

From: [Behen, Kenneth P \(DFW\)](#)
To: [Behen, Kenneth P \(DFW\)](#)
Subject: FW: WDFW - FW: Maps, Pictures, and more information
Date: Tuesday, June 16, 2020 3:21:21 PM
Attachments: [image001.png](#)
[image003.png](#)
[image004.png](#)

From: Walker, Brian M (DFW) <Brian.Walker2@dfw.wa.gov>
Sent: Tuesday, June 16, 2020 1:29 PM
To: Baker, Bill P (DFW) <Bill.Baker@dfw.wa.gov>; Behen, Kenneth P (DFW) <Kenneth.Behen@dfw.wa.gov>; Caromile, Steve J (DFW) <Stephen.Caromile@dfw.wa.gov>
Subject: FW: WDFW - FW: Maps, Pictures, and more information

Herman Spangle's response below. Please let me know if this is sufficient for what we needed.

Brian Walker
Washington Department of Fish and Wildlife
Fish Biologist
755 S. Main St. - Office
P.O. Box 350 - Mailing
Colville, WA 99114
509-563-5490
<http://www.wdfw.wa.gov/>



From: Spangle, Herm (ECY) <HSPA461@ECY.WA.GOV>
Sent: Tuesday, June 16, 2020 1:26 PM
To: Walker, Brian M (DFW) <Brian.Walker2@dfw.wa.gov>
Subject: RE: WDFW - FW: Maps, Pictures, and more information

Brian. Thank you for the email. Since there will not be a beneficial use of the de-watering of the ponds around/over the beaver ponds, WDFW will not be required to obtain a short-term water right permit for this project. Thank you.

From: Walker, Brian M (DFW) <Brian.Walker2@dfw.wa.gov>
Sent: Tuesday, June 16, 2020 11:22 AM
To: Spangle, Herm (ECY) <HSPA461@ECY.WA.GOV>

Cc: Baker, Bill P (DFW) <Bill.Baker@dfw.wa.gov>

Subject: WDFW - FW: Maps, Pictures, and more information

Good morning, Mr. Spangle,

Thank you for talking with me on Thursday. I apologize for the size of this Email, but I thought this was the best approach. The Email below and supporting documentation is what I sent to you on March 15, 2018 to describe our pumping efforts on Flume Creek. **Please note that we are no longer working in Highline Creek, and you can ignore any references to it.**

We will be operating our pumping this fall (and in the future, if needed) according to the methods described in the attached write-up and Email below. We will not be using any diversion or gravity piping, as we were unable to make it work correctly.

Succinctly, we will be pumping water from the beaver ponds on Tributary 9 into the mainstem of Flume Creek approximately 0.1 – 0.25 miles upstream of the confluence of Tributary 9 and Flume Creek. As Tributary 9 joins Flume Creek just downstream of the beaver ponds, the water we pump to mainstem Flume is winding up in the same place, just getting there a little bit early.

Please let me know if you have any questions, and please confirm that we do not need any permit from Ecology to operate our pumping during treatment.

Thank you,
Brian Walker

Brian Walker
Washington Department of Fish and Wildlife
Fish Biologist
755 S. Main St. - Office
P.O. Box 350 - Mailing
Colville, WA 99114
509-563-5490
<http://www.wdfw.wa.gov/>



From: Walker, Brian M (DFW)

Sent: Thursday, March 15, 2018 9:31 AM

To: Spangle, Herm (ECY) <HSPA461@ECY.WA.GOV>

Cc: Baker, Bill P (DFW) <Bill.Baker@dfw.wa.gov>

Subject: Maps, Pictures, and more information

Good morning, Mr. Spangle,

Thank you for getting back to me so quickly! Please find attached the maps you requested, as well as some additional information about our projects. I'll try to give you a call later this morning or afternoon. The topo map background worked well for Flume Creek, but the Highline Creek project area is so small that the topo background became grainy and distracting, so I used an aerial photo instead. Please let me know if you'd rather have the topo background for Highline Creek and I can update the maps for you.

Highline Creek:

Highline Creek Maps - "Highline Creek Area with TRS" shows the location of Highline Creek in Northern Pend Oreille County, as well as the township, range, and sections of the Highline Creek project area. "Highline Creek Project Area" is focused on the Highline Creek drainage, and shows the area of off-channel standing water (indicated by a red polygon). "Highline Creek Diversions" is a close-up of the off-channel standing water area (red polygon) with possible diversion sites.

Highline Creek is a small tributary to Sullivan Creek located immediately north of Sullivan Lake. Highline Creek flows through a flat, meadow area at the base of steep hills. A multitude of seeps and base-wall springs emerge from the base of the hills. The off-channel standing water area (shown as the red polygon on maps "Highline Creek Project Area" and "Highline Creek Diversions") is located at the base of the hills and is fed by multiple basewall seeps and springs. The entire Highline Creek drainage is located in the Colville National Forest (USFS).

Highline Creek was found to have the highest density of non-native Brook Trout in the Sullivan Creek drainage, and was treated with rotenone in September 2017. Highline Creek is scheduled to be treated again in August 2018 (Most non-native fish eradication projects with rotenone schedule for 3 years – we will likely treat in August 2019, as well). Flow times suggested that deactivation of rotenone at the terminus of the project area with potassium permanganate would require about 30 hours, but due to slow discharge from the off-channel standing water area, deactivation took approximately 100 hours. We are proposing to use gravity-fed piping or to pump water from the standing water area to mainstem Highline Creek to dewater this area as much as possible prior to treatment. I would estimate that our piping activities would occur over a 1 month period (beginning in mid-late July), with substantially less time required (1-2 weeks) if we have to use a pump. We would prefer to use the gravity-fed piping if practical.

Flume Creek:

Flume Creek Maps – "Flume Creek with Trib 9 Area Map" shows the Flume Creek drainage and Tributary 9 (in red), as well as the township, range, and sections. "Trib 9 with Beaver Activity" shows the Tributary 9 drainage, with beaver dams and small ponds (brown dots) and larger ponded areas (blue polygons). Also shown in this map are potential diversion sites.

Flume Creek is currently going through the proposal process to be treated with rotenone to remove non-native fish. The project was originally proposed to begin in 2019, but will likely not commence until 2020 due to logistical difficulties. Field surveys revealed a series of inactive and antiquated beaver complexes on a small tributary to Flume Creek (Tributary 9) that were inhabited by non-native Brook Trout. Tributary 9 and Flume Creek in this area flows through the Colville National Forest (USFS). Beaver complexes are problematic for non-native fish eradication due to the complexity of habitat and likely groundwater recharge. Tributary 9 parallels mainstem Flume Creek for approximately 0.4 miles, and flows within 100 – 200 feet of Flume Creek in many locations. We propose to pipe or pump water from Tributary 9 above the beaver complexes to dewater the ponds as much as possible prior to treatment. I estimate that piping would require approximately a month

to be effective, with less time needed (1-2 weeks) for pumping. We would prefer to use the gravity-fed piping option if practical. Piping would likely begin in mid-July prior to a treatment date in mid-August.

Although we will likely not treat Flume Creek until 2019 or 2020, we would like to install piping this summer (2018) for approximately a week to see if the diversion option is feasible. We have some concerns that groundwater recharge may continue to fill the beaver complexes, and if so, would need to come up with a different strategy for effectively removing non-native fish from Tributary 9. We would propose to try the temporary piping diversion in July or August of this year.

In terms of the piping design, please find attached two pictures (“Smalle Fish Totes” and “Smalle Fish Totes Feed”) showing a system for providing a flowing water source from a spring to totes set up to hold fish. The system receives water from the spring by virtue of a Rubbermaid tote cut in half and situated to catch the flow from the spring. This water then flows through the piping into the fish boxes, providing a continuous, clean water source.

The pictures are for reference only, as we would not be using fish totes. We propose to use a similar Rubbermaid tote cut in half to catch the flow, and allow the water to flow through piping to exit into the mainstem of Highline or Flume Creek.

Please let me know if this E-mail made it to you in good order! I’m a little concerned due to all the attachments, but I think it will go through. Please let me know if I can answer any questions or provide more information, maps, etc. I’ll try to call later this morning or afternoon, or you’re welcome to give me a call at your convenience. I’ll be in the office all day today.

Brian

Brian Walker
Washington Department of Fish and Wildlife
Fish Biologist
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