Application for Change/Transfer of Water Rights

Application for Change/Transfer of a Water Right

Form No. ECY 040-1-97 (Rev 01-2020)

DEPARTMENT OF ECOLOGY
State of Washington

- Refer to accompanying guidance to complete this form.
- We strongly encourage applicants to seek pre-application consultation **prior** to applying.
- Incomplete applications will be returned.
- All fees are non-refundable (RCW 90.03.470(13)).

Choose a processing option:

☒ **Standard Processing** (Department of Ecology)	☐ **Cost Reimbursement Processing** (Ecology Contractor)	☐ **County Water Conservancy Board Processing** (not available in all counties)
A minimum $50 fee is required to apply. Additional fees may apply. Drought applications are exempt.	Contact Department of Ecology to obtain information on fees for this option.	Fees charged by boards vary. Consult with the appropriate board to determine the fee.

Note: Submit all applications for Department of Ecology and Cost Reimbursement processing to the Cashiering Section. County Water Conservancy Board applications should be submitted directly to the appropriate board, if one exists.

Submit all applications and fees to:

DEPARTMENT OF ECOLOGY
CASHIERING SECTION
PO BOX 47611
OLYMPIA, WA 98504-7611

Check the box for the region where your project is located.

- ☒ Central Region
- ☐ Eastern Region
- ☐ Northwest Region
- ☐ Southwest Region

ADA Requests

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

DEPARTMENT OF ECOLOGY
State of Washington

For Ecology Use
(Date Stamp)

WATER RESOURCES PROGRAM
Application for Change/Transfer of a Water Right

A minimum filing fee of $50.00 is required for most applications. Additional fees may be required.

I am applying to (check all that apply):
- ☐ Change purpose(s) of use
- ☒ Add purpose(s) of use or acres
- ☒ Change/transfer place of use
- ☒ Change point(s) of diversion/withdrawal
- ☐ Add point(s) of diversion/withdrawal
- ☒ Add or modify period of use
- ☐ Other (i.e., consolidation, intertie, trust water) Describe:

No filing fee is required for applications for:
- ☐ Drought
- ☐ Cost Reimbursement Processing
- ☐ Water Conservancy Board Processing

FOR OFFICIAL USE ONLY

DATE APPLICATION RECEIVED
CHECK NO. FEE $
DATE ACCEPTED BY
CHANGE NO.
COUNTY WRIA
SPECIAL AREA
SEPA: ☐ EXEMPT ☐ NOT EXEMPT

ECY CODING: 001-002-WR10285-000011
DOC ID NO:_____
APP NO. PERMIT NO.
CERT NO. CERT OF CHG NO.

Date of pre-application consultation with Ecology: 08-01-2023

1. Water Right Information

WATER RIGHT OR CLAIM NUMBER G3-+22306CWRIS	RECORDED NAME(S) Washington State Department of Natural Resources	
HAS THE WATER BEEN USED AS DESCRIBED ON YOUR WATER RIGHT DOCUMENT IN THE LAST FIVE (5) YEARS? ☐ YES ☒ NO		
WATER RIGHT OWNER Washington State Department of Natural Resources	PHONE NO. (509) 925-8510	ALT PHONE NO. (360) 902-1000
ADDRESS MS 47000		
CITY Olympia	STATE WA	ZIP CODE 98504
EMAIL ADDRESS (IF AVAILABLE) Southeast.region@dnr.gov		

2. Applicant Information (Complete all applicable boxes)

APPLICANT/BUSINESS NAME Horse Heaven Wind Farm, LLC	PHONE NO. (303) 284-7566	ALT PHONE NO.
ADDRESS 5775 Flatiron Parkway, Suite 120		
CITY Boulder	STATE CO	ZIP CODE 80301
EMAIL ADDRESS (IF AVAILABLE)		

CONTACT (IF DIFFERENT FROM ABOVE)	PHONE NO.	ALT PHONE NO.
Dave Kobus (Scout Clean Energy)	(509) 947-3258	
ADDRESS		
1385 Cortland Ave		
CITY	STATE	ZIP CODE
Richland	WA	99352
EMAIL ADDRESS (IF AVAILABLE)		
Dave@scoutcleanenergy.com		

3. Purpose(s) and Period of Use

A. Existing

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
Irrigation of 260.7 acres	1955 gpm	1043	Irrigation Season

B. Proposed (if different from 3.A.)

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
Irrigation of up to 260.7 acres	1805 gpm	1031	Irrigation Season
Industrial, Construction, Dust Abatement	150 gpm	184	Year-Round (For Three Years)
Industrial	150 gpm	12	Year-Round
All uses will not exceed total authorization or the ACQ, development schedule will be used to phase irrigation expansion with temporary 3-year industrial watering needs until final contrition of the energy project is done.			
Not To Exceed	***150 gpm***	***1043***	

4. Point(s) of Diversion/Withdrawal

A. Existing

SOURCE	WELL NO.	WELL TAG NO.	QTR QTR	QTR	SEC	TWP	RGE	PARCEL NO.	GPS/ LAT-LONG
2 Wells	No. 1 No. 2	N/A	SW ¼ SE ¼	SW ¼ NW ¼	36	07N	25E	1-3675-000-0000-000	46.04494, -119.64138 46.05105, -119.63442

DO YOU OWN THE EXISTING POINT OF DIVERSION OR WITHDRAWAL? ☒ **YES** ☐ **NO**

B. Proposed

SOURCE	WELL NO.	WELL TAG NO.	QTR QTR	QTR	SEC	TWP	RGE	PARCEL NO.	GPS/ LAT-LONG
1 Well (Gould Well)	No. 1	N/A	NW	NE	36	08N	25E	1-3685-100-0000-000	46.13952, -119.62843

DO YOU OWN THE PROPOSED POINT OF DIVERSION OR WITHDRAWAL? ☒ **YES** ☐ **NO**

5. Place of Use

A. Existing

QTR QTR	QTR	SEC	TWP	RGE	COUNTY	PARCEL #	# OF IRRIGATED ACRES
		36	07N	25E	Benton	1-3675-000-0000-000	260.7

LEGAL DESCRIPTION OF LANDS WHERE WATER IS PRESENTLY USED:

Section 36, Township 07 North, Range 25 East. See Figure 1 for a map of the existing place of use.

LEGAL LAND OWNER OF EXISTING PLACE OF USE (IF DIFFERENT THAN APPLICANT)	PHONE NO.	ALT PHONE NO.
State of Washington		
ADDRESS Dept. of Natural Resources State Lands Divisions PO Box 47016		
CITY Olympia	STATE WA	ZIP CODE 98504-7016
EMAIL ADDRESS (IF AVAILABLE)		

B. Proposed (if different than 5.A.)

QTR QTR	QTR	SEC	TWP	RGE	COUNTY	PARCEL #	# OF IRRIGATED ACRES
					Benton	Multiple (See Attachment)	Up to 260.7

LEGAL DESCRIPTION OF LANDS WHERE NEW USE IS PROPOSED:

See Attachment F for a legal description of the place of use and Figure 1.

The place of use of the irrigation portion of this water right will be used on Benton County Parcel ID 1-3685-100-0000-000 located within the NW¼NE¼ of Section 36, Township 08 North, Range 25 East.

LEGAL LAND OWNER OF PROPOSED PLACE OF USE (IF DIFFERENT THAN APPLICANT)	PHONE NO.	ALT PHONE NO.
ADDRESS		
CITY	STATE	ZIP CODE
EMAIL ADDRESS (IF AVAILABLE)		

All applicants must also complete Sections 6 through 11, **except** drought and Quincy Basin Artifically Stored Groundwater applications (see below).

If you do not have the required information, make an appointment with your Ecology regional office to discuss your application. Applications sumitted without the required information will be returned as incomplete.

- If your water right change would impair an existing right, complete Section 6 through 11, and Attachment A, **mitigation plan**. Changes to water rights that will impair an existing right will be denied unless a mitigation plan is approved.
- If you are applying to **consolidate permit-exempt wells**, complete Sections 6 through 11, and Attachment B.
- If you are applying for a change related to the **Quincy Basin Artificially Stored Groundwater**, stop here. Complete only Sections 7 & 11, and continue with Attachment C.
- If you are applying for a change related to **drought**, stop here. Complete only Section 11, and continue with Attachment D.

6. Project Description

(Provide your answers in a separate report, and reference the section number in your responses)

Section	Required information	Reference(s)
6.1	Provide a brief narrative explaining the general nature and intent of the proposed change(s) to the water right.	
6.2	Are you aware of any compliance/enforcement actions that concern this water right? If so, describe.	
6.3	If this water right has previously been changed, summarize whether the previously authorized changes have been completed.	
6.4	If the water right includes a diversion from a permitted reservoir, list all the associated water rights, the maximum volume of water stored in the reservoir, and the means of withdrawal.	
6.5	Attach a copy of any SEPA checklists or environmental analyses related to this project with this application.	
6.6	**For period of use change proposals,** indicate the time of the year that the change would be in effect.	POL 1200
6.7	**For temporary change proposals,** indicate the timeframe that the proposed change would be in effect.	POL 1035
6.8	**For municipal change proposals,** provide the most recent water right self-assessment, if one exists, as submitted to the Department of Health (DOH).	

SYSTEM DESIGN AND OPERATION

Section	Required information	Reference(s)
6.9	Provide a description of the existing water supply system from the point of diversion or withdrawal to the place of use.	
6.10	Provide preliminary design plans and specifications for the proposed change, including diversion or withdrawal and conveyance facilities, if applicable, and the proposed flow rate and volume design capacity.	
6.11	Describe how the change proposal would affect return flow.	
6.12	Provide the current and projected system efficiency covered by the water right proposed for change.	
6.13	Provide an explanation of how the proposed use will not increase the authorized maximum flow rate (Qi) or annual volume (Qa).	PRO 1210 GUID 1210
6.14	**For surface water diversions,** describe how your plans comply with WDFW fish screening requirements.	RCW 77.57

DEVELOPMENT SCHEDULE

Section	Required information	
6.15	Provide a general timeline that includes the steps needed to begin the project, complete the project, and put the water to full beneficial use.	
6.16	**For changes to water rights currently under a development schedule**, provide a description of the current status of your project.	
6.17	Identify and discuss other land-use or environmental permits required and the timeline to obtain those permits.	

7. Related Water Rights

Section	Required information	Reference(s)
7.1	List any other water rights (applications, permits, certificates, or claims) related to this change application. Include any rights that overlap the place of use.	
7.2	Explain how the water rights listed above have been exercised.	
7.3	List all wells that have been added through a Showing of Compliance form.	POL 1260 ECY 040-74

8. Historic Use

Section	Required information	
8.1	Describe how the water proposed for change has been beneficially used since the water right was established.	
8.2	For the water right proposed for change and the portfolio of any related rights, provide the historic flow rate from each point of diversion or withdrawal (in cubic feet per second or gallons per minute) and explain how the amount was determined (e.g., meter data or power records).	
8.3	If the requested change/transfer is for a water right claim, include evidence demonstrating use of water prior to 1917 for surface water, or 1945 for ground water.	
8.4	**For surface water diversions**, explain whether streamflows were adequate to exercise the right throughout the historic period of diversion. If available, provide streamflow records to support the conclusion.	
8.5	**For groundwater withdrawals**, explain whether there has been an adequate supply of groundwater to exercise the water right throughout the historic period of withdrawal. Provide all groundwater data and methods used to support the conclusion.	
8.6	Describe your procedures for remaining in compliance with the provisions of your existing water right.	
8.7	If a water measuring device was installed, provide your measurement data.	
8.8	If a measuring device was not installed, do the pumps have a dedicated power meter(s)? If so, provide an estimate of water use using the power consumption to water consumption equation described in WAC 173-173-160(2).	
8.9	If no water use data are available, estimate annual use by using an alternative method and explain your methodology.	
8.10	Provide aerial photos, remotely sensed images, or other information and explain how they support the historic use.	

WATER USED FOR IRRIGATION

Section	Required information	Reference(s)
8.11	**If changing the purpose of use**, refer to the Provisions section of your water right document to determine whether the right is subject to the Family Farm Water Act. If so, contact the appropriate Ecology regional office prior to completing this form (refer to map on page 1).	RCW 90.66
8.12	Describe your irrigation scheduling practices (e.g., frequency and duration of irrigation sets). Describe how data from soil moisture probes, weather forecasts, crop inspection, or other irrigation scheduling techniques were used to determine irrigation practices.	

Section	Required information	Reference(s)
8.13	If adding the irrigation of additional acres or a new purpose of use, provide metering data for the most recent five-year period of continuous use. If metering data are unavailable, provide an estimate of water use for the most recent five-year period of continuous use and describe the methodology for this estimate.	POL 1210 GUID 1210 RCW 90.03.380
8.14	If water has been used from a state or federal water project (contract water) on the historic place of use, explain when and how that contract water was used.	

9. Hydrogeologic Analysis

We strongly recommend that applicants consult with Ecology in a pre-application meeting prior to conducting *any* hydrogeologic work, to determine the scope of data required for processing this application.

Section	Required information	
9.1	Provide a description of existing authorized points of withdrawal and proposed wells, their locations, well depths, static water levels, pumping rates and schedules, etc.	
9.2	Describe the hydrogeologic setting. Identify all ground water bodies and surface water bodies involved. Describe geographic recharge and discharge areas, seasonal variations, and interrelationships between surface and ground water, and between aquifers. Identify barriers to flow and hydrologic boundaries, if known.	
9.3	Describe, if available, the following characteristics of the aquifer and cite the source of that information: • Aquifer transmissivity • Aquifer storage coefficient and specific yield • Saturated thickness • Aquitard leakage • A detailed description of groundwater-flow boundaries • Water-level hydrographs for wells Associated water-quality information	
9.4	Additional hydrogeologic work may be required to process your application	

10. Environmental Assessment

Section	Required information	
10.1	Describe the aquatic uses of any related surface water bodies (i.e., fish and wildlife, recreation and aesthetic, water quality, etc.).	
10.2	Indicate whether the related surface water is fish-bearing, including whether it is inhabited by salmonids. List species and the times of year they are present. https://apps.wdfw.wa.gov/salmonscape/	

11. Maps and Other Documentation

Section	Required information	
11.1	Attach detailed map(s) clearly indicating the following: • The existing places of use for all rights related to this proposed change. If any overlapping water rights for the place of use, or multiple rights that share the same point(s) of diversion/withdrawal exist, provide one map depicting all of the historic points of diversion, means of conveyance, and places of use. Identify related rights as such by water right number. • The county parcel numbers for the existing and proposed place(s) of use, unless the place(s) of use are for large service area such as that served by an irrigation district or municipal water system. Identify the name of the irrigation district or the water system. • The existing and proposed locations of the point(s) of diversion/withdrawal. • The names, informal or formal, used to identify each point of diversion/withdrawal (e.g., Well No. 1, River Well, S01, Smith Dam, etc.). • The proposed place(s) of use. • A grid layer referencing Section, Township, and Range of the area. • The location of the water delivery system and other such features relevant to your proposed change/transfer (e.g., mainlines, reservoirs, booster pumps, etc.)	

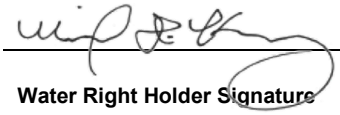
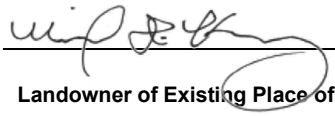
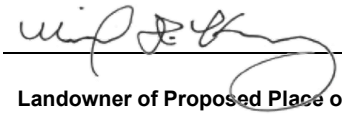
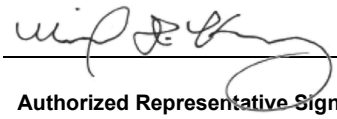
Certain applications may incur a Real Estate Excise Tax liability for the seller of the water rights. The Department of Revenue has requested notification of potential taxable water right related actions and therefore may be provided with a copy of this request. For further information, contact:

Department of Revenue
Real Estate Excise Tax
PO Box 47477
Olympia, WA 98504-7477

Phone (360) 570-3265

12. Signatures:

I certify that the information above is true and accurate to the best of my knowledge. I understand that in order to process my application, I hereby grant staff from the Department of Ecology or the County Water Conservancy Board access to the above site(s) for inspection and monitoring purposes. If assisted in preparing this above application, I understand that all responsibility for the accuracy of the information rests with me.

Michael Kearney, Division Manager		10/25/2023
Applicant Printed Name – Title	**Applicant Signature**	**(Date: MM/DD/YYYY)**
Applicant Printed Name – Title	**Applicant Signature**	**(Date: MM/DD/YYYY)**
Michael Kearney, Division Manager		10/25/2023
Water Right Holder Printed Name	**Water Right Holder Signature**	**(Date: MM/DD/YYYY)**
Michael Kearney, Division Manager		10/25/2023
Landowner of Existing Place of Use Printed Name	**Landowner of Existing Place of Use Signature**	**(Date: MM/DD/YYYY)**
Michael Kearney, Division Manager		10/25/2023
Landowner of Proposed Place of Use Printed Name	**Landowner of Proposed Place of Use Signature**	**(Date: MM/DD/YYYY)**
Michael Kearney, Division Manager		10/25/2023
Authorized Representative Printed Name	**Authorized Representative Signature**	**(Date: MM/DD/YYYY)**

For additional information, contact the Ecology regional office where your project is located:

Region	Counties served	Mailing Address	Phone
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	3190 160th Ave SE Bellevue, WA 98008	425-649-7000
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300

12. Signatures:

I certify that the information above is true and accurate to the best of my knowledge. I understand that in order to process my application, I hereby grant staff from the Department of Ecology or the County Water Conservancy Board access to the above site(s) for inspection and monitoring purposes. If assisted in preparing this above application, I understand that all responsibility for the accuracy of the information rests with me.

Brian Wixon - Senior Director of Real Estate & Title	Brian Wixon (Aug 12, 2023 21:32 CDT)	Aug 12, 2023
Applicant Printed Name – Title	**Applicant Signature**	**(Date: MM/DD/YYYY)**
Applicant Printed Name – Title	**Applicant Signature**	**(Date: MM/DD/YYYY)**
Water Right Holder Printed Name	**Water Right Holder Signature**	**(Date: MM/DD/YYYY)**
Landowner of Existing Place of Use Printed Name	**Landowner of Existing Place of Use Signature**	**(Date: MM/DD/YYYY)**
Landowner of Proposed Place of Use Printed Name	**Landowner of Proposed Place of Use Signature**	**(Date: MM/DD/YYYY)**
Authorized Representative Printed Name	**Authorized Representative Signature**	**(Date: MM/DD/YYYY)**

For additional information, contact the Ecology regional office where your project is located:

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ADA Requests

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

Attachment A: Mitigation Plan

Section	Required information	Reference(s)
A1	Identify what rights, as defined above, you expect to be impaired and identify the expected nature of that impairment.	
A2	Identify the source of supply for the proposed mitigation water.	
A3	Describe how this mitigation water source will offset the impacts of the proposed change. This should specifically address how the change in the amount of water in Section A4 will be offset by the source identified in Section A5	
A4	Estimate the change in consumptive quantity that would be available for the use being impaired. Describe the methodology used to support your estimate.	
A5	Describe the measures that will be taken to ensure mitigation will be maintained for the duration of the water right change authorization.	
A6	List each water right being proposed for transfer, relinquishment, or conveyance to the Trust Water Rights Program. Provide a history of beneficial use of each water right listed above and identify whether a separate water right change application has been filed for these water rights.	
A7	Provide copies of any agreements between you and other parties regarding mitigation for impacts, if applicable.	
A8	Describe the benefits and costs, including environmental effects, of any water impoundment or other resource management technique that is included as component of the application.	RCW 90.03.255 RCW 90.44.055
A9	For surface water, analyze whether there will be any increased water supply from the impoundment or technique, including recharge of groundwater, as a means of making water available or otherwise offsetting diversion impacts.	
A10	For groundwater, analyze whether there will be any increased water supply from the impoundment or technique, including recharge of groundwater, as a means of making water available or otherwise offsetting the impact of the diversion of surface water.	
A11	If you intend to offset your new use, describe how and when non-consumptive water returns to ground water or surface water, and explain how this volume was estimated. Specifically describe how the quantity, timing and location of return flow would change if the proposed change is approved.	WAC 173-500-050(5) WAC 173-500-050(9) POL 1020

Attachment B: Consolidation of Exempt Wells

RCW 90.44.105 provides that permit-exempt uses (RCW 90.44.050) may be consolidated with a valid right to withdraw groundwater only if all the following conditions are met.

Section	Required information	Reference(s)
B1	Provide evidence that water from the exempt wells tap the same body of public groundwater as the well with the water right to withdraw public ground waters.	RCW 90.44.105(1)
B2	Show that suitable arrangements have been made to discontinue use of the permit exempt well established under the exemption upon approval of the consolidation amendment.	RCW 90.44.105(2)
B3	Provide copies of legally enforceable agreements that bind present and future owners of the land from drilling and using another permit exempt well through appropriate title limitations.	RCW 90.44.105(3)
B4	Show that suitable arrangements have been made to properly decommission the permit exempt well(s) in accordance with Chapter 18.104 RCW and relevant Ecology rules.	RCW 90.44.105(4) RCW 18.104.048 WAC 173-160-381 RCW 18.104.043 RCW 18.104.040(4)(b)
B5	Describe impacts to other existing rights, including ground and surface water rights and minimum stream flows adopted by rule.	RCW 90.44.105(5)
B6	Provide evidence that the amount of water used is consistent with the average amount of water used for similar uses in the general area and explain how this was determined.	
B7	Is there an adopted Coordinated Water System Plan (CWSP) or Comprehensive Land Use Plan or another comprehensive watershed management plan in place for this location? Please indicate yes or no. If yes, please document whether your project is consistent with this plan.	RCW 70.116.030(1) RCW 36.70A.070

Attachment C: Quincy Basin Change Authorizations

Complete this attachment and the following sections of the Application for Change/Transfer of a Water Right:

- Sections 1 through 5
- Section 7. Related Water Rights
- Section 11. Maps and other Documentation

Section	Required information	Reference
C1	Provide a brief narrative explaining the general nature and intent of the proposed change(s) to the water right.	WAC 173-124
C2	If this water right has previously been changed, summarize whether the previously authorized changes have been completed.	

Attachment D: Drought Change Authorizations

Complete this attachment and the following sections of the Application for Change/Transfer of a Water Right:

- Sections 1 through 5
- Section 11. Maps and other Documentation

Note: In order to apply for a Drought Change Authorization, your water source must be within an area covered by a formal drought declaration.

Section	Required information	Reference(s)
D1	Describe the specific circumstances pertaining to your water shortage. Describe how existing water rights are insufficient to address these impacts due to the drought.	
D2	Describe how the water right proposed for change will address these impacts.	
D3	Have you had any previous drought-specific authorizations for the subject parcels? If yes: • What are the Drought Authorization numbers? • Did those former authorizations cause impairment to other water users?	RCW 43.83B.410
D4	**For irrigation changes,** indicate what types of crop(s) or orchard(s) you will be growing this year. Describe how the crop(s) or orchard(s) may be impacted by this year's drought.	

6. Project Description

6.1	Provide a brief narrative explaining the general nature and intent of the proposed change(s) to the water right.

The applicant (Horse Heaven Wind Farm) is requesting to change the point of diversion, period of use, add a purpose of use, and transfer the place of use of a Department of Natural Resources (DNR) water right (Certificate G3-+22306CWRIS) located in the Horse Heaven Hills area of Benton County, Washington.

This change is requested to supply temporary and perpetual water usage for the construction and operation of the Horse Heaven Clean Energy Center (Energy Center), which will combine wind, solar, and battery storage to produce renewable energy for the region and the State of Washington.

DNR holds Groundwater Certificate G3-+22306CWRIS which authorizes 1,955 gallons per minute (gpm) and 1,043 acre-feet/year (ac-ft/yr) for the irrigation of 260.7 acres from two groundwater wells in Section 36, Township 7 North, Range 25 East. This application requests to change the existing authorized points of withdrawal to a different DNR-owned well, “the Gould Well”, located approximately 5.5 miles to the north.

This change requests to add industrial use to the purpose of use to support the temporary water usage for the Energy Center (concrete mixing, dust suppression, soil compaction, and fire prevention) as well as perpetual water usage for the Energy Center operation (O&M facilities and solar panel washing). Additionally, DNR plans to retain a portion of the irrigation use to utilize this water right to hydrate land surrounding the Gould Well.

6.2	Are you aware of any compliance/enforcement actions that concern this water right? If so, describe.

No.

6.3	If this water right has previously been changed, summarize whether the previously authorized changes have been completed.

DNR filed a Temporary Donation to the Trust Water Rights Program on March 23, 2023 for the full amount of water right G3-+22306CWRIS. The donation was recorded under Document Number CG3-22306C.

6.4	If the water right includes a diversion from a permitted reservoir, list all the associated water rights, the maximum volume of water stored in the reservoir, and the means of withdrawal.

N/A.

6.5	**Attach a copy of any SEPA checklists or environmental analyses related to this project with this application.**
See Attachment D for SEPA checklist for the project. Additional environmental documents relating to this project are provided in Attachment D and includes: a letter indicating withdrawal of expedited Environmental Impact Statement ("EIS") review, the Energy Facility Site Evaluation Council (EFSEC) SEPA Determination of Significance in a Scoping Notice which included a public comment period through June 10, 2021, and the Draft EIS issued on December 19, 2022 with a public comment period ending on February 1, 2023.	

6.6	**For period of use change proposals, indicate the time of the year that the change would be in effect.**
This application requests to change a portion of the existing seasonal irrigation water right to a year-round industrial water right for temporary use (three years) and permanent use. The current period of use is during the irrigation season, typically between April 1st through October 31th, while the proposed industrial period of use will be January 1st through December 31st. As described in Section 6.1 above, DNR plans to retain a portion of this water right to irrigate the property that surrounds the Gould Well, currently by a dryland lessee that will be converted to an irrigated lessee with irrigation phased around the completion of the energy project development. The period of use for irrigation will remain as is, through the irrigation season.	

6.7	**For temporary change proposals, indicate the timeframe that the proposed change would be in effect.**
A portion of the water right proposed for change will supply temporary water use for the construction of the Energy Center for a three-year period. During construction, water would be used to mix concrete for structural foundations and to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction. Fire prevention also represents minor water use; this involves staging water trucks at the job site to keep the ground and vegetation moist during extreme fire conditions. The project will be built using a "phased approach", with construction estimated to take place over a three-year period. Once construction is complete, perpetual water use will consist of industrial use for O&M facilities and solar panel washing and irrigation use for seasonal irrigation. The development schedule for the irrigation portion of the change will be phased to allow for higher construction water use in the first three years without exceeding the water right quantities.	

6.8	**For municipal change proposals, provide the most recent water right self-assessment, if one exists, as submitted to the Department of Health (DOH).**
N/A.	

System Design and Operation

6.9	**Provide a description of the existing water supply system from the point of diversion or withdrawal to the place of use.**
The authorized points of withdrawal, referred to commonly as the John Barber Well No. 1 and No. 2 (Barber Wells), have historically been used to supply irrigation water under groundwater right G3-+22306CWRIS. Barber Wells 1 and 2 are shown on Attachment B (Figure 1), and well logs and construction schematics are included here as Attachment C. Barber Well No. 1 was drilled in 1976 to a depth of 860 feet below the ground surface. Barber Well No. 2 was drilled in 1978 to a depth of 990 feet below the ground surface. Both wells are equipped with 500-horsepower turbine pumps. Water is pumped from the wells to a center pivot irrigation system and then applied to the 125-acre field located Section 36.	

6.10	**Provide preliminary design plans and specifications for the proposed change, including diversion or withdrawal and conveyance facilities, if applicable, and the proposed flow rate and volume design capacity.**
The applicant proposes to use the DNR-owned Gould Well as a source of water supply for the Energy Center. DNR also intends to use the Gould Well to irrigate a portion of the land surrounding the well. The Gould Well was completed in December of 1980 to a depth of 1,220 feet below ground surface but later deepened to a depth of 1,340 feet and a larger-diameter pump chamber was reamed to a depth of 900 feet. The Gould Well has adequate capacity to meet the proposed instantaneous rate and a new well pump will be right-sized. A well log and construction schematic of the Gould Well is included here as Attachment C.	

6.11	**Describe how the change proposal would affect return flow.**
This water right change proposes to add a year-round industrial supply to the purpose of use. Historically, water has been used for seasonal agricultural irrigation from a center-pivot irrigation system. The application efficiency of this irrigation method is estimated to range from 70 to 90 percent (Ecology Water Resources Program Guidance 1210). The average percent consumptive use for this irrigation method is 95 percent. The proposed use includes year-round industrial supply which is assumed to be fully consumptive. Under this proposed use, consumptive use will not increase under the Annual Consumptive Quantity (ACQ) standard as an equivalent amount of acres will be fallowed (both temporarily and permanently) to offset the proposed industrial and related uses.	

6.12	**Provide the current and projected system efficiency covered by the water right proposed for change.**
Based on Ecology Guidance 1210, Table 1, the application efficiency of a center-pivot irrigation system ranges from about 70 to 90 percent. Total consumptive use based on the application efficiency is estimated to be near 95 percent. The proposed irrigation is expected to be of similar efficiency. Proposed industrial uses are expected to be entirely consumptive.	

6.13	**Provide an explanation of how the proposed use will not increase the authorized maximum flow rate (Qi) or annual volume (Qa).**
The water right instantaneous rate limit is 1,995 gallons per minute (gpm). The existing points of withdrawal were able to produce the full instantaneous rate when the water system was in operation. The proposed point of withdrawal (Gould Well) will have a pump installed right sized to meet the designed pumping rate in order to stay compliant with its water right authorization. The applicant will ensure no increase in the total quantity of water use by installing a measuring device maintained in accordance with RCW 90.03.360 and Washington Administrative Code (WAC) 173-173.	

6.14	**For surface water diversions, describe how your plans comply with WDFW fish screening requirements.**
N/A.	

Development Schedule

6.15	**Provide a general timeline that includes the steps needed to begin the project, complete the project, and put the water to full beneficial use.**
The applicant proposes a three-year development schedule for the temporary construction water use. Phased irrigation after the end of temporary use is expected to take another three years.	

6.16	**For changes to water rights currently under a development schedule, provide a description of the current status of your project.**
N/A.	

6.17	**Identify and discuss other land-use or environmental permits required and the timeline to obtain those permits.**
The applicant will obtain the required federal and state permits outlined in the Application for Site Certification including but not limited to, Construction Stormwater General Permit, Water Quality Permits, Authorization to Use State-owned Lands, Access Permits, Utility Permits, Oversize and Overweight Permits, Sand and Gravel General Permits, and Building Permits.	

7. Related Water Rights

7.1	**List any other water rights (applications, permits, certificates, or claims) related to this change application. Include any rights that overlap the place of use.**
Water rights that overlap the place of use or are related to the subject water right include two water right permits (G4-24435 and S4-25639(A)), and one Change-ROE (CS4-25369(A)@2). The attributes of these water right are described in Table 7.1.1 below.	

Table 7.1.1. Related Water Rights

Water Right Identifier	Owner	Priority Date	Qi	Qa (ac-ft/yr)	Irrigated Acreage	Purpose of Use	Source
G4-24435	WA DNR	1976	4300 gpm	1638	430	IR	Three Wells

S4-25639(A)P	WA DNR	1977	56.99 cfs	13713.95	3453.5	IR	Surface Water Pumps
CS4-25639(A)@2	WA DNR	2011	72.15 cfs	17375.15	4392.1	IR	Surface Water Pumps

Water right Certificates S4-28608GWRIS and G4-25953(A2) and Change-ROE CG4-24758(A)@1 were initially identified as overlapping the subject water right place of use. After further review, it was determined that these water rights have overly broad places of use that are adjacent to, but unrelated to, the subject water right in this change application.

7.2	**Explain how the water rights listed above have been exercised.**

Permit G4-24435 authorizes 430 acres of irrigation with a place of use northwest of the subject water right. The water right permit utilizes three groundwater wells, two of which are the John Barber wells under the subject water right. This water right permit will continue to use the Barber Wells after this change application is complete.

Permit S4-25639(A) was assigned to the DNR in 1994, superseding the original 1978 permit under the Paterson Power & Water District. The permit was superseded again in 2005 and issued for 72.15 cfs, 17,3175.15 ac-ft/yr for the irrigation of 4,392.1 acres. It was subsequently split into several "children" certificates following Ecology's agreement to a partial perfection strategy. DNR has perfected portions of the permit on some lands, while surrendering an equivalent number of acres that would otherwise be developed and transferring quantities to other DNR lands. The place of use of the subject water right starting in 2022 is now irrigated with this surface water right.

Change-ROE CS4-25639(A)@2 requested an additional point of diversion from the Columbia River pump station, that would allow for a more cost-effective means to development the irrigation system and acreage. On January 31, 2013, Ecology approved the Benton County Conservancy Board's decision to authorize the additional diversion point.

The water rights described above are being developed separately from the subject water right.

7.3	**List all wells that have been added through a Showing of Compliance form.**

N/A.

8. Historic Use

8.1	**Describe how the water proposed for change has been beneficially used since the water right was established.**

Based on a review of historical aerial imagery, irrigation has remained generally consistent within the authorized place of use for the extent of the available imagery (approximately 35 years). Attachment E includes historical imagery from 1985 through 2021. The extent of irrigation visible in the imagery dated 1985 and 1991 is estimated to be 260 acres. From the year 1996 to present, the extent of the irrigation appears to have been reduced to about 125 to 125.5 acres.

8.2	**For the water right proposed for change and the portfolio of any related rights, provide the historic flow rate from each point of diversion or withdrawal (in cubic feet per second or gallons per minute) and explain how the amount was determined (e.g., meter data or power records).**

According to the water right documentation, the authorized point of withdrawals, Barber Wells 1 and 2 are each equipped with 500-horsepower turbine pumps. A pumping test conducted on Barber Well No. 1 in September of 1976 indicated a maximum flow rate of 2,232 gpm, which resulted in a water level drawdown of 30 feet in the well. A more recent pump testing on Barber Well No. 1 was completed by GeoEngineers in February of 2013 (GeoEngineers, 2013). Their reporting indicates Barber Well No. 1 sustained pumping rates on the order of 900 gpm with very little drawdown. The water right file does not contain any information on flow testing at Barber Well No. 2; however no known restrictions to the well's ability to produce the designed flow rate have been noted and the well is completed in the same aquifer, which we have reason to believe is capable of producing similar quantities of water. Additionally, there are no flow meters associated with Barber Well No. 1 or 2.

8.3	**If the requested change/transfer is for a water right claim, include evidence demonstrating use of water prior to 1917 for surface water, or 1945 for ground water.**

N/A.

8.4	**For surface water diversions, explain whether streamflows were adequate to exercise the right throughout the historic period of diversion. If available, provide streamflow records to support the conclusion.**

N/A.

8.5	**For groundwater withdrawals, explain whether there has been an adequate supply of groundwater to exercise the water right throughout the historic period of withdrawal. Provide all groundwater data and methods used to support the conclusion.**

There has been an adequate supply of groundwater to exercise this right as supported by historical aerial imagery (included here as Attachment E).

The source aquifer is associated with the Columbia River Basalt Group (CRBG). The uncased sections and the perforated sections of the Barber Wells are open exclusively to the Wanapum Basalt Formation; specifically, the productive water-bearing zone is located at the top of the Frenchman Springs Basalt member. The aquifer is highly transmissive and is presumed to have no hydraulic connection between the shallower, overlying Saddle Mountain Basalt Formation. Available water level data collected at Barber Well No. 1 indicates a relatively small water level decline over the past 50 years (Table 8.5.1).

Table 8.5.1 Water Level Data in Barber Well No. 1

Date	Depth to Water (ft. bgs)
9/1976	372
3/1995	389
2/2010	403
2/2011	394

2/2012	398
2/2013	394

bgs = below ground surface

8.6	**Describe your procedures for remaining in compliance with the provisions of your existing water right.**

There are no existing provisions associated with the subject water right.

8.7	**If a water measuring device was installed, provide your measurement data.**

There is no measuring device installed.

8.8	**If a measuring device was not installed, do the pumps have a dedicated power meter(s)? If so, provide an estimate of water use using the power consumption to water consumption equation described in WAC 173-173-160(2).**

The pumps do not have dedicated power meters.

8.9	**If no water use data are available, estimate annual use by using an alternative method and explain your methodology.**

No water flow meters or dedicated power meters are available for measuring water use at each source. As an alternate, water use calculations were made following Ecology guidance and described in detail below. The water use calculations described herein are considered draft, and subject to change pending additional information and analyses.

The extent of irrigation was determined from readily available aerial photos obtained for the years between 1985 and 2021. Table 8.9.1 identifies the extent of irrigated acreage in each year. The aerial photographs utilized in this analysis are contained in Attachment E. The acreage of harvested crops in recent years were also verified by DNR through the provided Agricultural Lease Reports.

Table 8.9.1 Irrigated Acreage Estimated within Place of Use

Date	Acreage	Date	Acreage
1985	260	2012	125.5
1991	260	2013	125.5
1996	125.5	2015	125.5
2003	125.5	2016	125.5
2004	125.5	2017	125.5
2005	125.5	2018	125.5
2006	125.5	2020	125.5
2009	125.5	2021	125.5
2011	125.5	**Authorized Irrigated Acreage = 260.7**	

Ecology routinely relies on the Washington Irrigation Guide (WIG) to provide estimates of evapotranspiration (ET) by different crops. ET can be translated to total water use per acre (water duty), by dividing ET by irrigation efficiency. Irrigation efficiency differs according to the type of irrigation system (e.g., wheel line, solid-set, center-pivot), and Ecology has adopted a guidance document (GUID 1210) with efficiency estimates.

Based on the WIG, GUID 1210, and reported crop types (see Appendix H for DNR crop reports from lessee), Table 8.9.2 below summarizes crop water duty information for the crops recently reported irrigated by DNR's lessee. Irrigated Agricultural Lease Reports provided by DNR indicate the crops type historically irritated are alfalfa, corn, and grass seed. The Prosser, Washington WIG station was selected to represent the crop irrigation requirement in the vicinity of the water right place of use.

Table 8.9.2 Water Use Crop Irrigation Requirement

Crop	Crop Irrigation Requirement (ET) (inches)	Efficiency Range [1]	Total Irrigation Requirement (Water Duty) (ac-ft/acre)
Alfalfa	35.31	70% - 90%	4.20 – 3.27
Corn	28.14	70% - 90%	3.35 – 2.61
Pasture/Turf	37.29	70% - 90%	4.44 – 3.45

[1] Based on Ecology GUID 1210, center pivot irrigation systems have an application efficiency range of 70 – 90%.

For comparison, the authorized water duty from the Certificate is 4.0 ac-ft/acre (1,043 ac-ft/yr / 260.7 acres). We understand the lessee typically irrigated with spray heads and an end-gun. We selected an overall efficiency of 85% and a %Evap of 10%, for an overall %CU of 95%. This suggests that DNR historically fully utilized the authorized water duty of 4.0 ac-ft/acre when alfalfa and pasture/turf crops were grown under the subject water right, but under more modern center-pivot delivery the water duty is approximately 3.5 ac-ft/acre. Water use in the years when corn was grown may result in slightly less water consumption than the authorized water duty. However, corn is a routine crop rotation and temporarily reduced use from crop rotation is exempt from relinquishment.

Based on the irrigation of 125.5 acres and a water duty of 3.5 ac-ft/acre, annual total water use is calculated to be 439.3 ac-ft/yr.

8.10	**Provide aerial photos, remotely sensed images, or other information and explain how they support the historic use.**
Based on review of historical imagery, irrigation has remained consistent within the authorized place of use since 1996. The dated aerial photos are contained within Attachment E.	

Water Used for Irrigation

8.11	**If changing the purpose of use, refer to the Provisions section of your water right document to determine whether the right is subject to the Family Farm Water Act. If so, contact the appropriate Ecology regional office prior to completing this form (refer to map on page 1).**
N/A.	

8.12	**Describe your irrigation scheduling practices (e.g., frequency and duration of irrigation sets). Describe how data from soil moisture probes, weather forecasts, crop inspection, or other irrigation scheduling techniques were used to determine irrigation practices.**
Water is applied to the crops via center-pivot irrigation system. Additional information on the irrigation scheduling practices will be documented in the ROE.	

8.13	**If adding the irrigation of additional acres or a new purpose of use, provide metering data for the most recent five-year period of continuous use. If metering data are unavailable, provide an estimate of water use for the most recent five-year period of continuous use and describe the methodology for this estimate.**

Ecology interprets the "addition of new uses" under RCW 90.03.380(1) to mean the addition of a previously unauthorized purpose(s) of use, while retaining an existing purpose of use. In accordance with the added use requested in the application, it is required to determine that the annual consumptive quantity (ACQ) under the water right for change will be no greater after the change. The ACQ is defined in statute as the average consumptive use of the highest 2 years over the most recent 5 years of continuous beneficial use.

The appropriate time period of analysis is the 5-year period from 2018 to 2022 (since water was donated to trust in 2023), with the highest two years believed to be consistent with the certificate water duty (2019 and 2020).

Table 8.13.1 Water Use for Two Highest Years

Year	Crops Grown	Acres	Water Duty (ac-ft/acre)	Annual Volume by Year (ac-ft/yr)
2019	Alfalfa	125.5	3.5	439.3
2020	Alfalfa	125.5	3.5	439.3

The ACQ was estimated based on the following assumptions:

- Irrigation of 125.5 acres of alfalfa;
- Certificated water duty of 3.5 ac-ft/acre; and
- Average consumptive percentage of 95% (from GUID 1210 for center-pivots)

Calculations for the consumptive water use are summarized below:

$$\%\boldsymbol{CU}\ (per\ Guidance\ 1210) = 95\%$$

$$\boldsymbol{CU} = TIR\ \times \%CU\ ; 439.3\ ac-ft/yr\ \times 95\% = \boldsymbol{417.3\ ac-ft/yr}$$

$$\boldsymbol{CU/_{acre}} = {}^{417.3\ ac-ft}/_{125.5\ acres} = \boldsymbol{3.325\ ft/acre}$$

$$\boldsymbol{Non-Consumptive\ Use} = TIR - CU\ ; 439.3\ -\ 417.3 = \boldsymbol{22\ ac-ft}$$

During the 3-year construction period when the energy project needs 184 ac-ft (consumptive), the new lessee will be only allowed to develop a total of 70.2 acres assuming the same efficiency.

417.3 ac-ft CU – 184 ac-ft CU = 233.3 ac-ft CU
233.3 ac-ft CU / 3.325 ac-ft/acre CU = 70.2 acres

After the 3-year period when the energy project only needs 12 ac-ft of consumptive use, the lessee may develop Y acres.

417.3 ac-ft CU – 12 ac-ft CU = 405.3 ac-ft CU
405.3 ac-ft CU / 3.325 ac-ft/acre CU = 122 acres

8.14	**If water has been used from a state or federal water project (contract water) on the historic place of use, explain when and how that contract water was used.**
N/A.	

9. Hydrogeologic Analysis

9.1	**Provide a description of existing authorized points of withdrawal and proposed wells, their locations, well depths, static water levels, pumping rates and schedules, etc.**

The Barber Wells are constructed in the SW¼ SW¼ and the SE¼ NW¼ of Section 36, Township 7 North, Range 25 East, Benton County Tax Parcel ID 1-3675-000-0000-000 (see Figure 1; Attachment B). The proposed point of withdrawal (Gould Well) is in the NW¼ NE¼ of Section 36, Township 8 North, Range 25 East, Benton County Tax parcel ID 1-3685-100-0000-000. Tables 9.1.1 and 9.1.2 contain information on the existing and proposed points of withdrawal utilized under this water right.

Table 9.1.1 Point of Withdrawal Construction Information

Well	Well Casing Diameter (inches)	Surface Elevation (feet)	Well Depth (feet)	Bottom of Well Elevation (feet)	Screened / Open Interval (feet)
Barber Well No. 1	8 to 24	732.36	845	-112.64	Uncased from: 268-597; 832-860 Perforated from: 727-737; 802-832
Barber Well No. 2	10 to 18	770	990	-220	Uncased from: 640-990
Proposed (Gould Well)	16	1078	1,340	-262	Uncased from: 787-1340

Notes: Elevations are presented relative to the NAVD88.

Water well reports and construction schematics for each well are included in Attachment C.

9.2	**Describe the hydrogeologic setting. Identify all ground water bodies and surface water bodies involved. Describe geographic recharge and discharge areas, seasonal variations, and interrelationships between surface and ground water, and between aquifers. Identify barriers to flow and hydrologic boundaries, if known.**

A detailed description of the project site hydrogeology will is provided as a Hydrogeologic Technical Memorandum, included as Attachment G. A summary of pertinent information is provided below.

Subsurface geologic and hydrogeologic conditions in the project area were evaluated based on a review of water well reports, previously conducted assessments, and available published reports, including but not limited to:

GeoEngineers, 2013, Paterson Project Area Exploration, Testing, and Analysis, Columbia River Off-channel Aquifer Storage Project, Benton County Washington, Prepared for Washington State Department of Ecology, September 27, 2013.

Kahle, S.C., Morgan, D.S., Welch, W.B., Ely, D.M., Hinkle, S.R., Vaccaro, J.J., and Orzol, L.L., 2011, Hydrogeologic Framework and Hydrologic Budget Components of the Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho. USGS Groundwater Resources Program Scientific Investigations Report 2011-5124.

Molenaar, Dee, 1982, Water in the Horse Heaven Hills, south-central Washington: Washington Department of Ecology Water-Supply Bulletin 51, p.122.

Packard, F.A., Hansen, A.J., Jr., and Bauer H.H., 1996, Hydrogeology and simulation of flow and the effects of development alternatives on the basalt aquifers of the Horse Heaven Hills, south-central Washington: U.S. Geological Survey Water-Resources Investigations Report 94-4068, 92 p., 2 pls.

Reidel, S.P. and Fecht, K.R., 1994, Geologic map of the Richland 1:100,000 quadrangle, Washington, Washington Division of Geology and Earth Resources, Open File Report 94-8, 1:100,000.

Swanson, D.A., and Wright, T.L., 1978, Bedrock geology of the southern Columbia Plateau and adjacent area, Chap. 3, *in* Baker, V.R., and Nummedal, D., eds., The channeled scabland: Washington, D.C., National Aeronautical and Space Administration, Planetary Geology Program.

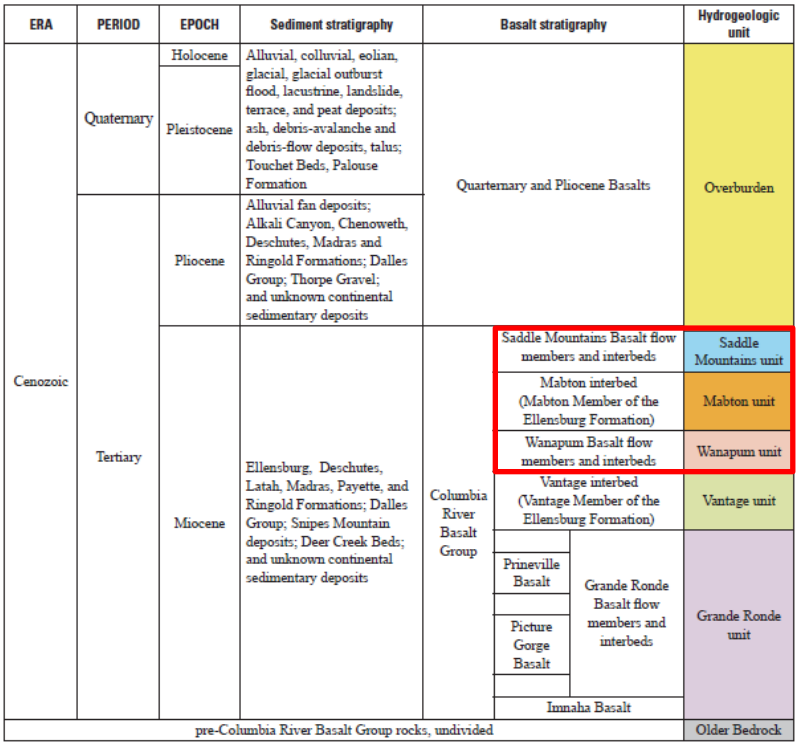
The subject water rights are located in the Horse Heaven Hills region of southeastern Washington about 8 miles north of the Columbia River. The project area is underlain by Miocene- and Pliocene-age basalts of the Columbia River Basalt Group (CRBG), which have been divided into six geologic formations, and these formations are further divided into members and flow units. From oldest to youngest, the CRBG formations include, the Imnaha Basalt, Picture Gorge Basalt, Prineville Basalt, Grande Ronde Basalt, Wanapum Basalt, and the Saddle Mountains Basalt (Swanson et al., 1979). Of importance to this change application are the Wanapum and Saddle Mountains Basalts.

Quaternary-age alluvium unconsolidated sediments are mapped at the ground surface near the Barber Wells (Reidel and Fecht, 1994); however, these sediments are presumed to be only approximately 10 feet in thickness and therefore have no bearing on water supply capabilities.

Hydrogeologic Setting

The hydrostratigraphy of the Columbia River Basalt Group (CRBG) in the immediate project vicinity has been developed during USGS test well construction observations by Pearson (1973) and detailed hydrogeologic framework by Kahle et al. (2011). Water wells reports and other available information indicate that two formational units within the CRBG–the Saddle Mountains Basalt and the Wanapum Basalt–make up the aquifer system in the project vicinity. These basalt units are separated by clay and silt interbeds of the Ellensburg Formation. A correlation chart showing the general stratigraphy and hydrogeologic units in the Columbia Plateau Regional Aquifer System is shown below by Kahle

and others, (2009). Relevant hydrogeologic units to this water right change application are outlined in red.



The occurrence of groundwater is generally limited to fractured and/or vesicular interflow zones between basalt flows and within the sedimentary interbeds found between some basalt flows (Molenaar, 1982). The interiors of individual basalt flows are generally massive and form barriers to vertical flow, resulting in strong vertical gradients (often downward) between interflow zones (Molenaar, 1982).

Structural Setting

Geologic structures in the Horse Heaven Hills region include faults and folds that compartmentalize the aquifer zones and thus groundwater flow within the Columbia River Basalts. Several north-northeast and northwest-oriented faults have been mapped in the project area and documented in a 1996 United States Geological Survey (USGS) report within limited field evidence of their existence (Packard, et al., 1996). These inferred faults were presumed to behave as barriers to groundwater flow; however, recent aquifer testing in the project area confirms that at least one of these faults did not act as a barrier to groundwater flow in the vicinity of the Gould Well.

Regional Aquifer Description

The Saddle Mountains Basalt and the Wanapum Basalt units contain water-bearing zones that were encountered during the drilling of both the Barber Wells and the Gould Well. The Barber Wells were completed to a depth of 845 and 990 feet below ground surface and source water from the Frenchman Springs member of the Wanapum unit. The uncased section of the Gould Well is open exclusively to the Wanapum Basalt Formation; specifically, the productive water-bearing zone is located at the top of the Frenchman Springs member at a depth of 1,188 feet below ground surface.

Aquifer Recharge and Discharge

Recharge to the aquifer system in the project area is primarily through infiltration of precipitation, surface water pumped by irrigators from the Columbia River, and water pumped from the deep aquifers (Packard et al., 1996). Recharge typically occurs only during certain sporadic, short-term periods, when rainfall exceeds evapotranspiration plus runoff (Packard et al., 1996). Downward movement of water from the shallow overburden to underlying basalt is controlled by the vertical

conductivity, unit thickness, and head differences between the units (Kahle et al., 2011). Groundwater from the aquifers is discharged primarily through irrigation well usage.

Regional Water Level Trends

Severe groundwater level declines (exceeding 250 feet) in the Wanapum Basalt are well documented in the western portion of the Horse Heaven Hills beginning int eh 1970s. However, available water level data collected in the vicinity of the Gould Well show relatively small water level declines over the past 30 to 40 years. Static water-level measurements within the Wanapum Basalt in the project area are presented in Table 9.2.1.

Table 9.2.1. Regional Water Level Measurements

Source Well	Date	Depth to Water (ft. bgs)
Gould Well	3/1981	738
	3/2014	788
	2/11/2015	786
	4/2/2015	790
Barber Well No. 1	9/1976	372
	3/1995	389
	2/2010	403
	2/2011	394
	2/2012	398
	3/2013	394

Static water level measurements taken at the Gould Well indicate an average decline of about 48 feet between March 1981 and February 2015, or about 1.4 feet per year. DNR records include six water level measurements from the Barber Well No. 1, as tabulated above. The measurements indicate a decline of about 17 feet between 1976 and 1995, or about 0.9 feet per year. Annual winter water level measurements in the Barber Well No. 1 fluctuated between 2010 and 2013, but the water level trend was slightly upward during that time. Using an arithmetic average of water levels between 2010 and 2013 results in an estimated decline of 0.5 feet per year between 1995 and 2012.

9.3	**Describe, if available, the following characteristics of the aquifer and cite the source of that information:** **• Aquifer transmissivity** **• Aquifer storage coefficient and specific yield** **• Saturated thickness** **• Aquitard leakage** **• A detailed description of groundwater-flow boundaries** **• Water-level hydrographs for wells** **Associated water-quality information.**

Hydraulic parameters have been published for aquifers within the CRBG by Kahle et al. (2011) and Packard et al. (1996). The Wanapum unit is the primary water-bearing basalt unit tapped by the Barber Wells and Gould Well. The saturated thickness of the Wanapum aquifer ranges from less than 300 feet to about 1,000 feet (Packard et al., 1996).

Lateral hydraulic conductivity is a measure of a material's ability to transmit water laterally and can be readily estimated from specific-capacity date reported on driller's well logs. The range in horizontal hydraulic continuity for the Wanapum unit is 0.007 to 5,200 feet per day, with a median of 3 to 11 feet per day reported by Kahle et al., (2011) and 0.8 to 8 feet per day by Packard et al., (1996).

The storage coefficient, a measure of the unit's ability to store and release water, is estimated to be 3.0E-5 to 4.0E-5 for the Wanapum unit (Kahle et al., 2011).

Additionally, aquifer parameters were estimated from previous aquifer tests performed on the Gould Well in 1981 and 2015, and the Barber Well No. 1 in 2013. Based on these aquifer tests, specific capacity and transmissivity estimates for the source aquifer (Frenchman Springs member of the Wanapum) are presented in Table 9.3.1 below:

Table 9.3.1 Summary of Regional Aquifer Parameters

Well	Date	Pumping Rate (gpm)	Drawdown (ft.)	Specific Capacity (gpm/ft.)	Transmissivity (gpd/ft.)
Gould Well	3/1981	1,680	15	112	224,000
	2/2015	1,860	16	115	547,000
Barber Well No. 1	2/2013	905	3.38	268	2,390,000

9.4	**Additional hydrogeologic work may be required to process your application.**
Additional hydrogeologic information is included in Attachment G	

10. Environmental Assessment

10.1	**Describe the aquatic uses of any related surface water bodies (i.e., fish and wildlife, recreation and aesthetic, water quality, etc.).**
N/A, the source aquifer is deep and not hydraulically connected to surface water.	

10.2	**Indicate whether the related surface water is fish-bearing, including whether it is inhabited by salmonids. List species and the times of year they are present.** https://apps.wdfw.wa.gov/salmonscape/**.**
N/A.	

11. Maps and Other Documentation

11.1	**Attach detailed map(s) clearly indicating the following:** • **The existing places of use for all rights related to this proposed change. If any overlapping water rights for the place of use, or multiple rights that share the same point(s) of diversion/withdrawal exist, provide one map depicting all of the historic points of diversion, means of conveyance, and places of use. Identify related rights as such by water right number.** • **The county parcel numbers for the existing and proposed place(s) of use, unless the place(s) of use are for large service area such as that served by an irrigation district or municipal water system. Identify the name of the irrigation district or the water system.** • **The existing and proposed locations of the point(s) of diversion/withdrawal.** • **The names, informal or formal, used to identify each point of diversion/withdrawal (e.g., Well No. 1, River Well, S01, Smith Dam, etc.).** • **The proposed place(s) of use.** • **A grid layer referencing Section, Township, and Range of the area.** • **The location of the water delivery system and other such features relevant to your proposed change/transfer (e.g., mainlines, reservoirs, booster pumps, etc.)**
See Attachments	

Attachment A: Mitigation Plan

A.1	Identify what rights, as defined above, you expect to be impaired and identify the expected nature of that impairment.
Click or tap here to enter text.	

A.2	Identify the source of supply for the proposed mitigation water.
Click or tap here to enter text.	

A.3	Describe how this mitigation water source will offset the impacts of the proposed change. This should specifically address how the change in the amount of water in Section A4 will be offset by the source identified in Section A5.
Click or tap here to enter text.	

A.4	Estimate the change in consumptive quantity that would be available for the use being impaired. Describe the methodology used to support your estimate.
Click or tap here to enter text.	

A.5	Describe the measures that will be taken to ensure mitigation will be maintained for the duration of the water right change authorization.
Click or tap here to enter text.	

A.6	List each water right being proposed for transfer, relinquishment, or conveyance to the Trust Water Rights Program. Provide a history of beneficial use of each water right listed above and identify whether a separate water right change application has been filed for these water rights.
Click or tap here to enter text.	

A.7	Provide copies of any agreements between you and other parties regarding mitigation for impacts, if applicable.
Click or tap here to enter text.	

A.8	Describe the benefits and costs, including environmental effects, of any water impoundment or other resource management technique that is included as a component of the application.
Click or tap here to enter text.	

A.9	**<u>For surface water</u>, analyze whether there will be any increased water supply from the impoundment or technique, including recharge of groundwater, as a means of making water available or otherwise offsetting diversion impacts.**
Click or tap here to enter text.	

A.10	**<u>For groundwater</u>, analyze whether there will be any increased water supply from the impoundment or technique, including recharge of groundwater, as a means of making water available or otherwise offsetting the impact of the diversion of surface water.**
Click or tap here to enter text.	

A.11	**If you intend to offset your new use, describe how and when non-consumptive water returns to groundwater or surface water, and explain how this volume was estimated. Specifically describe how the quantity, timing and location of return flow would change if the proposed permit is approved.**
Click or tap here to enter text.	

Attachment B: Consolidation of Exempt Wells

B.1	**Provide evidence that water from the exempt wells tap the same body of public groundwater as the well with the water right to withdraw public ground waters.**
Click or tap here to enter text.	

B.2	**Show that suitable arrangements have been made to discontinue use of the permit exempt well established under the exemption upon approval of the consolidation amendment.**
Click or tap here to enter text.	

B.3	**Provide copies of legally enforceable agreements that bind present and future owners of the land from drilling and using another permit exempt well through appropriate title limitations.**
Click or tap here to enter text.	

B.4	**Show that suitable arrangements have been made to properly decommission the permit exempt well(s) in accordance with Chapter 18.104 RCW and relevant Ecology rules.**
Click or tap here to enter text.	

B.5	Describe impacts to other existing rights, including ground and surface water rights and minimum stream flows adopted by rule.
Click or tap here to enter text.	

B.6	Provide evidence that the amount of water used is consistent with the average amount of water used for similar uses in the general area and explain how this was determined.
Click or tap here to enter text.	

B.7	Is there an adopted Coordinated Water System Plan (CWSP) or Comprehensive Land Use Plan or another comprehensive watershed management plan in place for this location? Please indicate yes or no. If yes, please document whether your project is consistent with this plan.
Click or tap here to enter text.	

Attachment C: Quincy Basin Change Authorizations

C.1	Provide a brief narrative explaining the general nature and intent of the proposed change(s) to the water right.
Click or tap here to enter text.	

C.2	If this water right has previously been changed, summarize whether the previously authorized changes have been completed.
Click or tap here to enter text.	

Attachment D: Drought Change Authorizations

D.1	Describe the specific circumstances pertaining to your water shortage. Describe how existing water rights are insufficient to address these impacts due to the drought.
Click or tap here to enter text.	

D.2	Describe how the water right proposed for change will address these impacts.
Click or tap here to enter text.	

D.3	**Have you had any previous drought-specific authorizations for the subject parcels?** **If yes:** **• What are the Drought Authorization numbers?** **• Did those former authorizations cause impairment to other water users?**
Click or tap here to enter text.	

D.4	**<u>For irrigation changes</u>, indicate what types of crop(s) or orchard(s) you will be growing this year. Describe how the crop(s) or orchard(s) may be impacted by this year's drought.**
Click or tap here to enter text.	

January 16, 2024

Benton County Water Conservancy Board
Attention: Dr. Darryll Olsen
3030 W. Clearwater, Suite 205-A
Kennewick, WA 99336

Re: Water Right Change Application CG3-22306@1

Dear Benton County Water Conservancy Board:

This letter requests modification of water right Change Application CG3-22306@1 and provides supplemental information to be considered for the water right record. Change Application CG3-22306@1 was filed by Horse Heaven Wind Farm, LLC on November 6, 2023, and transferred to the Benton County Water Conservancy Board (Board). The submitted application requested to change the point of diversion, period of use, add a purpose of use, and transfer the place of use of a Department of Natural Resources (DNR) water right. The current proposed purpose and period of use in the change application is shown below in Table 1.

Table 1. Proposed Purpose and Period of Use in CG3-22306@1

Purpose of Use	GPM	Ac-Ft/Yr	Period of Use
Irrigation of up to 260.7 acres	1,805 gpm	1,031	Irrigation Season
Industrial, Construction, Dust Abatement	150 gpm	184	Year-Round (For Three Years)
Industrial	150 gpm	12	Year-Round
Not to Exceed	***1,955 gpm***	***1,043***	

Notes: gpm = gallons per minute; Ac-Ft/yr = acre-feet per year

Requested Modification of Change Application CG3-22306@1

DNR is requesting that the Board modify Change Application CG3-22306@1 to increase the temporary and perpetual instantaneous rate to 450 gallons per minute (gpm) for industrial, construction, and dust abatement uses. The originally requested instantaneous rate (150 gpm) was calculated over a 12-hour pumping period. This modification is requested to reflect the projected instantaneous water demand during an 8-hour pumping period. Full authorization of the instantaneous rate (1,955 gpm) will not be exceeded, and actual coordination of irrigation and non-irrigation uses will occur between the applicant and the farm when filling events occur. Any surplus water will be used for irrigation purposes.

Modification of the proposed purpose and period of use of the change application is shown in Table 2 below.

Table 2. Modification of Proposed Purpose and Period of Use in CG3-22306@1

Purpose of Use	GPM	Ac-Ft/Yr	Period of Use
Irrigation of up to 260.7 acres	1955 gpm	1,043	Irrigation Season
Industrial, Construction, Dust Abatement (non-additive)	**450** gpm	184	Year-Round (For Three Years)
Industrial (non-additive)	**450** gpm	12	Year-Round
Not to Exceed	***1,955 gpm***	***1,043***	

Notes: gpm = gallons per minute; Ac-Ft/yr = acre-feet per year

Additionally, DNR requests a modification to the proposed place of use. This request is being made to ensure that all land water is to be used on is described on the change application. The proposed place of use is located within the following township and range: T9N, R26E., T9N, R27E., T8N, R25E., T8N, R26E., T8N, R27E., T8N, R28E., T7N, R26E., T7N, R27E., T7N, R28E., T7N, R29E., T7N, R30E., T6N, R30E., and T6N, R31E.

Supplemental Material for Change Application CG3-22306@1

DNR is providing the following supplemental material for the water right file to be considered by the Board:

- Relinquishment of Annual Quantity. Consistent with the findings of Section 8.1 in the submitted *Change Application Supporting Documentation,* DNR agrees that the extent of irrigation under the water right authorization has been reduced to 125.5 acres. Aerial imagery of the irrigated place of use and agricultural lease reports reveals a reduction in irrigated acreage since the year 1996. The reduction in irrigation creates a relinquishment risk of 134.5 acres, when compared to the full water right authorization.

- Preservation of Instantaneous Rate. The water right's full authorization of instantaneous rate has been preserved. There has been no modification to the installed pumps despite the reduction in the irrigated acreage. The water right file indicates that the two wells authorized under the water right are equipped with a 500-horsepower, and 350-horsepower vertical turbine pump (see Attachment A). From total head pressure, horsepower, and pump efficiency, the calculated the instantaneous flow rate of each well is 2,246 gpm and 1,572 gpm, respectively. Based on these findings, the full instantaneous rate of the water right should be preserved for peaking under the new proposed uses. This quantity of peaking is also needed for the new purposes.

Coordination for Change Application CG3-22306@1

DNR understands that the permitting process of the change application involves several mandatory steps including conducting a site visit and publishing a legal notice of the application. DNR is available to offer coordination of a site visit to aid in the technical investigation of the existing water right and the proposed changes. The Board may contact DNR with any proposed dates for a site visit if coordination is requested.

Additionally, DNR will work with the application to prepare and submit a public notice for the Board's review in accordance with RCW 90.03.280. The public notice will include information as described in WAC 173-153-080.

Please let us know if the Board has any questions or concerns about the proposed amendment request or would like DNR to facilitate coordination of a site visit.

Sincerely,

Department of Natural Resources

Christina Frantz

Christina Frantz
Water Resources Program Manager
Christina.frantz@dnr.wa.gov

Attachments: Attachment A – Barber Well Pump Information

cc: Dave Kobus, Scout Clean Energy

Dan Haller, Aspect Consulting

S:\Horse Heaven Wind Farm\2023 DNR Water Right Change\Change Application\Transmittal to Board\Modification to Change App\lttr_Modification_2024.01.08.docx