

STATE OF WASHINGTON  
REPORT OF EXAMINATION  
FOR WATER RIGHT APPLICATION

PRIORITY DATE	WATER RIGHT APPLICATION NUMBER
July 6, 2020	S3-30897

NAME AND MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
The Peter Wagner and Tonye-Marie Castaneda Revocable Family Trust 4252 Wilcox Road Northport, WA 99157	

--- APPLICATION DENIED ---

Total Rate and Quantity Authorized for Diversion	
DIVERSION RATE (cfs)	ANNUAL QUANTITY (ac-ft/yr)
N/A	N/A

cfs = Cubic Feet per Second; ac-ft/yr = Acre-feet per Year

Proposed Purpose(s)			
PURPOSE	DIVERSION RATE (cfs)	ANNUAL QUANTITY (ac-ft/yr)	PERIOD OF USE
Irrigation	1 cfs	360	4/1 – 10/31

IRRIGATED ACRES
85.5 acres

Proposed Source Location			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Stevens	Fivemile Creek	Columbia River	WRIA 61

SOURCE NAME	PARCEL	TOWNSHIP	RANGE	SECTION	QQ Q	LATITUDE	LONGITUDE
Fivemile Creek	5060200	39 N.	40 E.	18	SE¼NE¼	48.8878°N	-117.7990°W

QQ Q = Quarter Quarter

Datum: WGS84

**Place of Use**

PARCEL(S)

N/A

**LEGAL DESCRIPTION**

N/A

**Proposed Works**

N/A

**Development Schedule**

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE
N/A	N/A	N/A

**Findings of Fact and Order****Findings of Facts**

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is not available from the source in question; that there will be impairment of existing rights; and that there will be detriment to the public interest.

Therefore, I ORDER that Surface Water Application No. S3-30897 be **DENIED**.

**Your Right To Appeal**

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of the Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Street Addresses	Mailing Addresses
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
<b>Pollution Control Hearings Board</b> 1111 Israel RD SW, Ste 301 Tumwater, WA 98501	<b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903

For additional information, visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency rules, visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.

### Authorizing Signature

Signed at Spokane, Washington, this 2<sup>nd</sup> day of June, 2022.



Jaime Short, Section Manager  
 Water Resources Program/Eastern Regional Office  
 Department of Ecology

## INVESTIGATOR'S REPORT

Water Right Application No. S3-30897 (The Peter Wagner and Tonye-Marie Castaneda Revocable Family Trust)

### BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number S3-30897. On June 26<sup>th</sup>, 2020, the applicant filed the water right application with supporting attachments with Ecology. The application proposes to irrigate 85.5 acres from Fivemile Creek, a tributary of the Columbia River.

Peter Price with Aspect Consulting conducted a site visit of the project site on June 17<sup>th</sup>, 2021 as part of a cost reimbursement review of this application. The cost reimbursement review and contract is no longer in place and was cancelled on March 22, 2022. This report contains data collected from the original Aspect Consulting investigation and draft report and some information provided to the Department from Jill Van Hulle of Aspect Consulting. Aspect Consulting reviewed available information pertaining to site conditions, existing points of diversion, irrigation practices and crop types, historical water use changes, area water rights, and potential effects of proposed changes on any existing water rights. The Department of Ecology reviewed that information and Gene Drury (Ecology/Water Resources) was at the property on June 2, 2021 with manager, Philip Creach to view the existing water system and installed measuring device on the pond outlet.

**Table 1. Summary of Requested Water Right**

<b>Applicant Name</b>	The Peter Wagner and Tonye-Marie Castaneda Revocable Family Trust
<b>Priority Date</b>	June 26, 2020
<b>County</b>	Stevens
<b>WRIA</b>	WRIA 61
<b>Water Source</b>	Fivemile Creek
<b>Tributary to</b>	Columbia River
<b>Place of Use</b>	The S½ of the NE¼ of Section 18, the NW¼ of the SW¼ of Section 18, and W½ of the NW¼ of Section 17, all within Township 39 N., Range 40 E.W.M.

<b>Purpose</b>	<b>Instantaneous Rate (cfs)</b>	<b>Annual Quantity (ac-ft/yr)</b>	<b>Begin Season</b>	<b>End Season</b>
Irrigation (85.5 acres)	1 cfs	360 ac-ft/yr	4/1	10/31

<b>SOURCE NAME</b>	<b>PARCEL</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>SECTION</b>	<b>QQ Q</b>	<b>LATITUDE</b>	<b>LONGITUDE</b>
Fivemile Creek	5060200	39 N.	40 E.	18	SE¼NE¼	48.8878°N	-117.7990°W

WRIA = Water Resource Inventory Area; cfs = Cubic Feet per Second; ac-ft/yr = Acre-feet per Year; QQ Q = Quarter Quarter

Datum: WGS84

### ***Notification to the Washington Department of Fish and Wildlife***

Per RCW 90.03.280 and 77.57.020, Ecology must give notice to the Washington Department of Fish and Wildlife (WDFW) of applications to divert, withdraw, use, or store water.

Steve Boessow, Water Right Biologist for the Washington State Department of Fish and Wildlife (WDFW) was provided notice of this water right application on August 31, 2021, and responded in a letter dated September 1, 2021. WDFW did not support any further water rights being issued from Fivemile Creek, and recommended the denial of the application.

The September 1, 2021 letter from WDFW states:

Based on impacts to fish and/or wildlife and the habitat they rely on, and pursuant to 77.57.020 RCW, WDFW recommends denial of this application. This is a small seasonal stream that falls under the 5 cfs MAF and 5 ft. guidelines described in WDFW Policy 5204. Fivemile Creek is also included in Ecology's SWSL list as one of only 10 Columbia River tributaries singled out in WRIA 61.

With no instream flow rule to protect minimum flows, the applicant would be allowed to take 100% of the stream when flows dropped to or below 1 cfs. This would extend the frequency and duration of dry periods and subsurface flow, further impacting aquatic life. If an instream flow rule were to be established on Fivemile Creek it would likely preclude any further diversions. We do not support any further water rights being issued from Fivemile Creek.

This letter does not exempt the applicant from compliance with state Hydraulic Code (Chapter 77.55 RCW) and fish screening statutes (RCW 77.57.010, RCW 77.57.040, and RCW 77.57.070), which may be required in order to divert water.

Additional comments and clarification of the recommended denial were provided to the Department from Mr. Boessow on March 23, 2022. These comments are addressed in this Report of Examination in the section entitled *Consideration of Comments and Protests*.

#### ***State Environmental Policy Act (SEPA)***

Under chapter 197-11 WAC, a water right application is subject to a SEPA threshold determination (i.e., an evaluation of whether there will be significant adverse environmental impacts) if any of the following conditions are met:

- It is a surface water right application for more than 1 cfs, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cfs, so long as that irrigation project will not receive public subsidies;
- It is a groundwater right application for more than 2,250 gpm;
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Considering that none of the above conditions are met, the application under review is categorically exempt from a SEPA threshold determination.

**Public Notice**

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted, and used. Notice of this application was published in the Statesman-Examiner on July 22 and July 29, 2020.

In response to public notice of this application, the Department of Ecology received protests from the parties listed in Table 2. These protests are considered in the portion of this Report of Examination dedicated to addressing impairment.

**Table 2: Summary of Protests**

<b>Protester</b>	<b>Date of Protest</b>	<b>Summary of Protest</b>
James Berg	August 27, 2020	Concerned the applicant's surface water use will diminish local groundwater availability.
Peter Sherve	August 12, 2020	Experienced reduced surface water availability due to applicant's intended water use. State that Fivemile Creek flow is not adequate to satisfy senior downstream users if more water is appropriated upstream.
Joseph & Carol Wichmann	August 27, 2020	Impacts of applicant's water use has not been determined.
George & Catherine Scott	August 27, 2020	Have an existing spring source with a Warranty Deed and Spring and Water System Agreement. Later clarified that the primary concern was about impacts to the flow of Fivemile and use of their senior water right
Carl & Pamela Tenney	September 1, 2020	Appropriating Fivemile Creek may result in loss of aesthetics of waterfall and nullify the ability to install a micro hydro generator to power the Tenneys' residence. Applicant's project is resulting in higher turbidity downstream and affecting water quality of the creek. Increased upstream use may eliminate wetlands downstream.

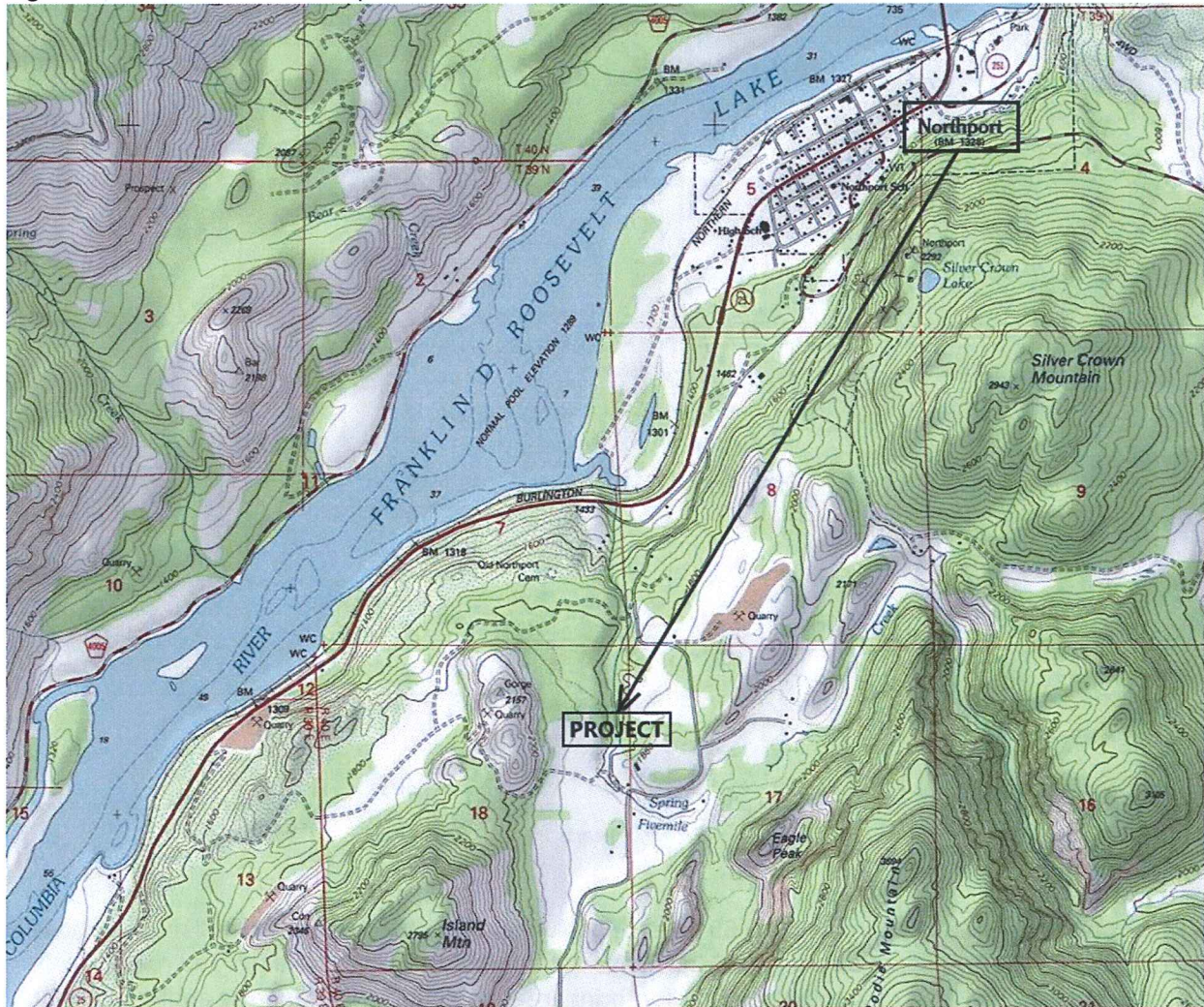


## INVESTIGATION

### Site Description

The project site is located two miles southwest of Northport, WA in Stevens County (Figure 1).

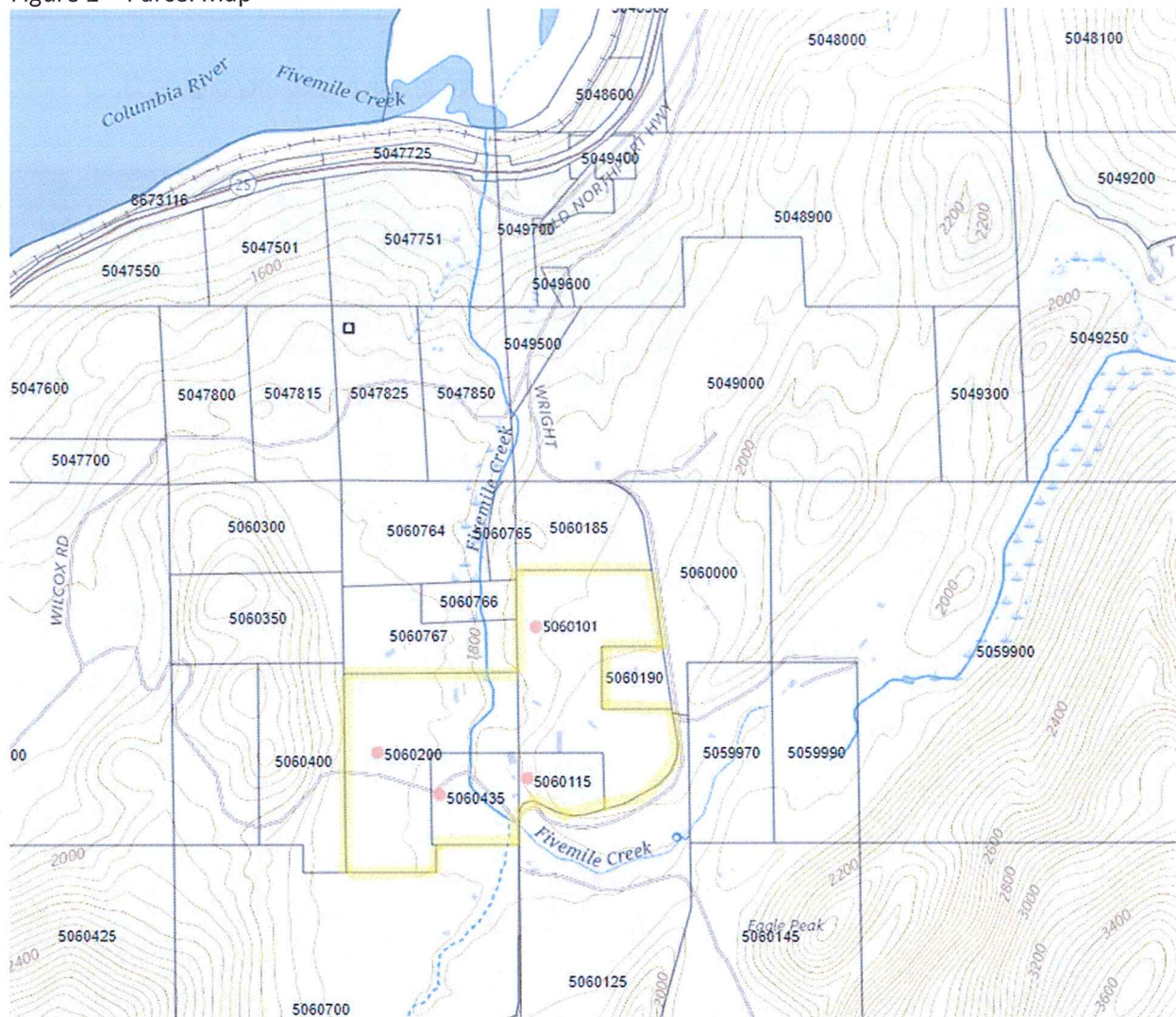
Figure 1 – General location map



The site consists of Stevens County Parcel Numbers: 5060200 (32.93 acres), 5060435 (10 acres), 5060115 (8.3 acres), and 5060101 (34.27 acres) (Figure 2). The proposed water source, Fivemile Creek, flows northerly through the applicant's property before discharging to the Columbia River.



Figure 2 – Parcel Map



The property consists of approximately 85 acres of pasturelands with a gymnasium and multiple housing structures and barns (Figure 3). The applicants have determined that once buildings and roads are accounted for that 72 acres within the larger footprint are suitable for irrigation. The applicants emphasize that the amount of acreage irrigated each year can be managed on a flexible basis and reduced accordingly.

The proposed POU was previously irrigated under a water right which the Department of Ecology recently determined was relinquished due to non-use extending over 5 years.



Figure 3 – Property aerial photo



### ***Water System Description***

The applicant's water system utilizes a half-acre pond that is approximately 10 feet in depth. When water is present in Fivemile Creek, it flows into the pond via a culvert. The pond serves to store water and water remains in the pond even during times when flows are low or non-existent in upstream reaches of Fivemile Creek, suggesting that there is groundwater contribution to the pond. When water levels are high enough in the pond, water is discharged into Fivemile Creek via a discharge point that is instrumented with a fixed staff-gage and v-notch weir. The weir and staff-gage were established in May of 2020, and professionally designed by the engineering firm Open Channel Flow (OCF).

Aspect Consulting's site visit reported the staff-gage at 0.84 feet which corresponds to a flow rate of 0.32 cfs based on the developed rating curve. The rating curve was established after the installation of the weir and staff-gage in May 2020. Aspect conducted a bucket test at the culvert downstream of the weir was used to confirm the discharge rate, and a flow rate of 0.26 cfs was observed. Aspect noted that given that it can be challenging to capture the full discharge in a bucket, the rating curve appears to be within reasonable accuracy tolerances.

The existing installed water system consists of two 20-hp pumps - each pump is controlled by a 30-hp single phase variable frequency drive. The pumps are located on the pond and are connected to the two main 5-inch irrigation lines running to hose reels in the two main fields. Application method is auto retractable lines with adjustable retraction speed attached to gun style sprinklers mounted on rubber wheels. The area around the buildings is generally irrigated using smaller sprinklers that are positioned as needed. The water is proposed to be used for irrigation of grass-type crops, such as hemp, and grass located around the building complex.

### ***History of Water Use***

Surface Water Certificate No. 9931 was issued to Chester W. and Ruth Wilcox on April 20, 1967 with a priority date of November 15, 1961. The certificate authorized diversion of public waters of the State of Washington from Fivemile Creek in the amounts of 1.00 cubic foot per second and 360 acre-feet per year, for the irrigation 90 acres. The authorized point of diversion was within the SE¼NE¼, Sec. 18, T. 39 N., R. 40 E.W.M. The place of use was described as follows: NW¼NW¼ of Sec. 17; SW¼NW¼ of Sec. 17; NW¼SW¼ of Sec. 17; S½NE¼ of Sec. 18; ALSO: Commencing at a point on the subdivision line of Sec. 18, 630 feet west of the quarter section corner on the east side of Sec. 18; thence west on subdivision line 1016 feet; thence south 205.9 feet; thence east 1016 feet; thence north 205.9 feet to point of beginning. All above in T. 39 N., R. 40 E.W.M. (Located on Stevens County Parcels Nos. 5060000, 5060101, 5060125, 5060185, 5060190, 5060200, 5060400, 5060435 and 5060767). The Proof of Appropriation under this right was filed by Wilcox in 1965. It appears that the system was developed and water may have been used up until around 1987 when irrigation ceased for a period of at least 10 years. Today, the place of use consists of eight landowners. Two of the larger fields were purchased by the applicant in 2004.

In November of 2019, Joe Wichmann, who owns land adjacent to applicants, contacted the Department and reported that new PVC pipe and new irrigation system was being installed in fields next to his property. Mr. Wichmann stated that he has lived near the fields since 1995 and has never seen them irrigated. He was concerned about the new water use and the effect it might have on his domestic well. He stated that his neighbor, Jim Berg, has also lived in the area since 1983. Mr. Berg was contacted and told Ecology that irrigation of the fields stopped around 1994. The Department visited the site on November 21, 2019 and witnessed recently dug ground with newly installed piping and risers. Photographs were taken. A quick review of aerial photographs confirmed what the nearby landowners have stated about the long period of non-use of water.

An Order of Relinquishment (Order Docket No. DE 18175), was issued to Surface Water Certificate No. 9931 on June 3, 2020 which was later appealed by Applicant to the Pollution Control Hearings Board (PCHB No. 20-056). Appeal 20-056 is currently stayed pending issuance of this decision. Per agreement of the parties, Applicant must elect to either appeal this decision or prosecute PCHB No. 20-056 within one week of the date of this decision.

### ***Hydraulic Considerations***

The Aspect Consulting investigation of June 17, 2021 found the following:

Water is present in Fivemile Creek below the applicant's property due to a combination of overflow from the pond and natural groundwater discharge. The downstream reach of Fivemile Creek exhibits surface flow year-round even when the upper reach goes dry at the surface, which is indicative of a subsurface flow component to the downstream reach. Thus, while a portion of the flow originates from the pond, a much larger component is simply derived from naturally occurring ground water discharge.

Since the pond contribution is relatively small compared to the larger drainage patterns of the watershed, the applicant is requesting that a flow trigger of 0.5 cfs be established at an appropriate location below the impoundment and above the Sherve diversion. Since the source of irrigation water is the pond, and the pond remains full year-round due to groundwater discharge, the period when water is physically available extends later into the year than would be indicated by water flow above the Wagner property where Fivemile Creek is intermittent in nature.

Below the Wagner's pond, Fivemile Creek is fed in part by discharge from the pond, but more so by the naturally discharging groundwater that enters into the lower reaches of the creek due to the presence of an erosional canyon which positions the Creek at elevations below the shallow aquifer. A more detailed discussion of groundwater surface water relationships within the Fivemile Creek watershed are included in the sections below.

This phenomenon of increased flows in the lower creek was noted during the site visit which occurred during unseasonably dry conditions (June 2021). During the site visit, Fivemile Creek was dry in reaches above the pond and flowing in reaches below the pond. The v-notch weir at the site recorded that the flow from the pond into the creek was approximately 0.3 cfs, however, it was observed that even during these conditions, the downstream headwork's diversion for a neighboring property (Peter Sherve) was still functional, and that Sherve was able to irrigate consistent with what appears to be his historical operations.

Streamflow data from the installed v-notch weir at the pond outlet was provided by Aspect Consulting for the 2021 season. The streamflow measurements are as follows:

**Table 3: Aspect Flow data from Fivemile Creek**

<b>Read Date</b>	<b>GPM</b>	<b>CFS</b>
5/21/2021	296	<b>0.66</b>
5/28/2021	228	<b>0.51</b>
6/4/2021	228	<b>0.51</b>
6/11/2021	223	<b>0.50</b>
6/18/2021	212	<b>0.47</b>
6/25/2021	201	<b>0.45</b>
7/2/2021	181	<b>0.40</b>
7/9/2021	144	<b>0.32</b>
7/16/2021	131	<b>0.29</b>
7/23/2021	153	<b>0.34</b>
7/30/2021	171	<b>0.38</b>
8/6/2021	186	<b>0.41</b>
8/13/2021	217	<b>0.48</b>
8/20/2021	223	<b>0.49</b>
8/27/2021	234	<b>0.51</b>
9/3/2021	240	<b>0.53</b>
9/10/2021	246	<b>0.54</b>
9/17/2021	252	<b>0.55</b>
9/24/2021	264	<b>0.58</b>
10/1/2021	264	<b>0.58</b>
10/8/2021	276	<b>0.61</b>
10/15/2021	289	<b>0.64</b>
10/22/2021	302	<b>0.66</b>
10/29/2021	309	<b>0.68</b>
11/5/2021	316	<b>0.70</b>

Ecology has conducted stream flow measurements in the past on Fivemile Creek. From 1987 to 1991, flow measurements of the creek were taken approximately  $\frac{3}{4}$  mile downstream of the proposed point of diversion at Highway 25 within the NE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 7, Township 38 N., Range 40 E.W.M. The flows were recorded as follows:



DATE	CFS	STREAM	TRIBUTARY TO
06/18/87	<b>0.25</b>	Fivemile Creek	Columbia River
07/28/87	<b>0.16</b>	Fivemile Creek	Columbia River
08/27/87	<b>0.3</b>	Fivemile Creek	Columbia River
06/28/88	<b>0.31</b>	Fivemile Creek	Columbia River
07/26/88	<b>0.21</b>	Fivemile Creek	Columbia River
08/17/88	<b>0.13</b>	Fivemile Creek	Columbia River
07/11/89	<b>0.24</b>	Fivemile Creek	Columbia River
08/01/89	<b>0.1</b>	Fivemile Creek	Columbia River
06/07/90	<b>0.77</b>	Fivemile Creek	Columbia River
07/31/90	<b>0.48</b>	Fivemile Creek	Columbia River
08/21/90	<b>0.36</b>	Fivemile Creek	Columbia River
09/29/90	<b>0.39</b>	Fivemile Creek	Columbia River
06/12/91	<b>0.82</b>	Fivemile Creek	Columbia River
07/11/91	<b>0.415</b>	Fivemile Creek	Columbia River
08/13/91	<b>0.383</b>	Fivemile Creek	Columbia River
09/11/91	<b>0.213</b>	Fivemile Creek	Columbia River
10/13/91	<b>0.26</b>	Fivemile Creek	Columbia River

## Hydrogeologic Evaluation

---

The following hydrogeologic analysis was provided by Patrick Cabbage, Hydrogeologist for Ecology's Water Resources Program Technical Unit in Ecology's Eastern Regional Office. This application proposes to divert 1 cubic foot per second (cfs), 360 acre-feet per year (acre-ft/yr) of water from Fivemile Creek, a tributary of the Columbia River for the purpose of irrigating 85.5 acres. The season of use is from April 1<sup>st</sup> to October 31<sup>st</sup>. The diversion is located in the SE¼NE¼ of Section 18, T. 39 N., R. 40 E.W.M. This project is located in WRIA 61 in Stevens County, Washington.

### Analysis from Aspect Consulting

Aspect Consulting compiled hydrogeologic information for the project area in the summer of 2021. The following analysis includes portions of that compilation, and presents my findings. While I largely concur with the information presented by Aspect, I differ in the conclusions derived from that information.

From Aspect:

Geologic history, past reports, well logs and occurrence of groundwater provide the basis for our interpretation of local hydrogeology and hydraulic continuity between Fivemile creek and the underlying bedrock aquifer. A description of the geologic setting and stratigraphic units of the area are discussed below.

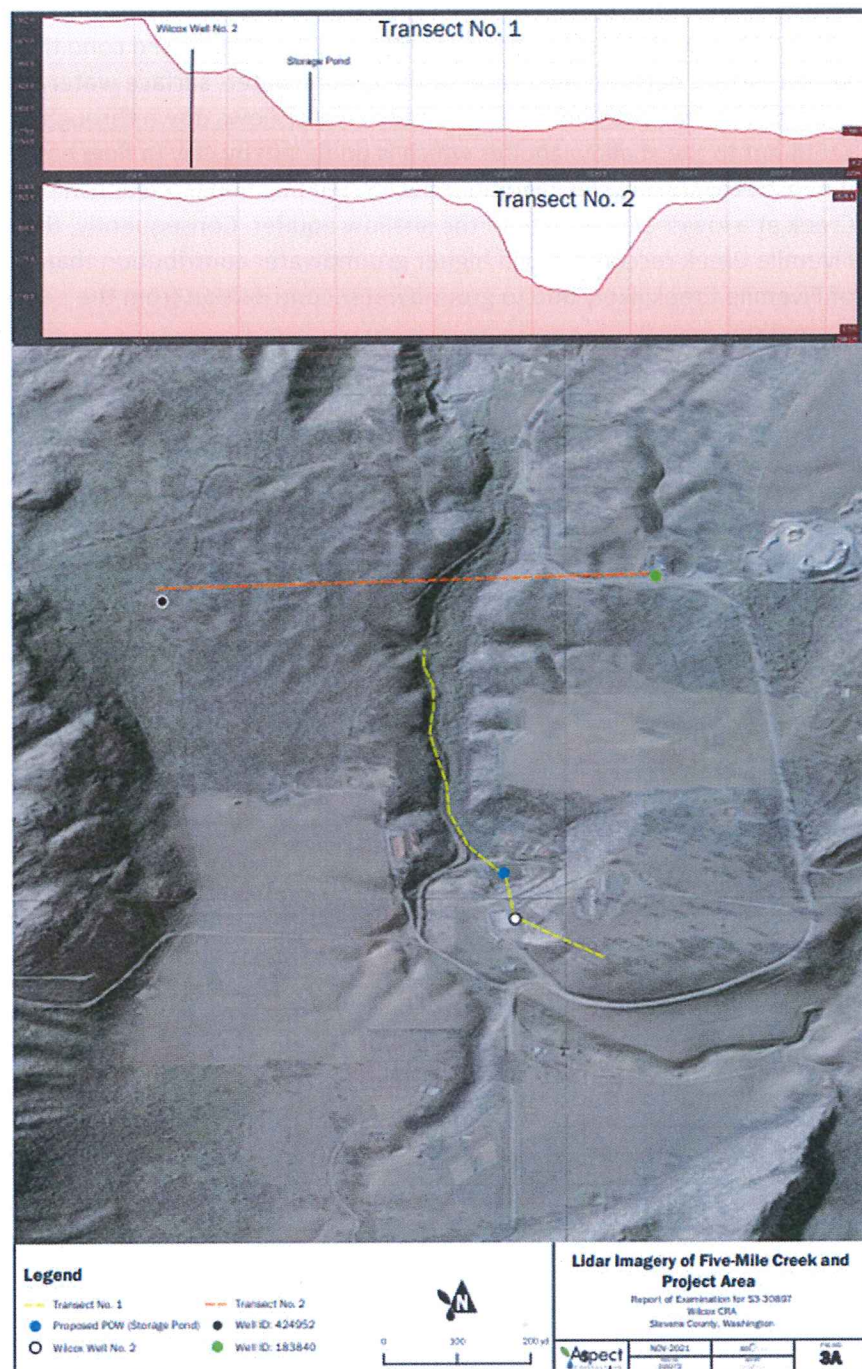
The hydrogeology of the project area is dominated by recent alluvium and glacial deposits which overlies metasedimentary bedrock, locally known as the Metaline Formation (USGS, 1971; USGS 1990). The Metaline Formation is the predominant source of groundwater in the area and consists of three units, an upper limestone unit, a middle dolomite unit and a lower interbedded limestone and shale unit.

To determine local groundwater occurrence and stratigraphy, well logs were gathered and reviewed (Figure 2) from the sections within the Fivemile Creek watershed (Sections 17, 18 and 8 of T. 39 N., R. 40 E.W.M).

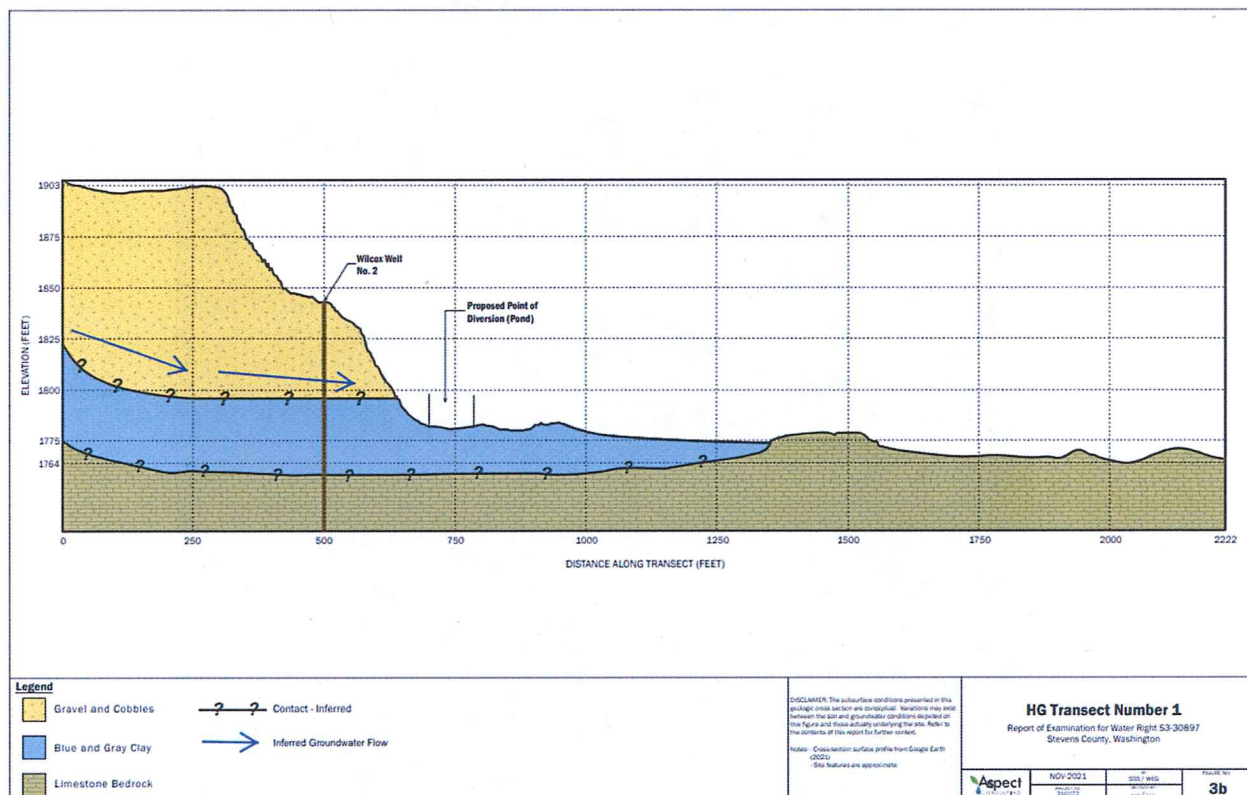




Nearby well logs suggest that the applicant's pond is located on top of a laterally extensive clay layer that is overlain by 50 feet of gravels and cobbles (Figure 3A). This is supported by information gathered from the two closest well logs (687251 and 765774) which both document 50 feet of gravels at the surface. The closest well log (687251) documents a clay layer underneath the gravel layer.



Downstream of the pond, Fivemile Creek transitions into an incised canyon that lies 80-100 feet below the surrounding area (Figure 3B<sup>1</sup>). The incised conditions below the pond are important because they reverse the groundwater- surface water relationship. For example, in the upstream reaches surface water flows down through the coarse sediment to the shallow aquifer which is underlain by clay (a flow boundary). While downstream the incised conditions switch the positional relationship and place the Creek at a lower elevation than the shallow aquifer. Consequently, the lower reaches of Fivemile Creek receive a much higher groundwater contribution than the upper reaches of Fivemile Creek likely due to groundwater contribution from the exposed Metaline Formation.





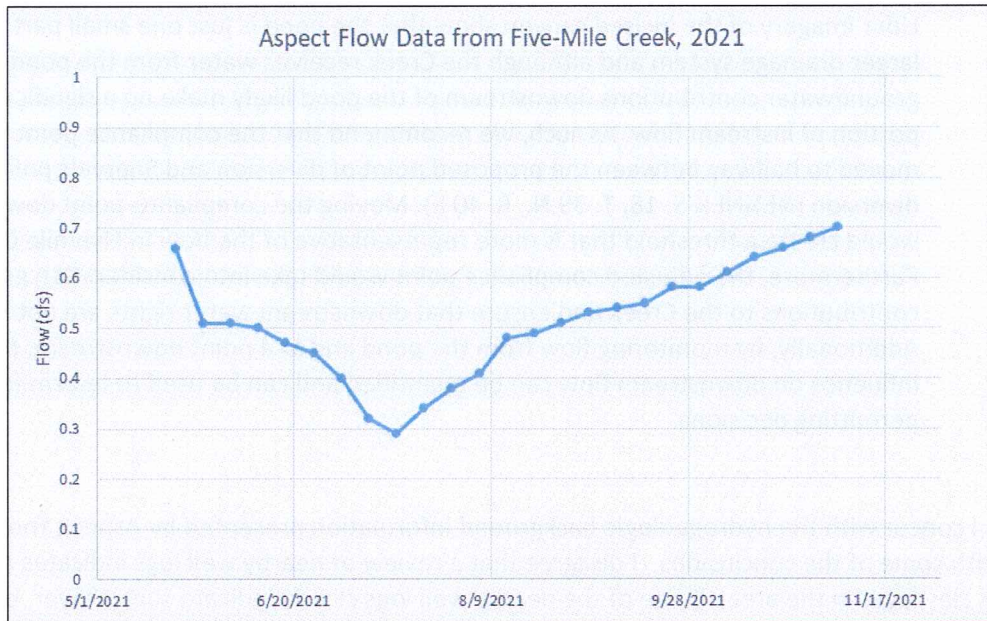
Lidar imagery of the incised canyon show that the pond is just one small part of the larger drainage system and although the Creek receives water from the pond, groundwater contributions downstream of the pond likely make up a significantly larger portion of instream flow. As such, we recommend that the compliance point to be moved to halfway between the proposed point of diversion and Sherve's point of diversion (NE¼NE¼ S. 18, T. 39 N., R. 40 E). Moving the compliance point downstream would create a threshold that is more representative of the flow in Fivemile Creek. Furthermore, the adjusted compliance point would take into consideration groundwater contributions to the Creek and ensure that downstream water rights are not impaired. Additionally, by monitoring flow from the pond and at a point downstream, the pond's influence on downstream flow can be quantified and can be used to inform future permitting decisions.

### **Analysis**

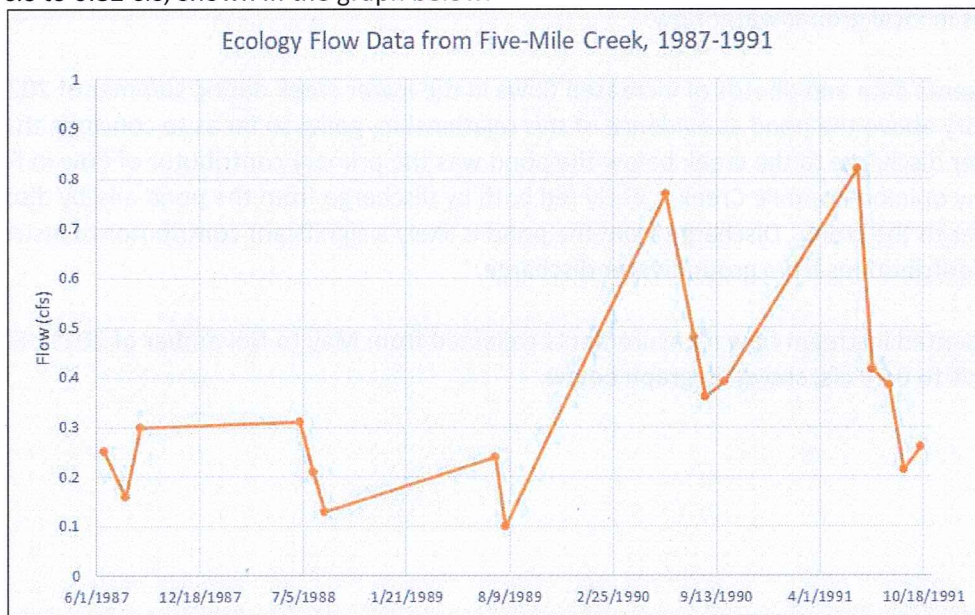
In general, I concur with the hydrogeologic background information presented by Aspect, though I disagree with some of the conclusions. I disagree that a review of nearby well logs indicates a laterally-continuous clay layer in the area. Some of the nearby well logs clearly indicate such a layer, but not all nearby well logs. Furthermore, not all nearby well logs that do indicate such a clay layer also report a relatively thick gravel layer (at least 50 ft thick according to Aspect) above the clay. The presence/absence of the laterally continuous clay layer and the overlying gravel layer has important implications in local groundwater flow.

Aspect presents data and photos of increased flows in the lower creek during summer of 2021 while the creek was dry above the pond as evidence of this relationship, going so far as to conclude that groundwater discharge to the creek below the pond was the primary contributor of flow in Fivemile creek. In my opinion Fivemile Creek is likely fed both by discharge from the pond and by discharge of groundwater to the creek. Discharge from the pond is likely a significant contributor to instream flow, as well as contributions from groundwater discharge.

Aspect presented instream flow measurements collected from May to November of 2021. Flows ranged from 0.29 cfs to 0.70 cfs, shown in graph below.



Ecology collected instream flow measurements from Fivemile Creek from 1987-1991. Flows ranged from 0.10 cfs to 0.82 cfs, shown in the graph below.



There are a couple of important takeaways from the instream flow measurements collected by Aspect and Ecology. First, the range of measured instream flow measurements fall within a similar range for the 1987-1991 measurements and the 2021 measurements; even accounting for seasonal variations, streamflow from early summer to late fall is all within the same order of magnitude. Based on the size of the Fivemile Creek channel and the size of the drainage which feeds the creek, it is likely that flow in the spring months is also within this same order of magnitude. Second, both the 1987-1991 measurements and the 2021 measurements indicate similar seasonal variation; lower streamflow in the summer months followed by higher streamflow in the late fall months.

### **Impairment Considerations**

Aspect presented an impairment analysis, concluding that impairment of nearby groundwater users is unlikely. Aspect determined that there were potentially two downstream surface water users whom could potentially be impacted by this application, but these users were not likely to be impaired. In my opinion Aspect did not provide sufficient evidence to determine the likelihood of impairment. Aspect reasons that because the diversions of downstream surface water users (Sherve & Scott) was under water during summer 2021 flows, there was no chance of impairment under future water use under this application. This is not a logical conclusion, especially in light of a lack of data regarding how much water was being pumped from the Sherve diversion on the day of observation, and how that relates to the total allowed under that water right.

Furthermore, a SWSL was issued on Fivemile Creek, and was referenced in a 1961 surface water application. The SWSL called for a minimum instream flow of 1.0 cfs to be left instream. It is significant to note that none of the instream flow measurements presented above met the 1.0 cfs provision. It is my conclusion that the potential exists for impairment of downstream surface water users, and that flows in Fivemile Creek are not sufficient to support this application under the SWSL.

### **Consideration of Protests**

James Berg - 4261 Wilcox Road, Northport, WA

Mr. Berg was concerned that the amount of water diverted under this application will affect the surrounding wells in the area of the project and diminish local groundwater availability.

The Berg property is located on Stevens County Parcel No. 5060125, directly south of the applicant's property by about ¼ mile. The Berg well is completed in a gravel aquifer at a depth of 152 feet and was constructed by Fogle Pump in 1987. This well serves two homes, one on Parcel 5060125 and the other on Parcel No. 5060145.

Aspect Consulting reported that when considering possible impairment to the Berg well it is important to note the positional relationship between the applicant's pond and the Berg well. For example, the depth of the Berg well is approximately 1,684 feet amsl (above mean sea level), with a documented static water level of 1,766 ft amsl while the pond is approximately 1,774 ft amsl (assuming a depth of 10 feet). Thus, if the pond and the well are hydraulically connected and share the same elevation head (water level), the pond (being much higher than the well) would go dry before effecting the available drawdown of the Berg well. Therefore, Ecology has determined that the proposed diversion and water use is unlikely to have an impact on the protestant's water use or their ability to use their well.

Joseph & Carol Wichmann – 4268 Wilcox Road, Northport, WA

The Wichmann's expressed concern about the impact of 1 cfs diversion on the aquifer system and existing residences in the valley. They had concerns about the existing installed irrigation system and intended use of the property.

The Wichmann property is located on Stevens County Parcel No. 5060700, south of the applicant's property. The Wichmann's have two wells. One is a drilled 400 foot well and the other is a 17 foot hand dug well used for domestic supply. Aspect Consulting reported that the 400 foot well (ABQ-888) was constructed by Fogle Pump in 1995 and was completed in the limestone aquifer of the Metaline Formation. This was a deepening of the original well which was drilled in 1994 to a depth of 260 feet. As noted in the Hydrogeologic Investigation above, the pond is believed to be fed by glacio-fluvial sediments overlying the limestone bedrock and thus, withdrawals from the pond are not expected to impair deep groundwater users. If in some way the pond is hydraulically connected to the limestone aquifer, the pond (1,774 ft amsl) would go dry long before the well (1,580 ft amsl) based on the relative elevations. Furthermore, the Wichmann property is located up gradient from the applicant's property which decreases the probability of impairment resulting from surface water withdrawals.

Peter J. Sherve – 4150 Wright Road, Northport, WA

Mr. Sherve experienced reduced surface water availability due to applicant's intended water use when they ran their irrigation system in 2020. In his protest, he stated that Fivemile Creek flow is not adequate to satisfy senior downstream users if more water is appropriated upstream.

The Sherve property is located approximately 1 mile north-northeast of the applicant's property. Mr. Sherve currently uses water under Surface Water Right Claim No. 022358, filed February 2, 1973. The claimed priority is August 1897 for diversion from Fivemile Creek for the purposes of domestic supply and irrigation. The amount claimed was 2 cfs, 160 acre-feet for irrigation of 40 acres. The amount used at the time of filing in 1973 was 0.20 cfs, 32 acre-feet for irrigation of 7 acres.

An observation of the Sherve's diversion from Fivemile Creek made during the site visit by Aspect Consulting confirmed the intake pipe was still covered by water. This visit corresponded to the discharge bypass rate from the Wagner's pond of about 0.3 cfs. Based on Aspect's observation, this downstream intake appeared to be functional and was not impaired even during low flow conditions, despite the active irrigation noted on the Sherve property during the June 12, 2021 site visit. Ecology contacted Mr. Sherve and he stated that he irrigated approximately 3 acres in 2021 due to the extreme low flow conditions. He was able to run 2 or 3 sprinklers at about 15-20 gpm or about .045 cfs. During the 2020 irrigation season, the applicant irrigated the two large fields (Figure 3 – area in red) with the two large hose reels and irrigation guns. During this time Mr. Sherve noticed a significant decrease in the flow of Fivemile Creek at his point of diversion and was not able to have the water to satisfy his senior right. Mr. Sherve said that he contacted the applicant in 2020 and they agreed to cut back the irrigation to 12 acres to provide enough water downstream. He is concerned the proposed diversion will impair his senior right.

Carl & Pamela Tenney - 4162 Wright Road, Northport, WA

The Tenney property is approximately 0.5 miles north northeast of the applicant's property and downstream of the applicant's pond. The Tenneys expressed concerns of increased turbidity due to the applicant's new water use. Appropriating Fivemile Creek may result in loss of aesthetics of waterfall and nullify the ability to install a micro hydro generator to power the Tenneys' residence.



Aspect Consulting investigated this protest and found that the temporary increase in turbidity was likely caused by a road improvement project on the applicant's property in 2016 and was temporary. The Tenneys were also concerned that upstream use would remove the downstream wetlands. However, considering the amount of groundwater that is continually discharging into Fivemile Creek below the pond it is unlikely that applicant's proposed use is large enough to substantially change the drainage patterns of the watershed. Aspect's investigation has not identified any mechanism for the proposal to directly impact the Tenneys. The Tenneys do not have a surface water right and thus have no legal authority to use Fivemile Creek for hydropower.

George Allan Scott – 4080 Old Northport Rd, Northport, WA

The Scott property is approximately one mile north of the applicant's property. Fivemile Creek flows through property owned by Mr. Scott. He irrigates about one acre of land under Surface Water Right Claim No. 001382, filed on October 12, 1970 (Stella Rainey) with a claimed priority of 1902. Mr. Scott moved to the property in 2001.

Mr. Scott was interviewed by Aspect Consulting and indicated that "There never has been enough water to irrigate 85 acres, even before the proposed application. The land they are on has been successfully dry farmed for years before they moved into the area". Scott wants the creek to maintain flow for emergency fire suppression. The reason Mr. Scott bought the land was because of the presence of the creek; he feels that if the application is accepted as is, the creek would not flow anymore. Mr. Scott's initial protest mentions a spring water system and references Parcel 5047750 – this is incorrect. Mr. Scott actually owns Parcel 5047751. When contacted by Ecology he clarified that his main concern was the flow of Fivemile Creek through this parcel and his inability use water under his senior water right. When the applicant's did use water in 2020, he noticed a significant drop in the flow of water at his point of diversion which is just below the Sherve diversion. He is concerned about impairment to his right.

Washington Department of Fish & Wildlife (WDFW) Comments

Steve Boessow, Water Right Biologist for WDFW, provided comments on this application on September 1, 2021. WDFW's comments are rooted in the agency's interpretation of it is **Policy Document 5204 Managing Instream Flows and Water Projects**. The applicant's request is categorized as a Major Water Project, which is defined as a project that changes streamflow by at least 1 cfs and at least 10 percent at any point along the stream when flow is at least the 90 percent exceedance flow for any given month.

Under Policy 5204, WDFW will base instream flow recommendations on the best available or best obtainable information depending on the magnitude of the project. This can include recommending a minimum flow that is based on the relationship between fish and wildlife habitat and stream flow. The categories that WDFW is to consider include the following (paraphrased) list of considerations:

- Protect full fish and wildlife production potential;
- Maintain riparian and instream wildlife habitat;
- Manage water use and allocation to provide channel forming and maintenance flows;
- Protect hyporheic flows;
- Maintain fish passage and safe downstream fish migrations;
- Provide mitigation for, or enhancement of, adversely affected fish and wildlife habitat, to ensure “no net loss” of function and value;
- Provide habitat for desirable aquatic nongame wildlife species, even instreams without populations of fish;
- Preserve future enhancement and/or compensation options where the potential fish habitat is unused because of barriers to immigration.
- Account for current management plans and activities;
- Avoid adverse impacts on estuarine and marine habitats; and
- Provide connectivity of channel processes such as movement of sediment and debris.
- Further, the WDFW is to discourage diversions from very small streams.

WDFW notes that Fivemile Creek is a small stream that it is largely intermittent – drying up during many years in the upper reaches. Fivemile Creek is a direct tributary to the Columbia River, however it joins the Columbia at a point generally associated with the Lake Roosevelt reach.

In WDFW’s comment letter, it invokes RCW 77.57.020, which provides it is the policy of the state that a flow of water sufficient to support game fish and food fish populations be maintained at all times in the streams of this state. Under this provision, a water permit may be denied if issuing the permit might result in lowering the flow of water in a stream below the flow necessary to adequately support food fish and game fish populations in the stream. Based on impacts to fish and/or wildlife and habitat they rely on, WDFW recommended denial of this application. Fivemile Creek is a small seasonal stream that falls under the 5 cfs MAF and 5 ft guidelines described in WDFW Policy 5204. WDFW is concerned that the 1 cfs requested would extend the duration of dry periods and subsurface flow, further impacting aquatic life. If an instream flow were to be established on Fivemile Creek it would likely preclude any further diversions.

Aspect Consulting noted that according to the Washington State Department of Transportation (DOT) Fish Passage Inventory, there is a fish barrier (WFDW ID 998844) located on Fivemile Creek directly up gradient of the Columbia River. This barrier is classified in the DOT database as zero percent passable and thus, fish migration between the Columbia River and Fivemile Creek is highly unlikely. Additionally, a waterfall (located approximately 50 feet upstream Old Northport Highway) was observed during the Aspect Consulting 2021 site visit. Based on the waterfalls steep slope (70-90 degrees) and height (16 inches) it is likely that the waterfall acts as a second fish barrier fish further decreasing the chances of fish presence in Fivemile Creek.

On March 23, 2022, Steve Boessow with WDFW provided additional comments and clarification to previous comments regarding this application. His comments were as follows:

Numerous native and non-native fish species have access to the lower reaches of Fivemile Creek downstream of the waterfall and culverts. Fivemile Creek empties into Lake Roosevelt, and the lower reaches are accessible to those fish residing in the lake. It is reasonable to assume that native salmonids and other fish will use the smaller stream for rearing and protection from predators. It is possible that the lowest culvert may be at least partially passable during spring freshet flows and high lake levels, providing additional in stream habitat. WDFW does not consider road and rail crossings as permanent barriers. They have the potential for replacement and repair, and are considered temporary. Natural barriers to fish passage are considered permanent barriers, but upstream flow impacts extend to fish downstream of such barriers. Any water diverted for out-of-stream uses will impair habitat not only near the point of diversion, but all reaches downstream. It is not uncommon to find documented accounts of fish upstream of natural barriers. Fish presence upstream of the waterfall on Fivemile Creek is likely. The water right applicant also applied for and received a fish stocking permit. Since their pond is in line with and part of Fivemile Creek, those fish are to be considered when reviewing the water right application. Showing fish presence in the area of the Point of Diversion is unnecessary, as documented fish presence is well established downstream of Hwy 25.

A Surface Water Source Limitation (SWSL) was issued on Fivemile Creek. It was referenced in a 1961 surface water application for the same property in question today. The SWSL and the 1961 ROE and certificate S3-\*17016CWRIS calls for a minimum instream flow of 1 cfs to be left instream. Sixteen streamflow measurements provided for the time period May through September showed that Fivemile Creek never once met the 1 cfs provision. During that irrigation time period Fivemile Creek ranged from a high of 0.66 cfs to a low of 0.29 cfs. Even were a water right to be issued, it would be unusable under anticipated conditions.

Finally, I would like to address WDFW policy 5204 – Managing Instream Flows and Water Projects. This policy guides the review of water projects, including water right applications, Section 6 of this policy reads: “6. WDFW Will Discourage Diversion from Very Small Streams This applies to streams of less than 5 cubic feet per second MAF or less than 5 feet between toes of banks. EXCEPTION: Diversions for the propagation of public fisheries resources, if all diverted flows return to the stream, may be considered following a Biological Risk Assessment Process review that considers their overall effects on fish and wildlife resources.” WDFW staff visited multiple sections of Fivemile Creek from Hwy 25 to upstream of the proposed diversion. The conclusion was that there was fish habitat in Fivemile Creek observing accessible sections of creek and taking photographs, it was apparent that the channel was less than 5 foot toe width and unlikely to exceed 5 cfs mean annual flow. Given documented fish presence, an existing SWSL, and our instream flow policy, I stand by my recommendation that Ecology deny water right application S3-30897.

It is Ecology’s position that there is not sufficient water in Fivemile Creek at the requested amount and if approved, the project would be detrimental to the creek by diminishing the flow for wildlife habitat and senior water rights.

## FINAL ANALYSIS

---

Under Washington State law (RCW 90.03.290), each of the following four criteria must be met for an application for a new water right permit to be approved:

- Water must be available for appropriation.
- Water diversion and use must not cause impairment of existing water rights.
- The proposed water use must be beneficial.
- Water use must not be detrimental to the public interest (public welfare).

### Water Availability

---

For any new appropriation, water must be both physically and legally available.

#### ***Physical Availability***

For water to be physically available for appropriation, water must be present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses. An analysis of physical availability is required for both surface water and groundwater applications.

The data collected by Aspect Consulting indicated that water would not have been available at all for the entire 2021 irrigation season. Aspect Consulting also concluded that if this permit were approved, water may not always be available to use for this project during the full irrigation season. Also, water from Fivemile Creek would not always be available due to curtailment to provide water for downstream water right holders.

The data from the existing installed V-notch weir during the 2021 season and existing streamflow measurements conducted by Ecology do not support approval of this application at the requested amount of 1 cfs (448.8 gpm). It is Ecology's position that there is not sufficient flow in the creek for the proposed project to satisfy existing downstream water rights and the proposed project. Based on the information available, water is not physically available for this project.

#### ***Legal Availability***

To meet the legal availability test, the proposed appropriation may not divert or use water that is already "spoken for", such as water from sources that are protected by administrative rule or court order.

Surface Water Certificate No. 9931 (Chester & Ruth Wilcox) was applied for on some of the same lands as this application on November 15, 1961. The 1961 application was protested by downstream landowner, John Sherve. At the time, Mr. Sherve was concerned that approval of the water right would not leave enough water in the stream to satisfy his water right. The Department conducted an investigation in November of 1962 and established a Surface Water Source Limitation (SWSL) of 1 cubic foot per second for Fivemile Creek. The water right was approved with a required 1 cfs bypass at all times to satisfy downstream rights. Surface Water Certificate No. 9931 has since relinquished for non-use but the SWSL of 1 cfs remains on Fivemile Creek. Measured flows do not achieve with the 1 cfs SWSL on a regular basis and additional diversion will further reduce the frequency with which flows achieve the SWSL. For these reasons, Ecology concurs with WDFW that water is not legally available to support the proposed use.



## Impairment

---

In analyzing impairment, Ecology must decide whether existing water rights, including adopted instream flows, may be impaired by the diversion and proposed use.

Based on the hydrogeologic analyses above surface water withdrawals from the pond are not expected to impair adjacent groundwater users due to the fact that the pond is positioned on top of a laterally extensive clay layer that separates the surficial aquifer system and deep bedrock aquifer system.

To determine possible effects to existing water rights holders, Ecology's water rights database and well log database was reviewed for a half-mile radius of the proposed withdrawal location. This review produced a total of 5 claims and 1 surface water certificate. Based on our review of water right records there are two downstream water right holders that would be impacted by the issuance of this water right permit. These users are represented by Water Right Claims Nos. 022348 (Sherve - 1897) and 001382 (Rainey - 1902). Both claims list a date of first use that predate the water code, and claim a combination of irrigation and domestic use.

It is Ecology's position that there is not sufficient flow in the creek to satisfy these existing downstream uses in addition to the quantity proposed under this application. If this permit were approved, it would impair the senior water rights downstream.

## Beneficial Use

---

The use of water for irrigation is considered a beneficial use of water under RCW 90.54.020(1).

## Public Interest

---

The diversion and associated use must not be detrimental to the public interest. There is not sufficient flow in Fivemile Creek for the proposed project. Aspect concluded that due to the flow challenges, water could rarely if ever be exercised at the request amount. Ecology agrees with this conclusion. If approved, Ecology would most likely have to regulate or "shut off" the proposed project regularly to satisfy minimum flow in the creek and provide water for downstream senior water users. Based on the available data and comments received by WDFW regarding the effects this diversion would have on the flows of Fivemile Creek, approval of this permit would be detrimental to the public interest.

## Conclusions

---

I find that:

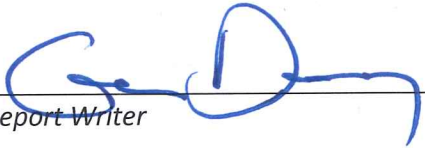
- Water is not physically and legally available
- The appropriation will impair existing rights.
- The proposed use for irrigation is a beneficial use.
- Approval of this application will be detrimental to the public interest.

## RECOMMENDATIONS


---

Failure to fully meet the public welfare, water availability and impairment components of the four-part test warrants denial of this new application for irrigation from Fivemile Creek (RCW 90.03.290).

Therefore, it is recommended this application be DENIED.

  
\_\_\_\_\_  
Report Writer

6-1-22  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Hydrogeologist

6/1/2022  
\_\_\_\_\_  
Date

*To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.*