



State of Washington DRAFT REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

Change Place of Use and point of withdrawal

PRIORITY DATE January 26, 1967	WATER RIGHT NUMBER G3-00633
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MAILING ADDRESS Marlin Hutterian Brethren Trust 21344 Road 18 NE Marlin WA 98832	SITE ADDRESS (IF DIFFERENT)
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Total Quantity Authorized for Withdrawal		
WITHDRAWAL RATE 2500	UNITS GPM	ANNUAL QUANTITY (AF/YR) 1308.6

Purpose						
PURPOSE	WITHDRAWAL RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Agricultural irrigation of 520 acres	2500		GPM	1308.6		04/01 - 10/31

Split into A & B

"A" portion – 2452 gpm, 1283.6 acre feet per year for 510 acres

"B" portion - 48 gpm, 25 acre-feet per year for 10 acres

Source Location			
COUNTY Lincoln	WATERBODY GROUNDWATER	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA 41

"A"Portion

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Well 1	2131030800000		21 N.	31 E.	30	SE¼SE¼	47.27710	-118.96050
Well 2	2131032700000		21 N.	31 E.	22	NW¼NW¼	47.27255	-118.95814

DRAFT REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

"B" portion

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Well 1	2131021500000		21 N.	31 E.	21	NW¼NE¼	47.30453	-118.92206
Well 2	2131022000000		21 N.	31 E.	22	SW¼NW¼	47.29793	-118.91543
Well 3	2131022000000		21 N.	31 E.	22	NE¼SW¼	47.29696	-118.90568
Well 4	2131022000000		21 N.	31 E.	22	NE¼NE¼	47.30465	-118.89484

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

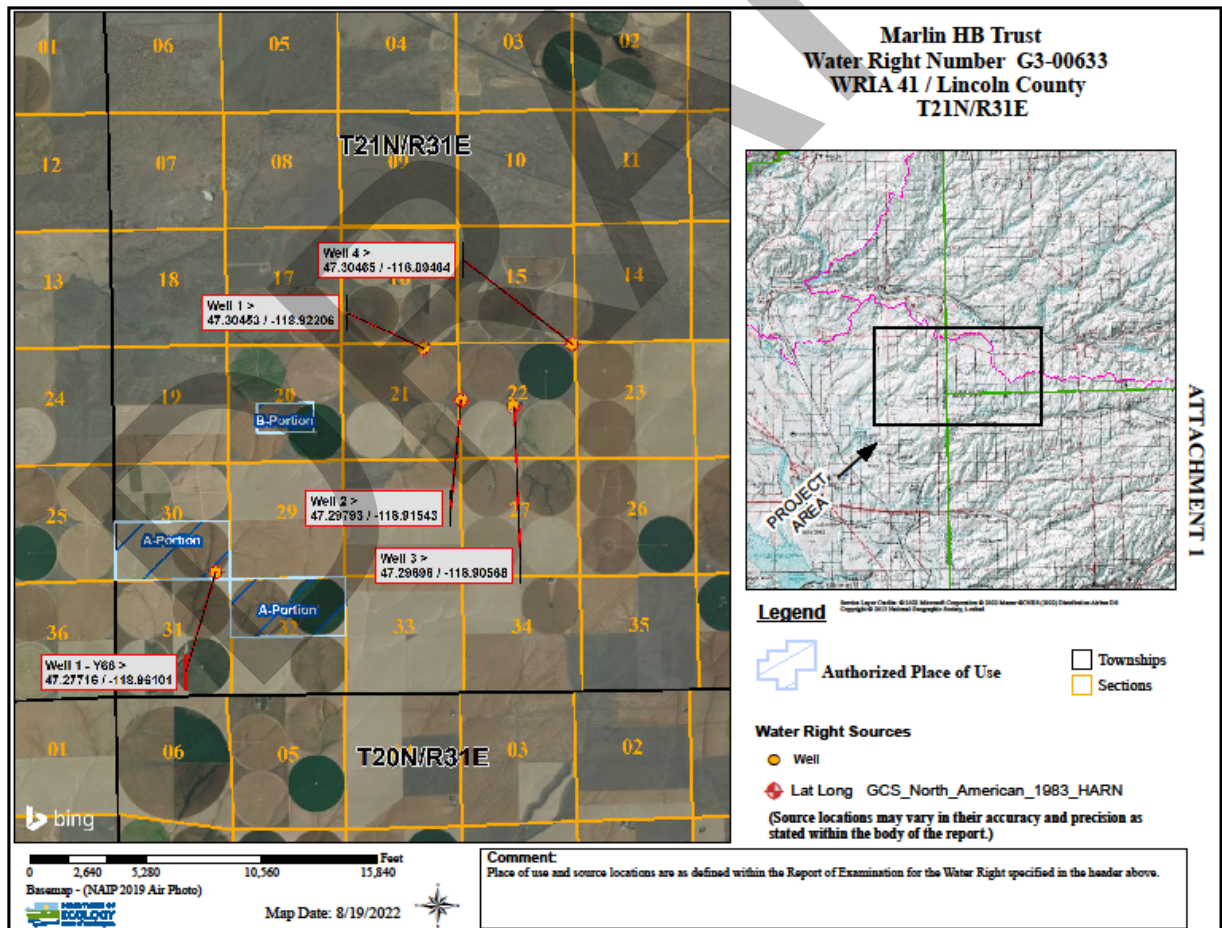
"A" PN 2131030800000, 2131032700000

"B" PN 2131020000000

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

"A" – 510 acres in the S½ of Section 30 and the N½ of Section 32 T. 21 N., R. 31E.W.M.

"B" - 10 acres within the NE¼SW¼ and NW¼SE¼ of Section 20, T. 21 N., R. 31 E.W.M. Lincoln County



Proposed Works

The proposed change application does not intend to construct a new wells. Existing wells are located on proposed sites. This change proposes to move a portion of the water right closer to the canal to receive delivery from the East Columbia Basin Irrigation District (ECBID) surface water delivery under the replacement water program. This change allows for the change in place of use pending entry into a Water Service Contract (WSC) with the ECBID. At such time this right will be standby reserve (RCW 90.44.510). A Superseding Certificate will be issued subject to this change authorization.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
began	complete	infill

Measurement of Water Use

How often must water use be measured?	Weekly if used
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 (gpm)

Provisions

If no appeals are filed, Superseding Certificate may be issued after the appeal period subject to the request for payment of appropriate certificate and recording fees.

The remaining 120 acres is considered relinquished under this authorization.

This right lies within the Odessa Sub Area and eligible for replacement water. The applicant desires to transfer this right closer to the canal for potential replacement water from the ECBID. Under this authorization, the applicant will be able to negotiate a water service contract and explore the potential of receiving water from the District. Should the landowner enter into a water service contract with the ECBID, water use under this right shall be subject to the following provision.

In accordance with RCW 90.44.510, Ecology "shall issue a superseding water right permit or certificate for a groundwater right where the source of water is an aquifer for which the department adopts rules establishing a groundwater management subarea and water from the federal Columbia Basin project is delivered for use by a person who holds such a groundwater right. The superseding water right permit or certificate shall designate that portion of the groundwater right that is replaced by water from the federal Columbia Basin project as a standby or reserve right that may be used when water delivered by the federal project is curtailed or otherwise not available."

This water right authorizes use of groundwater in the Odessa Ground Water Management Subarea.

This provision is being added to clarify that this right will be a standby reserve right that is entirely supplemental to Columbia Basin Project water. Groundwater withdrawn under this authorization shall only be used when delivery of Project water is interrupted during the Project's irrigation season. Groundwater shall not be used before Project water delivery begins each season and after Project water delivery ends each season.

Should the contract/delivery of water from the Project be terminated by the water right holder, landowner or successor, this standby/reserve right shall be subject to cancellation. However, such cancellation shall not occur if the contract/delivery of water from the Project is terminated as a result of an action outside of the control of the water right holder, landowner or successor, such as the failure of the United States Bureau of Reclamation and an irrigation district to renew their contract.

Transfer of this standby reserve water right to other lands, or change in the nature or purpose of use of this right is prohibited.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state must meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.

All wells must be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160-291(3) is required.

Measurements, Monitoring, Metering, and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", chapter 173-173 WAC, which 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 (Ecology) for modifications to some of the requirements.

Recorded water use data shall be submitted upon request. To set up an Internet reporting account, contact the Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Regional Office for forms to submit your water use data.

Water Use Efficiency

The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will 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 a valid right exists; 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. CG3-00633C@1, 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 Spokane, Washington, this xx day of xxxxx.

Jaime Short, 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>.

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number CG3-00633C@1. The applicant proposes to change the place of use and point of withdrawal under Ground Water Certificate G3-00633 on a portion of this water right.

Ground Water Certificate G3-00633 confirmed a right from a well for 2500 gallons per minute, 1308.6 acre feet per year for irrigation of 640 acres and domestic supply.

The applicant proposes to change/add four points of withdrawal and transfer a portion of the place of use. This application for change proposes to transfer this right and enter into a Water Service Contract with the ECBID.

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 Odessa Record on November 16 and 23, 2021 and no protests were received.

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.

Water Resources Statutes and Case Law

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of the extent and validity of the right. This is necessary to establish whether the right is eligible for change. *R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp*. Thus, in reviewing the subject water right change application, Ecology must first determine the extent and validity of the water right that is eligible for change. Then, Ecology must determine whether the requested change would cause impairment of other existing water rights or be detrimental to the public welfare.

Certificate G3-00633 authorized the use of 2500 gallons per minute, 1308.6 acre-feet per year for the irrigation of 640 acres and domestic supply. The water use is within the Odessa Sub Area and predates the Record of Decision, signed April 2, 2013, for the Odessa Ground Water Replacement Program.

This application proposes to change the place of use of 10 acres of this right and transfer these acres to other lands.

Evaluation of the Water Right and Beneficial Use Analysis:

The Washington State Supreme Court, in *Okanogan Wilderness v. Town of Twisp and Department of Ecology*, 133 Wn.2d 769, 947 P.2d 732 (1997), found that applications for change may be granted only to the extent the water has been historically put to beneficial use, as beneficial use determines the measure of a water right. They also found that the existence and quantification of a water right must be determined, including whether or not the water right has been lost for non-use before the Department can approve a change or transfer of the water right.

The right issued for 2500 gpm, 1308.6 acre-feet per year. The annual quantity confirmed in the certificate is 2.0 acre-feet per acre. The Odessa Rule established a maximum of 2.5 acre-feet per acre which is common in the area. Typical crops grown in this area require 2.5 acre-feet per acre or less. The annual quantity is slightly below the Odessa Rule.

Ground Water Certificate G3-00633 confirmed a right for the irrigation of 640 acres and domestic supply within the S½ of Section 30 and the N½ of Section 32, T. 21 N., R. 31 E.W.M. The applicant has agreed only 520 acres has been continuously irrigated under 4 – 130 acre pivots. RCW 90.44.520 was adopted in 2006 protecting 520 acres of this right from relinquishment from 2006 to present. The landowner has filed an Odessa Subarea Conservation Relinquishment Exemption Form.

The applicant has agreed the remaining irrigation portion of this right has been relinquished. The Qi (2500 gpm) is still being used on the lesser number of acres. This calculates to approximately 4.8 gpm/acre. The original annual quantity averaged at 2.0 acre-feet per acre. The annual quantity continued to be used on the lesser acres and would be closer to the 2.51 acre-feet per acre.

Based on the review of the records, it appears this right is valid and eligible for change up to 2500 gallons per minute, 1308.6 acre-feet for the irrigation of 520 acres. The applicant proposes to reduce the pivot sizes and transfer 10 acres to a small center pivot in Section 20.

The applicant desires to transfer this right and enter into a WSC with the ECBID to obtain replacement water for this water right. This proposed transfer is only to move a portion of this authorization and obtain a surface water contract. If approved this change would allow for him to enter into a WSC at the new place of use. The applicant proposes to exercise this right pending a WSC and construction of the delivery pipelines from the ECBID.

The land proposed for the transfer has been tilled and cropped in the past.

This right lies within the Odessa Sub Area and eligible for replacement water. Under this authorization, the applicant will be able to negotiate a water service contract and explore the potential of receiving water from the District.

RCW 90.44.510, states Ecology “shall issue a superseding water right permit or certificate for a groundwater right where the source of water is an aquifer for which the department adopts rules establishing a groundwater management subarea and water from the federal Columbia Basin project is delivered for use by a person who holds such a groundwater right. The superseding water right permit or certificate shall designate that portion of the groundwater right that is replaced by water from the federal Columbia Basin project as a standby or reserve right that may be used when water delivered by the federal project is curtailed or otherwise not available.”

Based on this review, a valid right exists for 2500 gallons per minute, 1308.6 acre feet for 520 acres. The remaining 120 acres and domestic supply is considered relinquished. This right can be used for “infill” purposes in the OSSA and is considered eligible for the replacement program.

Overlapping water rights

Ground Water Certificate 1526-A issued for 50 gallons per minute, 40 acre-feet for the irrigation of 10 acres in the SE¼SE¼ of Section 30. The original well is described as a 6 inch well, constructed to a depth of 147 feet. It appears this well and the right associated with it have relinquished for non-use. The applicant has agreed it is relinquished.

Ground Water Certificate 2668-A issued for 600 gallons per minute, 480 acre-feet for the irrigation of 120 acres in the SW¼ and N½ and SW¼SE¼ of Section 30. The well was located in the SW¼ of Section 30 and was drilled to a depth of 500 feet. Certificate of Change Vol 2 pg 984 changed the point of withdrawal to a 775 foot well in the SE¼SE¼SE¼ of Section 30.

Ground Water Certificate 3905-A issued for 668 gallons per minute, 534.4 acre-feet for 320 acres in the N½ of Section 32. The well was located in the W½NW¼ of Section 32. Two 130 acre pivots are irrigated within the N½ of Section 32. The applicant has agreed 60 acres of this right has relinquished but the 668 gallons per minute and 534.4 acre-feet per year are retained. Certificate 3905-A is the primary right to these 260 acres and G3-00633 is supplemental. Certificate of Change Vol 2 pg 985 changed the point of withdrawal to a well in the SE¼SE¼SE¼ of Section 30.

Ground Water Certificate G3-00633 issued for 2500 gallons per minute, 1308.6 acre feet for the irrigation of 640 acres in the S½ of Section 30 and the N½ of Section 32 less water supplied under 1526-A, 2668-A in the S½ of Section 30 and less water supplied under 3905-A in the N½ of Section 32. The applicant has agreed 120 acres of this right has relinquished. This right authorized the well in the SE¼SE¼ of Section 30 and the well in the NW¼ of Section 32.

This would leave G3-00633 with 2500 gallons per minute, 1308.6 acre-feet for the irrigation of 520 acres less water applied under 2668-A and 3905-A.

Hydrologic/Hydrogeologic Evaluation

Applications for change/transfer of water right permits and certificates of ground water are governed by RCW 90.44.100, which states in part that: the holder of a valid right to withdraw public ground waters may, without losing his priority of right, construct wells at a new location in substitution for, or in

addition to, those at the original location, or he may change the manner or the place of use of the water. Such amendment shall be issued by the Department only on the conditions that: (1) the additional or substitute well or wells shall tap the same body of public ground water as the original well or wells; (2) use of the original well or wells shall be discontinued upon construction of the substitute well or wells; (3) the construction of an additional well or wells shall not enlarge the right conveyed by the original permit or certificate; and (4) other existing rights shall not be impaired. The Department may specify an approved manner of construction and shall require a showing of compliance with the terms of the amendment.

The proposed project lies within the boundaries of the Odessa Sub-area as defined in Chapter 173-128A WAC. The Odessa Sub-area encompasses approximately 2,000 square miles in parts of Grant, Lincoln, and Adams Counties. The relatively flat-lying land surface slopes in a southwesterly direction and is locally dissected by coulees. The proposed change is subject to the conditions of WAC 173-130A, the management regulation for the Odessa Sub-area.

The wells associated with this right is discussed below.

The original wells for G3-00633 was constructed under 2668-A together with CC V2-984 is described as a 15 inch diameter well, 775 feet deep. This well was deepened in 1977 to a depth of 1180 feet. It was deepened again in 1996 to a depth of 1553 and again in 2002 to a depth of 2166 feet.

Additional well logs indicate a second well was constructed to 1767 feet. It was deepened to 2700 in 2008 and deepened to 2729 in 2009.

The log for the well in the NW¼ of 32 indicates the well is a 12 inch constructed to a depth of 708 feet.

It is a basalt well based on the well log. No additional wells are proposed at this location.

Four existing wells are constructed at the proposed location.

Well 1: (NW¼NE¼ of Section 21, T. 21 N., R. 31 E.W.M.) is a 10 inch diameter well, constructed to a depth of 470 feet. The well was cased to 21 feet. Basalt was encountered at 24 feet.

Well 2: (SW¼NW¼ of Section 22, T. 21 N., R. 31 E.W.M.) is described as a 15 inch diameter well, constructed to a depth of 700 feet. No logs are available for this well. A replacement well was constructed in 2004 at this location and is described as a 14 inch diameter well to a depth of 2190 feet. It was cased to 800 feet (AHP 782).

Well 3: (NE¼SW¼ of Section 22, T. 21 N., R.3 E.W.M.) No well log or information is found for this well.

Well 4: (NE¼NE¼ of Section 22, T. 21 N., R.31 E.W.M.) is a 15 inch diameter well, constructed to a depth of 650 feet. Basalt was encountered at 34 feet. A casing depth was not identified on the well log.

These four wells are constructed into basalt, and in the same body of public ground water. These wells are proposed to be used pending entry into a water service contract and construction of a lateral.

A change or transfer of a ground water right requires a determination of the existing well and proposed well to determine if they are in the same body of public ground water.

All of the wells are constructed into the Columbia River Basalt Ground and considered to be in the same body of public ground water.

Impairment Considerations

“Impair” or “impairment” means to: 1) adversely impact the physical availability of water for a beneficial use that is entitled to protection, and/or 2) to prevent the beneficial use of the water to which one is entitled, and/or 3) to adversely affect the flow of a surface water course at a time when the flows are at or below instream flows levels established by rule (POL-1200); and/or 4) degrade the quality of the source to the point that water is unsuitable for use by existing water right holders (WAC 173-150). Demonstration of impairment would require evidence of a substantial and lasting or frequent impact reflecting such conditions.

Water levels within the Odessa Subarea have been in a state of decline since the first wells were brought into production in the late 1960s. This area is managed under WAC 173-130A, the Odessa Ground Water Subarea Management Policy. The rule established what was determined to be acceptable declines in the ground water table. The purpose of this regulation was to provide a procedure for managing ground water within the subarea and insure the maintenance of a safe sustaining yield within a reasonable pumping lift. WAC 173-130A-060 established the rate of decline be limited to a total amount of 30 feet in three consecutive years as measured in the spring before the start of the irrigation season. Over the decades, the Department has measured over 600 different wells throughout the Odessa Subarea. We are currently measuring around 120 wells (sites drop out of the monitoring network as wells are destroyed, airlines become inoperable, or access is otherwise denied and new wells are added as opportunities occur).

The ultimate goal of this Project (OGWRP) is to utilize surface water from the East Columbia Basin Irrigation District and for these ground water rights to go into standby/reserve status.

This proposed change in place of use does propose use of the existing wells for the proposed locations. Since water will be withdrawn from the wells and the water right will be used for “infill” purposes, an impairment analysis under WAC 173-130A-160 is required.

Well Construction

The currently authorized point of withdrawal for Certificate G3-00633 is located in the SE¼SE¼ of Section 30 and the NW¼ of Section 32, T. 21 N., R. 31 E.W.M.

WAC 173-130A-170 Casing and Sealing, allows the determination of casing and sealing requirements on a case-by-case basis in order to protect existing shallow domestic and stock water wells, and springs.

The construction of the 4 existing/proposed wells are summarized as follows:

Well 1 (NW¼NE¼ of Section 21, T. 21 N., R. 31 E.W.M.) was drilled to a depth of 470 feet below ground surface (ft bgs). It is recorded as having 10 inch surface casing from ground surface to 21 feet with a land surface elevation of approximately 1,740 feet above mean sea level (ft amsl). The altitude of the top of the Grande Ronde Basalt Member (from the USGS WRI Report 87-4238, Sheet Three, and other sources) for this well is approximately 1,100 ft amsl. This would put the top of the Grande Ronde at approximately 640 ft bgs. WAC 173-160 requires that wells be constructed to prohibit the interchange of aquifer waters. The change in head between the Wanapum aquifer and the Grande Ronde aquifer typically does not occur at the formation contact; rather, it occurs up to 200 feet below the Vantage Interbed. Should this well be reconstructed or modified or a replacement well constructed for this water right, sealing shall be placed from the bottom of the well to the top until undiluted seal material returns to the surface through the annular space. If the well is reworked or reconstructed, and its total depth will be more than 640 ft bgs, then a properly sealed casing will need to be installed to a depth of 840 ft bgs.

Well 2 (SW¼NW¼ of Section 22, T. 21 N., R. 31 E.W.M.) is described as a 15 inch diameter well, constructed to a depth of 700 feet. No logs are available for this well. A replacement well was constructed in 2004 at this location and is described as a 10 inch diameter well to a depth of 2190 ft bgs. It was cased to 800 ft bgs with a land surface elevation of approximately 1,720 ft amsl. The altitude of the top of the Grande Ronde Basalt Member (from the USGS WRI Report 87-4238, Sheet Three, and other sources) for this well is approximately 1,100 ft amsl. This would put the top of the Grande Ronde at approximately 620 ft bgs. WAC 173-160 requires that wells be constructed to prohibit the interchange of aquifer waters. The change in head between the Wanapum aquifer and the Grande Ronde aquifer typically does not occur at the formation contact; rather, it occurs up to 200 feet below the Vantage Interbed. Should this well be reconstructed or modified or a replacement well constructed for this water right, sealing shall be placed from the bottom of the well to the top until undiluted seal material returns to the surface through the annular space. If the well is reworked or reconstructed, and its total depth will be more than 620 ft bgs, then a properly sealed casing will need to be installed to a depth of 820 ft bgs. The replacement well appears to be properly constructed into the Grande Ronde Formation.

Well 3 (NE¼SW¼ of Section 22, T. 21 N., R.3 E.W.M.) has no information associated with the well construction. With a land surface elevation of approximately 1,730 ft amsl. The altitude of the top of the Grande Ronde Basalt Member (from the USGS WRI Report 87-4238, Sheet Three, and other sources) for a well at this location is approximately 1,050 ft amsl. This would put the top of the Grande Ronde at approximately 680 ft bgs. WAC 173-160 requires that wells be constructed to prohibit the interchange of aquifer waters. The change in head between the Wanapum aquifer and the Grande Ronde aquifer typically does not occur at the formation contact; rather, it occurs up to 200 feet below the Vantage Interbed. In order to prevent mixing of the Wanapum and Grande Ronde waters this well should be cased to a depth of 880 feet bgs. A video log of this well could help verify well construction details, including casing depth and total depth.

Well 4 (NE¼NE¼ of Section 22, T. 21 N., R.31 E.W.M.) was drilled to a depth of 650 feet below land surface with a land surface elevation of approximately 1,740 ft amsl. The altitude of the top of the Grande Ronde Basalt Member (from the USGS WRI Report 87-4238, Sheet Three, and other sources) for this well is approximately 1,125 ft amsl. This would put the top of the Grande Ronde at approximately 615 ft bgs. WAC 173-160 requires that wells be constructed to prohibit the interchange of aquifer waters. The change in head between the Wanapum aquifer and the Grande Ronde aquifer typically does not occur at the formation contact; rather, it occurs up to 200 feet below the Vantage Interbed. In order to prevent mixing of the Wanapum and Grande Ronde waters this well should be cased to a depth of 815 feet bgs. It is unclear from the well log how deep this well is cased. If the well is reworked or reconstructed, and its total depth will be more than 615 ft bgs, then a properly sealed casing will need to be installed to a depth of 815 ft bgs.

The analysis for the proposed transfer of 48 gallons per minute, 25 acre feet is as follows:

Over the decades, the Department has measured over 600 different wells throughout the Odessa Subarea. We are currently measuring around 120 wells (sites drop out of the monitoring network as wells are destroyed, or airline become inoperable, or access is otherwise denied and new wells are added as opportunities occur). The nearest well which is part of this monitoring network is approximately 2.5 miles away from the project area. Water level measurements from this location are available from 2011-2019. During this time period the water level at this well dropped an average of 3.5 ft per year. For this analysis we will consider a drop of 3.5 ft per year to be representative of the Grande Ronde aquifer in this area.

To determine if moving this change application's withdrawal of 48 gpm, 10 acre-feet per year will push water declines in the area over the 10'/year threshold, calculations were made to predict what additional decline will occur in the Grande Ronde aquifer if this new withdrawal is authorized. To make these calculations, aquifer characteristics were chosen to be used in a Theis Confined Aquifer analysis. A transmissivity of 25,000 ft²/day and a storativity of 0.005 were utilized in an analytical software package to calculate expected drawdowns at various distances from the pumping well. The transmissivity value is within the range of median values for the Grande Ronde aquifer as documented by several USGS publications. The distance used in the calculations correspond with nearby irrigation wells. As pumping under this change will occur during the irrigation season, it is very likely that the cone of depression created by the seasonal pumping stress would be mostly recovered by the springtime synoptic measurements envisioned in the WAC. To be conservative, the drawdown analysis used a pumping time of one year.

The calculated drawdown that would be experienced by the nearby irrigation wells at the end of 365 days of continuous pumping at the proposed locations is approximately 0.4 feet. Added to the representative 3.5 feet of annual decline = 3.9 feet of decline. This is within the 10 foot threshold of WAC 173-130A-060.

The ultimate goal of this Project is to utilize surface water from the East Columbia Basin Irrigation District and for these rights to go into standby/reserve status as well. I recommend this change is unlikely to cause impairment of nearby water users.

The proposed changes to the existing water right will not increase the authorized rate of withdrawal, annual quantities or acres authorized under the certificate. Impacts to the streams, ponds or springs will not change subject to this request.

Public Interest Considerations

The proposed change in place of use will not be detrimental to the public interest. No additional water quantities are proposed to be withdrawn from the aquifer.

Conclusions

There is a water right available for change/transfer under Ground Water Certificate G3-00633 in the amount of 2500 gallons per minute, 1308.6 acre-feet per year for the irrigation of 520 acres.

When considering an application for change to a water right, Ecology must determine that the proposed change can be made without detriment or injury to existing water rights. Factors considered when determining potential impact include the following:

No Impairment to Existing Rights:

It is not anticipated that the proposed change/transfer would cause impairment to existing water rights.

No Detriment to the Public Welfare:

There has been no findings through this investigation indicating that there would be any detrimental impact to the public welfare through issuance of the proposed change/transfer.

No Enhancement of the Original Right:

No withdrawal of water over and above what has been authorized for beneficial use would be authorized through approval of this change.

Same Source of Water:

The ground water to be withdrawn from the well will be supplied by the same body of public water.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a change to the 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:

“A” portion – 2452 gpm, 1283.6 ac/ft for irrigation of 510 acres

“A” – 510 acres in the S½ of Section 30 and the N½ of Section 32 T. 21 N., R. 31E.W.M.

“B” portion - 48 gpm, 25 acre-feet per year for the irrigation of 10 acres.

“B” - 10 acres within the NE¼ SW¼ and NW¼SE¼ of Section 20, T. 21 N., R. 31 E.W.M. Lincoln County

Report Writer

Date

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