, January 20, 2023 12:18 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Ashleigh Gilbert <agilbert@tol.ca>; Teresa Hanson <thanson@tol.ca>

Subject: RE: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hi Aaron,

I was told you have been overseeing the beaver activity in the Gloucester Golf Course Lands. The Beaver Management Strategy by EBB Environmental Consulting Inc. starts on page 60.

Please review and provide any comments you may have. Let me know if you would like to discuss further.

Thanks,

Kim Garma | Development Engineering Technologist

Direct line: 604.533.6049

From: Kim Garma

Sent: Monday, December 05, 2022 12:16 PM

To: James Sun < <u>isun@tol.ca</u>>; Brian Edey < <u>bedey@tol.ca</u>>; Jennifer Elderkin < <u>ielderkin@tol.ca</u>>; Richard Welfing < <u>rwelfing@tol.ca</u>>; Jocelyn Ramsey < <u>iramsey@tol.ca</u>>; Dave McCormick < <u>dmccormick@tol.ca</u>>; Dave Jarvis < <u>djarvis@tol.ca</u>>; Rick Campagna < <u>rcampagna@tol.ca</u>>

Subject: 14-05-0105 - Rezoning and Plan Amendment for Gloucester Golf Course Lands - Engineering Referral

Hello,

Please see the attached Engineering Referral Form and proposed plan(s).

Let me know if you need further information.

Thanks,

Kim Garma | Development Engineering Technologist

Direct line: 604.533.6049

From: Jennifer Elderkin

Sent: Monday, February 06, 2023 11:30 AM

To: Aaron Ruhl

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

I've left a message and awaiting a call back from the officer(s).



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Monday, February 06, 2023 11:13 AM To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Have we heard from the province on this one?

If not, reach out pro-actively?

Please advise

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca Sent: Thursday, February 02, 2023 3:19 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Monday Jan 30 involved very minimal notching, hand cleared maybe 10 sticks overall. Not much beaver activity between Jan 23 and Jan 30 had occurred.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Jennifer Elderkin

Sent: Thursday, February 02, 2023 2:22 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Correction, add Jan 30. It's on the paper timesheet, it doesn't show me in the system yet because it hasn't transferred yet.

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca > Date: 2023-02-02 1:54 p.m. (GMT-08:00)

To: Aaron Ruhl < aruhl@tol.ca >

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Pulled the WO and the timesheet data which shows staff were there Jan 19, 20 & 23.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>

Sent: Thursday, February 02, 2023 12:24 PM **To:** Jennifer Elderkin < jelderkin@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

When were staff onsite, January 19 and/or 31?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca Sent: Thursday, February 02, 2023 12:19 PM

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Draft response below, SR attached for your information:



Regards,

Jennifer Elderkin, AScT | Stormwater Manager



Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4 Telephone: 604.532.7570

Web | Facebook | Twitter | YouTu

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl < aruhl@tol.ca >

Sent: Wednesday, February 01, 2023 5:44 PM **To:** Jennifer Elderkin < <u>jelderkin@tol.ca</u>>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Thanks

In the format of a draft response, thanks

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca>
Date: 2023-02-01 5:43 p.m. (GMT-08:00)

To: Aaron Ruhl <aruhl@tol.ca>

Subject: RE: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Will confirm with staff tomorrow and let you know.

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-02-01 4:15 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca>

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Please provide an update as to the work we may have been performing in the area?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Roeland Zwaag < rzwaag@tol.ca Sent: Wednesday, February 01, 2023 3:08 PM

To: Aaron Ruhl <aruhl@tol.ca>

Cc: Kevin Larsen < klarsen@tol.ca >; Patty Jadis < pjadis@tol.ca >

Subject: FW: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

Aaron, can you please review?

Kevin, FYI.

Roeland.

From:

Sent: Wednesday, February 01, 2023 3:02 PM

To: Roeland Zwaag <rzwaag@tol.ca>

Subject: [EXTERNAL] Fwd: Natural Resource Violation Report 202271

To whom it may concern:

The section referring to 'Nature of the Violation' has a few errors. I am aware that although Beedie owns the land, it is in fact the TOL doing the work. Also the taking down of the dams has occurred in the past (not annually), affecting both the Coho salmon smolt cycle and migratory bird nesting sites but this time the extensive damage done is going to have a much greater impact. The timing of this activity raises questions.

Sincerely,

Sent from my iPad

Begin forwarded message:

From: "FOR Compliance and Enforcement Contact Centre FOR:EX"

<<u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>>

Date: February 1, 2023 at 12:42:39 PM PST

To:

Subject: Natural Resource Violation Report 202271

Thank you for submitting Natural Resource Violation Report number 202271. Your report has been received by Natural Resource Officers with the Compliance and Enforcement Branch. We appreciate you taking the time to bring this to our attention as all complaints help inform our enforcement strategies. Emerging priorities and officer capacity may lead to some complaints not being actioned. If more information is required, a Natural Resource Officer may contact you.

We have been experiencing system issues which has prevented us from providing you with your natural resource violation report number sooner. We sincerely apologize for this delay.

Please do not reply to this e-mail as email responses are not received at this address.

Danielle

Natural Resource Violation Reporting Line http://www.for.gov.bc.ca/hen/nrv/

Toll-free number: 1877-952-7277, option 2

----Original Message-----

From: mailer@a100.gov.bc.ca

Sent: January 31, 2023 10:59 AM

To: FOR Compliance and Enforcement Contact Centre FOR:EX

< <u>CE.FrontCounterBCContactCentre@gov.bc.ca</u>> Subject: Report of Natural Resource Violation

Below is the result of your feedback form. It was submitted on Tuesday, January 31, 2023 at 10:58:53.

referer: https://www.for.gov.bc.ca/

remote address:

ReportDate: 01/31/2023

ReportTime: 10:51

LastName

FirstName s. 22(1)

EmailAddress:

DaytimePhone s. 22(1)

MailingAddress: \$ 22(1)

PropertyAddress: s. 22(1)

Location: Gloucester Park in Langley, including West Creek.

Nearest_City_Town: Langley

ViolatorAddress: Township of Langley

BD Developments

ViolationHour_Start: 00

ViolationMinute_Start: 00

ViolationHour_End: 00

ViolationMinute_End: 00

NatureOfViolation: Reporting destruction beaver dams in Gloucester Park in Langley. Concerned with changes in water course and that it has been altered. This work on the development is done annually, most recently and just before migratory birds arrive. Beavers have since created ponds and wetlands, concerns about wildlife (already reported to RAPP) but wanted to report concern of diversion water and impact on the wetlands.

Township of Langley managing watercourses, BD Development Group doing the work.

s. 22(1)	
	. The stream is a red coded fish bearing
stream (salmon/Coho).	
No machines in the area at the moment. Believe damag	e is done.
DFO has been advised and has made an appointment to concerns as well.	attend. Other agencies have been advised of
AgenciesNotified: DFO and Township of Langley	
Hazards: None	

From: Jennifer Elderkin

Sent: Tuesday, March 07, 2023 3:50 PM

To: Aaron Ruhl

Subject: RE: Gloucester Beaver Dams

Scott had been provided a copy of the memo and had discussed parameters/gave direction and guidance to staff. Brad had not received an actual copy of the 2020 memo himself until today (to my knowledge and his recollection).

The stormwater maintenance crews have been regularly notching the beaver dams in Gloucester to manage water levels and prevent flooding at the businesses in the area. Geoff Smart (EBB Environmental Consulting) performed a site visit on January 20, 2023 and suggested we notch the dams regularly to prevent flooding but no written instruction was provided. The technical memo from 2020 does identify this as a management technique as an alternative to complete removal of the dam. An additional pond leveller was also discussed at this time and Geoff is preparing a quote for this work.

Based on discussions with the maintenance crew foremen, the dams have been notched regularly since the January 20 site visit (as backed up by the crew timesheets). Typically, crews were sent on a Friday to ensure businesses would not flood over the weekend then the first working day following the weekend to ensure there would be no issues through the work week. The exact depth the dam was notched at each visit is unknown but based on crew description it was under 30cm each time which exceeds the 20cm maximum outlined in the 2020 memo.

Unfortunately, this regular preventative maintenance was completed by different Stormwater staff members and the dam height was reduced to just above the stream bed.

To avoid issues resulting from our preventative maintenance work in the Gloucester detention pond in the future we propose taking multiple steps:

- 1. Reviewing the 2020 Technical Memo with all foreman to ensure we are following the recommendations and BMPs outlined
- 2. Foreman will visit site before/with OMWs/Laborers to ensure that notching is required and we are not exceeding maximum allowable notching.
- 3. Retain EBB Consulting to provide an update to the 2020 memo to include the north east section of the Gloucester
- 4. Develop quick guide to Beaver dam notching to provide to all staff, ideally with EBB Consulting, that provides key points to ensure notching is completed in a way to complies with both DFO and the Ministry of Water, Land and Resource Stewardship protocols

Township of Langley

**

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Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4 Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Aaron Ruhl <aruhl@tol.ca>
Sent: Monday, March 06, 2023 5:53 PM
To: Jennifer Elderkin <jelderkin@tol.ca>
Subject: RE: Gloucester Beaver Dams

What happened to working under the general tech memo from a few years ago (see attached)?

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Brad Henningson < bhenningson@tol.ca>

Sent: Monday, March 06, 2023 5:01 PM

To: Jennifer Elderkin < jelderkin@tol.ca>; Aaron Ruhl < aruhl@tol.ca>

Cc: Matt Brigden < mbrigden@tol.ca > Subject: Re: Gloucester Beaver Dams

Hi All

EBB did not send out a technical memo at that time January 20 2023. Discussion with EBB was about installing a pond leveller, we were told verbally at that time we could notch the dams by hand. After talking to the crew, they said they put in not more than a one foot notch into the dams this past Friday March 3. I think what has happened since January 20 is the foreman1 has sent multiple crews multiple times to notch these dams. Small notches over time, along with head pressure have taken these dams very low. Going forward I will talk to the foreman 1 about over notching the dams & Best management practices regarding beaver dams. This afternoon I told both Foreman to stay out of this Gloucester pond.

Regards, Brad

From: Jennifer Elderkin <<u>jelderkin@tol.ca</u>>
Sent: Monday, March 6, 2023 12:18 PM
To: Brad Henningson <<u>bhenningson@tol.ca</u>>
Subject: FW: Gloucester Beaver Dams

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-06 12:10 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca >
Subject: RE: Gloucester Beaver Dams

It has been reported that staff notched the dams down to the creek bed, please confirm.

Aaron Ruhl | Manager, Engineering Operations

Direct Line: 604.532.7301

From: Jennifer Elderkin < jelderkin@tol.ca > Sent: Friday, March 03, 2023 4:35 PM

To: Aaron Ruhl < aruhl@tol.ca >

Subject: RE: Gloucester Beaver Dams

Yes, they had had Geoff from EBB out the first time we were out responding to recent flooding SRs. Staff is cautious in this sensitive area.

Sent from my Galaxy

------ Original message ------From: Aaron Ruhl <aruhl@tol.ca>

Date: 2023-03-03 4:32 p.m. (GMT-08:00)
To: Jennifer Elderkin < jelderkin@tol.ca
Subject: RE: Gloucester Beaver Dams

Was the technical memo for EBB followed when performing the works?

Aaron Ruhl, Manager, Engineering Operations Township of Langley

Sent from my Galaxy

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

From: Jennifer Elderkin < jelderkin@tol.ca > Date: 2023-03-03 4:27 p.m. (GMT-08:00)

To: Aaron Ruhl < aruhl@tol.ca >

Subject: FW: Gloucester Beaver Dams

FYI below.



Jennifer Elderkin, AScT | Stormwater Manager

Stormwater | Engineering Division 4700 – 224 Street, Langley, BC V2Z 1N4

Telephone: 604.532.7570

Web | Facebook | Twitter | YouTube

From: Brad Henningson < bhenningson@tol.ca >

Sent: Friday, March 03, 2023 4:26 PM
To: Jennifer Elderkin < jelderkin@tol.ca
Cc: Matt Brigden < mbrigden@tol.ca
Subject: Gloucester Beaver Dams

Hi Jennifer

This morning March 3, I had my Foreman 1 Dustin send a crew into Gloucester pond #2 North to notch beaver dams. There are two dams at this location that require routine maintenance. Beavers are active at this

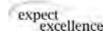
location and have caused nearby businesses to flood in the past. While at this location asked my crew what they were doing. My crew was polite and responded that they had notched the dams. As they walked away took their pictures.

Regards, Brad



Brad Henningson | Foreman II Stormwater | Engineering Division

4700 – 224 Street, Langley, BC V2Z 1N4



Web | Facebook | Twitter | YouTube