



State of Washington
DRAFT
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

PRIORITY DATE 2/27/1995	WATER RIGHT NUMBER S2-29196
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MAILING ADDRESS DIRK & DIXIE HAVLAK 1613 CAMDEN CIRCLE SW OLYMPIA WA 98512	SITE ADDRESS (IF DIFFERENT) 661 OLD BARN ROAD RANDLE WA 98377
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Quantity Authorized for Diversion

DIVERSION RATE 0.042	UNITS CFS	ANNUAL QUANTITY (AF/YR) 4.84
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Purpose

PURPOSE	DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
POWER GENERATION	0.042	0	CFS	4.5	0	01/01 - 12/31
DOMESTIC SINGLE	0	0.042	CFS	0.34	0	01/01 - 12/31

REMARK: Domestic water is limited to in-door use only. Power generation portion is non-consumptive.

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
0	0	N/A	1

Source Location

COUNTY LEWIS	WATERBODY DAYS CREEK	TRIBUTARY TO SILER CREEK	WATER RESOURCE INVENTORY AREA 26-COWLITZ
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SOURCE FACILITY/DEVICE DAYS CREEK	PARCEL 031942009000	TWP 12N	RNG 07E	SEC 23	QQ Q SESE	LATITUDE 46.508736	LONGITUDE -121.886628
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Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

031942008000 & 031942009000

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Lots 8 and 9 of Randle Acres, recorded October 19, 1987

Proposed Works

A gravity-fed diversion using a 2" intake pipe that supplies water to a recreational cabin and a pelton wheel miniature hydroelectric power generator. A 300 gallon above-ground water tank serves a reservoir for emergency water use and fire flow.

The project will be considered complete upon the installation of an approved metering device.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
October 1, 2016	October 1, 2017	October 1, 2019

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (cfs)

Provisions

Measurements, Monitoring, Metering and Reporting

An approved measuring device shall be installed just before the junction of the main distribution line and the miniature hydroelectric generator and maintained for the source identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Hydraulic Project Approval and Screening

Pursuant to Chapter 77.55 Revised Code of Washington (RCW), Hydraulic Project Approval must be obtained from the Washington State Department of Fish and Wildlife prior to beginning construction of the diversion. The intake must be screened in accordance with RCW 77.57.010, 77.57.040 and 77.57.070. Contact the Washington Department of Fish and Wildlife Habitat Program at 600 Capitol Way N, Olympia, WA 98501-1091 or (360) 902-2534.

<http://wdfw.wa.gov/licensing/hpa/>

Non-Consumptive Water Use

The distribution system must not be altered in any way that would allow the non-consumptive water used for power generation to be collected for any consumptive use or increase the length of the by-pass reach (the point of diversion to the outlet pipe in Days Creek). Any such changes will require the water right holder to submit a water right change application.

Proof of Appropriation

The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof

inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

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 available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. S2-29196, subject to existing rights and the provisions specified above.

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

Signed at Olympia, Washington, this _____ day of _____ 2015.

Michael J. Gallagher, Section Manager

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>.

INVESTIGATOR'S REPORT

Application for Water Right -- Havlak

Water Right Control Number S2-29196

Matthew K. Rakow, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number S2-29196.

The Havlak's submitted Surface Water Right Application S2-29196 for the diversion of Days Creek on February 27, 1995. The application indicated that water is intended for domestic supply at a diversion rate of 0.004 cubic feet per second (cfs) instantaneous supply and no specified annual quantity.

The application was amended on December 8, 2014 to include an instantaneous allotment for power generation because the original water right application was not completed correctly. The original water right application only listed domestic use in Section 2. However, it was indicated in Section 7 that water was needed for a miniature hydroelectric power generator. Ecology should have returned the application to the applicant so they could have revised the requested quantities of water because 0.004 cfs (1.8 gpm) is not enough to supply water for domestic use and a mini hydroelectric generator. The amended application requests 0.042 cfs for power generation and single domestic use.

Table 1. Summary of Requested Water Right (Amended)

Control Number	S2-29196
Name	Dirk & Dixie Havlak
Priority Date	2/27/1995
WIRA	26 - Cowlitz
Source	Days Creek
Tributary To	Siler Creek
Purpose of Use	Domestic Supply & Power Generation
Instantaneous Rate	0.042 cfs
Annual Quantity	No quantity specified
Period of Use	Year Round
Place of Use	Lots 8 and 9 of Randle Acres, recorded October 19, 1987.

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; WRIA = Water Resource Inventory Area

Table 2 provides location details for the proposed point of withdrawal.

Table 2. Point of Withdrawal Location Information

Source Name	Parcel	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Days Creek	031942009000	12N	07E	23	SE SE	46.508736	-121.886628

Sec. = Section; QQ Q = Quarter-quarter of a section; E = East of the Willamette Meridian; Datum: NAD83/WGS84.

Legal Requirements for Approval of Appropriation of Water

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 *East County Journal* on December 24 and 31, 2014. No protests or letters of concern were received in response to this notice. It should be noted that the advertisement listed the requested instantaneous amount at 0.057 cfs instead of 0.042 cfs. Since no protests or letters of concern were received at the higher advertised amount, no action is necessary with regard to the typographic error.

Consultation with the Department of Fish and Wildlife

The Department must give notice to the Department of Fish and Wildlife (DFW) of applications to divert, withdraw or store water. Ecology received comments from Steve Boessow of the DFW regarding this water right application.

State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- (a) It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- (b) It is a groundwater right application for more than 2,250 gallons per minute;
- (c) It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- (d) 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);
- (e) 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.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

INVESTIGATION

The material reviewed in support of this application included the following:

- The State Surface Water Codes, administrative rules, and policies.
- Department of Ecology's Water Right Tracking System (WRTS) database.
- Topographic, geologic, and local area maps.
- Department of Natural Resources Geologic Information Portal.
- Notes from site visit conducted on November 20, 2014.
- 2004 Grays-Elochoman and Cowlitz Watershed Management Plan.

- 2014 WRIA 26 Water Supply and Stream Flow Review.
- Lewis County Auditor's Records.
- Lewis County Assessor's Records.

Project Location and Site Description

The project area is located in eastern Lewis County approximately 2 miles southeast of the community of Randle. The Havlak's cabin sits at an elevation of 1,412 feet above mean sea level in a section of foothills dividing the Cowlitz River and Cispus River drainages. The Gifford Pinchot National Forest borders the Havlak's property to the east and south. Areas to the west and north are forested private land with little to no development.

The Havlak's property is forested with minor development. Improvements on their property include a cabin, gravel road, a culvert on Days Creek, and water delivery system. The cabin sits on a west-facing hillside.

Days Creek originates from springs east of the Havlak's property on National Forest Land. The creek enters parcel 031942009000 from the east and flows through the entire width of the parcel. The slope of Days Creek is fairly steep until it reaches the main access road to the Havlak's property where it then flows through a culvert and the slope is significantly reduced.

See Attachment #1

Proposed Use

The Havlak's propose to use water for domestic use and power generation. The applicants estimate that the cabin is occupied no more than 60 days a year. Power generation is accomplished by a miniature two-paddle horizontally mounted pelton wheel. The amended application requests 0.042 cubic feet per second with no specified annual quantity.

History of Water Use

Historic water use for this project cannot be quantified because a water meter was not installed upon initial construction of the water system. However, an annual water use quantity can be estimated based on a maximum occupancy rate of 60 days per year.

Domestic Water Use

Water has been used for domestic purposes since 1996 when the Havlak's cabin was built. The cabin has been occupied at least once a month most years. Outdoor irrigation and residential watering do not occur at this property. Water use consists of normal in-house domestic use (e.g. cooking, cleaning, and bathing). It is estimated that the maximum daily amount of domestic does not exceed 150 gallons per day.

Power Generation

According to the Havlak's, the power generator is running the majority of time that the cabin is occupied. A valve located forward of the generator allows water to by-pass the generator when it is not in use.

Water System Description

The Havlak's gravity-fed water system consists of a single diversion point, distribution pipe, a storage tank, a pelton wheel power generator, and one domestic connection to a cabin. The diversion consists of a three-foot wide by one foot deep artificial pool in the streambed. Days Creek at this location is roughly 12-15 feet wide. The pool was created by installing a small weir dam and reinforcing the perimeter of the pool with rocks and concrete. The Havlak's did not obtain an HPA prior to constructing the diversion.

A two-inch screened intake pipe is cemented in place at the center of the pool and the pipe opening is facing up (vertical). The intake pipe is screened with wire mesh to keep debris from entering the pipe and it is capped when not in use.

Water is routed via above ground black polyethylene pipe to a valve system that distributes water to the cabin or the cabin and the pelton wheel. Water can also be sent to a 300 gallon plastic storage tank on the hillside above the cabin. The storage tank is normally filled in the spring and exists to provide fire flow and emergency water supplies. Power generated by the pelton wheel is stored in a battery bank located under the cabin. Water returns to Days Creek after it passes through the pelton wheel about 100 feet downstream according to Mr. Havlak. Waste water from the cabin is treated by an on-site septic system.

This set up is more of an on-demand diversion in the sense that water is only diverted when there is demand from the system. Water fills the pipes leading down to the house when the cap to the intake pipe is removed. After that, additional water is only diverted when water is used in the cabin or water is being sent to the pelton wheel. Water simply flows around the intake pipe when there is no demand from the system.

Basis of Water Demand

Domestic Use

Domestic use under this application is for indoor use only since outdoor irrigation or residential watering does not occur at or around the cabin.

Power Generation

The application also requests 0.038 cfs for and an unspecified annual quantity for power generation. Power is generation accomplished using a two-paddle vertical-axle pelton wheel. Water is sprayed through two 0.25-inch nozzles at 40 pounds-per-square-inch onto the paddles. Mr. Havlak estimates that the pelton wheel uses approximately 17 gpm (0.038 cfs). The water then leaves the pelton wheel housing and is discharged directly back into Days Creek. This use is considered to be non-consumptive because the water used for power generation goes directly back into Days Creek. The distance from the point of diversion to the point of discharge is roughly 100 feet.

Other Rights Appurtenant to the Place of Use

There are no other water rights appurtenant to the place of use of this application.

Impairment Considerations

Fisheries and In-stream flow Considerations

In a letter issued August 19, 2015, Steve Boessow from the DFW stated that the DFW does not oppose issuance of this permit for domestic in-house use and power generation. Steve cites the presumption that fish presence in the area is unlikely and all of the water for power generation returns to the creek.

There are no stream gaging stations, instream flows, or Source Water Surface Limitations on Days Creek or Siler Creek.

Senior Water Rights

There are no senior water rights on record for Days Creek. A search of Ecology's WRTS returned six water right certificates for surface diversions on Siler Creek. Three of the six certificates are for diversions located upstream of the point of confluence between Siler Creek and Days Creek.

Two of the remaining three certificates are for the Mt. Adams Veneer Company. Mt. Adams Veneer Company held Reservoir Certificate R2-*15450C and Surface Water Certificate S2-*15451C for the diversion of water from Siler Creek to supply water to the mill pond and manufacturing plant. The Mt. Adams Veneer Company Randle operation consisted of a plywood manufacturing plant and a 33-acre mill pond. The exact date of when the mill was demolished cannot be determined, but a 1996 aerial photograph located on the Lewis County GIS portal shows that the manufacturing plant had been demolished by that year. Reclamation of the mill pond has not occurred at present. It appears that this water right has been relinquished due to non-use.

The remaining downstream senior water right is Certificate S2-*13021 belonging to J.C. Hansen. This certificate has a priority date of July 13, 1954 and authorizes two points of diversion on Siler Creek for irrigation of 40 acres with an instantaneous quantity of 0.2 cfs. Satellite imagery of the place of use shows irrigation is still active. These diversions are roughly 4.5 miles away from the Havlak's diversion. Given the distance between the two sites and small consumptive portion requested by this water right application, the risk of impairment to Certificate S2-*13021CWRIS is considered minimal.

Claims

There are three downstream claims with Siler Creek listed as their source found in Ecology's WRTS. Details of the claims are presented in Table 3.

Table 3. Siler Creek Claims

Claim Number	Name	Date of First Use	Purpose of Use	TRS
S2-066664CL	John Dey	June 1972	Irrigation, Stock water	12N. 07E. 28
S2-163590CL	John Morris	1908	Domestic	12N. 07E. 27
S2-099433CL	Donald Fischer	Not listed	Irrigation	12N. 07E. 21

Surface Water Claim S2-066664CL lists date of first use as sometime in June 1972. Surface Water Claim S2-099433CL does not list a date of first use. Additional details of water use under these claims is unavailable.

It appears water is still being used under Surface Water Claim S2-163590CL. A search of Lewis County's records indicates that John Morris and his family own at least one parcel in Section 27 with direct access to Siler Creek. However, the claim form indicates that in 1974, John Morris was only using 5 gallons per minute for domestic purposes and irrigating only one acre. He also states that he is sourcing water from a well, presumably for domestic purposes. Aerial imagery from 2013 indicates that no more than an acre of land is possibly still irrigated. Approval of this water right application should not impair Water Right Claim S2-16359CL if it is in fact valid.

Water Availability

For water to be available for appropriation, it must be both physically and legally available.

Physical availability

The spring that feeds Days Creek originates on the hillside above the Havlak's property and flows year round. Days Creek is also receives additional water flow from seeps along its length. The bed of the creek is comprised of angular bedrock fragments ranging in size from 1" – 18" across. There most likely is a shallow subsurface component of this system just under Days Creek given the fractured bedrock exposed at the surface. At the time of the site visit on November 20, 2014, it was estimated that approximately 0.1 to 0.2 cfs was flowing through the active channel of Days Creek. However, it is expected that the flow of visible surface water and subsurface flow directly underneath the active channel have a larger combined flow rate.

Given the small diversion rate and annual quantity of water needed, it is determined that water is physically available year round.

Legal availability

Days Creek, Siler Creek, and the Cowlitz River are all open for new appropriations. There are no Surface Water Source Limitations or instream flows set for any of these water bodies.

The quantity and proposed use of water proposed under this application are in agreement with the 2004 Grays-Elochoman and Cowlitz Watershed Management Plan and the 2014 WRIA 26 Water Supply and Stream Flow Review. There is no discussion in either planning documenting limiting the use of miniature hydroelectric devices. The County has no regulations for miniature hydroelectric projects.

Federal Energy Regulation Commission

Unless a project has a valid pre-1920 federal permit, non-federal hydroelectric projects are subject to the Federal Energy Regulation Commission's (FERC) jurisdiction if:

1. The project is located on navigable waters of the United States.
2. The project occupies public lands or reservations of the United States.
3. The project utilizes surplus water or waterpower from a federal dam.
4. The project is located on a body of water over which Congress has Commerce Clause jurisdiction, project construction occurred on or after August 26, 1935, and the project affects the interests of interstate or foreign commerce.

The Havlak's project does not meet any of these criteria and is therefore exempt from FERC's regulation.

Beneficial Use

The domestic and power generation uses of water are defined in statute as beneficial uses (RCW 90.54.020(1)).

Public Interest Considerations

Consideration of alternative sources

The applicant's lot is not located within the service area of a public water system. There is no well or other alternative source of water available. A miniature hydroelectric power generator is the most practical way for the Havlak's to supply their cabin with power. They currently have solar panels on the roof of the cabin. However, very little sunlight reaches the panels in the summer due to the dense forest canopy and the winters are mostly overcast when the forest canopy thins. Getting power utilities installed at the cabin would be a long, difficult, and expensive process due to the area topography, limited space for utility lines/trenches, and the need to obtain easements from nearly a dozen property owners.

Consideration of Protests and Comments

No protests were filed against this application.

Conclusions

I find that:

- Water is available from Days Creek.
- Domestic use is a beneficial use.
- Power generation is a beneficial use.
- The appropriation, as recommended, will not impair existing rights or in-stream flows.
- Approval of this application will not be detrimental to the public welfare.
- This project is exempt from FERC regulations.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and within the limitations listed below and subject to the provisions listed above

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

- 0.042 cfs for both in-house domestic use and power generation
- 0.34 acre-feet per year for domestic use
- 4.5 acre-feet per year for power generation (non-consumptive)

Point of Diversion:

- SE ¼, SE ¼, Section 23, Township 12 North, Range 07 E.W.M.

Place of Use:

- As described on Page 1 of this Report of Examination.

Matthew K. Rakow

Date

If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Attachment 1. Area Map

