



STATE OF WASHINGTON  
**DRAFT**  
REPORT OF EXAMINATION  
FOR WATER RIGHT APPLICATION

<b>PRIORITY DATE</b>	<b>WATER RIGHT APPLICATION NUMBER</b>
May 26, 2015	G3-30740

<b>NAME AND MAILING ADDRESS</b>	<b>SITE ADDRESS (IF DIFFERENT)</b>
Chris Hyer POB 1093 Moses Lake WA 98837	

**Total Rate and Quantity Authorized for Withdrawal**

<b>WITHDRAWAL RATE (gpm)</b>	<b>ANNUAL QUANTITY (ac-ft/yr)</b>
350	See below

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

**Purpose(s)**

<b>PURPOSE</b>	<b>WITHDRAWAL RATE (gpm)</b>	<b>ANNUAL QUANTITY (ac-ft/yr)</b>	<b>PERIOD OF USE</b>
Irrigation	350	0	4/1 — 11/30

<b>IRRIGATED ACRES</b>	<b>PUBLIC WATER SYSTEM INFORMATION</b>	
1000	<b>WATER SYSTEM NAME and ID</b>	<b>CONNECTIONS</b>
	NA	NA

**Purpose(s)**

PURPOSE	WITHDRAWAL RATE (gpm)		ANNUAL QUANTITY (ac-ft/yr)		PERIOD OF USE
	ADDITIVE	NON-ADDITIVE	ADDITIVE	NON-ADDITIVE	
Agricultural irrigation of 1000 acres	350			0	4/1 — 11/30

<b>IRRIGATED ACRES</b>		<b>PUBLIC WATER SYSTEM INFORMATION</b>	
<b>ADDITIVE</b>	<b>NON-ADDITIVE</b>	<b>WATER SYSTEM NAME and ID</b>	<b>CONNECTIONS</b>
	1000	NA	NA

**SPECIAL REMARKS:**

This application requests an additional 350 gallons per minute. The instantaneous rate will be additive, the annual quantity and acres irrigated will be non-additive.

Source Location			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Lincoln	Groundwater		43

SOURCE NAME	PARCEL	WELL TAG	TOWNSHIP	RANGE	SECTION	QQ Q	LATITUDE	LONGITUDE
Well 1	2533027900052	NA	25 N.	33 E.	27	N½NE¼	47.64123	-118.64044
Well 2	2533027900052	BHT065	25 N.	33 E.	27	N½NE¼	47.64125	-118.64335

QQ Q = Quarter Quarter

Datum: NAD83/WGS84

Source Limitations
The existing right authorizes 2500 gallons per minute This application requests an additional 350 gallons per minute for a maximum of 2850 gallons per minute.

Place of Use
PARCEL(S)
2533027900052, 2533026100020, 2533028900010, 2533033700010, 2533033700020

LEGAL DESCRIPTION OF THE AUTHORIZED PLACE OF USE
<p>That portion of Section 26, Township 25 North, Range 33 E.W.M., described as follows: Beginning at the Northwest corner of said Section 26, being the Point of Beginning; thence South 01°09'15" West along the West line of said Section 26 for 2686.07 feet to a point on an existing fence line; thence continuing along said existing fence line, North 59°18'24" East for 94.68 feet; thence North 53°55'43" East for 1507.66 feet; thence South 74°10'24" East for 1458.16 feet; thence North 01°33'04" East for 2019.10 feet more or less, to a point on the North line of said Section 26, and the centerline of the Schuster County Road; thence Westerly along the North line of said Section 26 and the centerline of said County Road for 2706.53 feet, more or less, to the Point of Beginning. (As delineated on Record of Survey recorded in Book C of Surveys, page 79-81, recorded under Auditor's File No. 43776) EXCEPT Schuster Road East.</p> <p>PARCEL B:</p> <p>All of Section 27, Township 25 North, Range 33 E.W.M.; EXCEPT that portion of Section 27, Township 25 North, Range 33 E.W.M., lying south and east of the following described line as follows:</p> <p>Parcel 2533027900050 according to Auditor File 2005-437706, Lincoln Co WA, Book C of Surveys at Pg. 79, Aug 25, 2005; Excluding therefrom land south of the following described line. Commencing at the Southwest corner of said section 27; thence South 86°30'00" East along the South line of said Section 27 for 2073.41 feet to the Point of Beginning; thence North 60°42'08" East for 1967.78 feet and terminus of said line.</p> <p>PARCEL D:</p> <p>The South Half and the Northeast Quarter of Section 28, Township 25 North, Range 33 E.W.M.</p>

EXCEPT 1 acre in the Northwest corner of the Southwest Quarter excepted for school, in deed recorded in Book 13 of Deeds, page 401;

PARCEL E:

The Northwest Quarter of Section 33, Township 25 North, Range 33 E.W.M.

#### Proposed Works

Two wells, pond and pivot irrigations systems

#### Development Schedule

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE
begun	complete	complete

**Attention:** These dates represent deadlines that must be met or risk cancellation of this authorization. Submittal of formal documentation for each stage is required. Extensions may be requested.

#### Measurement of Water Use

HOW OFTEN MUST WATER USE BE MEASURED AND RECORDED?	Weekly
HOW OFTEN MUST WATER USE DATA BE REPORTED TO ECOLOGY?	Upon request by Ecology
WHAT QUANTITY SHOULD BE REPORTED?	Total annual quantity in acre-feet
WHAT RATE SHOULD BE REPORTED?	Annual peak rate of withdrawal in gpm

#### Provisions

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

#### 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 may be submitted electronically. 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.

#### Schedule and Inspections

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

## Findings of Fact and Order

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated.

Therefore, I ORDER **APPROVAL** of Application No. G3-30740, 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 to Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

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

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

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

## Authorizing Signature

Signed at Spokane, Washington, this \_\_\_\_\_ day of \_\_\_\_\_, 20XX.

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

## INVESTIGATOR'S REPORT

Water Right Application No.: G3-30740

Investigator: Kevin Brown,

### BACKGROUND

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This report serves as the written findings of fact concerning Water Right Application Number G3-30740.

The applicant filed this application to increase the instantaneous rate for the two wells. The wells are currently authorized 2500 gallons per minute. This application requests an increase of 1500 gallons per minute only. No additional acres or annual quantity are requested.

Based on internal discussions at Ecology, the applicant was contacted to see specifically what Qi was being sought. A field visit in June of 2022 by Ecology Watermaster Kevin Brown showed that with the current pumps in place, an additional Qi of 1500 GPM was not physically possible without upgrading the pumps. Since then, the applicant has told Ecology that the Qi application could be reduced to 350 GPM. This number is based on the spring capacity of the two wells to produce roughly 2,850 GPM, which slowly decreases as the irrigation season moves forward and the seasonal cone of depression reduces capacity.

### INVESTIGATION

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A field exam was conducted on June 23, 2022. There are two wells in operation and the owner is irrigating 1000 acres under Certificate 7185-A. The wells are currently operational at 1850 gallons per minute and 1000 gallons per minute for a total of 2850 gallons per minute.

#### Proposed Use and Basis of Water Demand

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##### *Site Description*

The property lies south of the Town of Wilber in the Sinking Creek basin. Two wells are currently serving the farm and irrigation 1000 acres under Certificate 7185-A.

#### Other Rights Associated with Project or Place of Use

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Certificate 7185-A authorizes 2500 gallons per minute, 2693 acre-feet per year for irrigation of 1000 acres.

### ANALYSIS

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

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

## Water Availability

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

### ***Physical Availability***

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

The aquifer is capable of supporting the additional requested quantities.

### ***Legal Availability***

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

This application request additional Qi only. No additional Qa is requested nor authorized.

## Impairment

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In analyzing impairment, Ecology must make a determination as to whether existing water rights, including adopted instream flows, may be impaired by the withdrawal and proposed use.

This application was modified to be a Qi of 350 GPM based on springtime physical capacity. This updated decision is discussed in an addendum at the end of this analysis. The original analysis and language relative to the original application of 1,500 GPM has been retained to display the difference between the two pumping rates.

## Analysis

### **Well Construction**

There are two proposed wells for water right application G3-30740 that are authorized under Certificate 7185-A both located in the N½NE¼ of Section 27, T. 25 N., R. 33 E.W.M. 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 these wells are summarized as follows.

The first well (no ID) was drilled to a depth of 865 feet below ground surface (ft bgs) in 1980. The water level was measured at 331 feet below the top of the well in 1980. This well is located in the NE¼NE¼ of Section 27, T. 25 N., R. 33 E.W.M with a land surface elevation of approximately 2320 AMSL (variable throughout the quarter-quarter section). It is recorded as having 18 inch casing from 0 to 27 ft bgs, and 16 inch casing from 389 to 572 ft bgs. There are dimensions listed on the well log that are unclear. They are 17 inches from 0 to 572 ft bgs, 12 inches from 650 to 854, and 10 inches from 854 to 865 ft bgs. Based on this, I assume this is a 10 inch well set at the total depth of 865 ft bgs. 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 1760 feet AMSL. This would put the top of the Grande Ronde at 560 feet below land surface, which appears to be confirmed by data on the well log. 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 the original 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. Based on the corresponding well log, it does not appear that the well is currently properly cased and sealed. If the well is reworked or reconstructed then a properly sealed casing will need to be installed to a depth of 760 feet below land surface, which is in line with nearby well BHT065. The second well (BHT065) was drilled to a depth of 2040 feet below ground surface (ft bgs) in 2015. The water level was measured at 514 feet below the top of the well in 2015. This well is located in the N½NE¼ of Section 27, T. 25 N., R. 33 E.W.M with a land surface elevation of approximately 2320 AMSL (again, variable throughout the quarter-quarter section). It is recorded as having 24 inch casing from +1 to 36 ft bgs, and 14 inch casing from +1 to 756 ft bgs. The well liner appears to be 14.75 inch from 806 to 1000 ft bgs and 9.875 and 9.5 inch casing from 1000 to the completed depth of 2040 ft bgs. Based on the casing requirements of the previous well and the close proximity, well BHT065 would have similar requirements. Because the well log states that 14 inch casing was installed to a depth of 756 ft bgs, this well appears to be properly cased and sealed into the Grande Ronde Formation of the Columbia River Basalt Group.

The annular space shall be a minimum of 4-inches greater than the permanent casing. After casing is sealed in place, a well may be completed by drilling out the casing until sufficient water is obtained. This design assures separation of hydrologic head of the shallower Wanapum aquifer from the deeper Grande Ronde aquifer. More casing than specified may be necessary in any well should an interaquifer transfer occur after casing and sealing is set.

### **Impairment**

Water level data is somewhat limited for the Grande Ronde in WRIA 43. There are large gaps in spatial coverage as well as temporal. There are also many wells that are improperly constructed and double completed in the area, which may skew groundwater level data for individual aquifers. One of the wells associated with this application has groundwater data collected by Ecology dating back to 1980. The water level in 1980 was 291 ft bgs and has decreased to 465 ft bgs in the spring of 2022. Based on these data the average annual decline at this well is roughly 4.1 feet per year. This decline would be concerning if this application had an additional  $Q_a$  associated. Because it is for  $Q_i$  only, it should not add to annual declines in the Grande Ronde because the total annual quantity being pumped is unchanged. An analysis is still required for any additional drawdown for nearby users with an increase in pumping rate.

This application is for an additional 1500 GPM from the Grande Ronde Basalt Aquifer. The hydrogeologic properties of the Grande Ronde vary greatly throughout its extent. Hydraulic Conductivity can range from 0.1 ft/day to 1000's of ft/day. Based on the pump tests noted on the well log of the 865 foot well as well as water level data, it is reasonable to assign a transmissivity to the Grande Ronde in this area of 8000 ft<sup>2</sup>/day. This should be considered conservative as values for transmissivity in the Grande Ronde have been observed an order of magnitude higher for wells in the region. The storativity used for this analysis was 0.0002, which is a typical mean value for the Grande Ronde. Several pump test results were discovered in the vicinity of the wells relative to this application. The assigned transmissivity values based on these test results ranged from 2,200 ft<sup>2</sup>/day to 138,000 ft<sup>2</sup>/day. A transmissivity of 8000 ft<sup>2</sup>/day can be considered reasonable for this analysis based on these pump test results.

A Theis confined aquifer analysis was performed based on the above values. The nearest well completed in the Grande Ronde is roughly 0.8 miles or 4,200 feet away, also located in Section 27. Based on the assigned  $Q_a$  of 2693 acre-feet and the new total  $Q_i$  of 4000 GPM, the  $Q_a$  would be exhausted after 152 days (period of use for water right is 244 days April 1 to November 30). Using a period of 152 days and a pumping rate of 1,500 GPM, the expected additional drawdown for a well 4,200 feet away is modeled at just over 19 feet. To be clear, this is not the total drawdown relative to pumping at these wells, just the drawdown as a result of an extra 1500 GPM.

Wells that are completed in the Grande Ronde tend to have a large column of water (well BHT065 had roughly 1500 feet of water in 2015), the additional modeled 19 feet of drawdown after 152 days at a well 0.8 miles away should not be expected to impair pumping activities. The well in question was deepened in 1982 from 500 to 650 ft bgs. At the time of deepening the static water level was noted as 200 ft bgs. This static level would mean a water column of 450 feet in this well in 1982. Based on regional declines in the Grande Ronde, it may be expected that the static water level has decreased to 360 ft bgs, leaving a water column in the well of 290 feet.

With further investigation, it was discovered that the previous analysis is based on the assumption that all involved wells are properly constructed and cased and sealed into the Grande Ronde. However, this is not the case as the 865 foot well is open to both the Wanapum and Grande Ronde aquifers. Additional  $Q_i$  being pumped from the Wanapum is of great concern in WRIA 43. The Wanapum has a high degree of connection to surface water throughout the region as it is dissected by coulees and feeds springs and streams, or feeds the alluvium that in turn feeds streams. This connection has been a point of contention in the Sinking Creek area for decades [Rettkowski vs. Dept of Ecology, 1993]. Surface water users have historically complained of supply depletion with an increase in groundwater pumping. There was a prior application, G3-27631, in 1983 for a  $Q_i$  of 700 GPM in the same location as the application before us (G3-30740). This application was denied based on the results of the aforementioned aquifer test that showed pumping on the proposed 850 foot well would decrease springs, stream flow, and lake levels in the vicinity of the well and there was a measurable effect up to 4.5 miles away. This decision was summarized in the following statement(s):

"It is, therefore, the conclusion of this examiner that any additional drawdown would result in reduced stream flow of Sinking Creek as well as its associated lakes, ponds and springs. A loss or seasonal reduction in these sources would be adverse to the prior rights of holders of claims and riparian stockwater users.

It is also the conclusion of the examiner that: although irrigation is a beneficial use, public ground water is not available for appropriation; that the appropriation of such water will impair existing rights and would be detrimental to the public welfare."

Based on the well log related to the previous denial and the well log of the 865 foot well related to this application, they are of similar construction and open to both the Wanapum and Grande Ronde Formations. It is the opinion that because the well is double completed and is demonstrably connected to surface water in the region that approval of this application would result in detrimental effects to surface water flow. Because of this, and the similarity to the previously denied application G3-27631, it was recommend that this application for a  $Q_i$  of 1500 GPM be denied.

### **Addendum 8/18/2022**

Based on internal discussions at Ecology, the applicant was contacted to see specifically what Qi was being sought. A field visit in June of 2022 by Ecology Watermaster Kevin Brown showed that with the current pumps in place, an additional Qi of 1500 GPM was not physically possible without upgrading the pumps. Since then, the applicant has told Ecology that the Qi application could be reduced to 350 GPM. This number is based on the spring capacity of the two wells to produce roughly 2,850 GPM, which slowly decreases as the irrigation season moves forward and the seasonal cone of depression reduces capacity.

With the new Qi of 350 GPM, there are a few things to consider with this application. The first consideration is that the original water right Qi of 2,500 GPM was fully allotted to the improperly constructed, double completed well. Since then, the capacity of this well has decreased and the second properly constructed well was added to water right Certificate 7185-A with a total depth of 2,040 ft bgs. Therefore, the regional impacts to surface water related to this right should have decreased because there is no clear connection between the Grande Ronde and surface water as there is between the Wanapum. The additional 350 GPM would be split between the two wells so the well considered to impact surface water would still be far below the original 2,500 GPM. A key factor in this consideration versus the denial of 700 GPM in the 1980's is the fact that there is a properly constructed, cased and sealed well producing water from the Grande Ronde Formation.

The second consideration would be that because now the allowable Qi is 2,850 GPM it could legally be fully allocated to the original improperly constructed well. However, through conversations with the owner and field exams, it has been determined that the physical capacity is well below this pumping rate. The only way to achieve increased production from this well would be to rework or deepen the well. Should the owner decide to rework the well they would be subject to the casing and sealing requirements discussed above. In this case, the well would then be properly constructed and sealed into the Grande Ronde and impairment to surface water sources would be considered negligible based on the current data available. In summary, to increase production in the non-compliant well it would have to be brought into compliance, essentially nullifying concerns over surface water impairment.

In addition to these considerations, the previous impairment analysis relative to other groundwater users becomes less of a concern at the reduced Qi. By reducing the Qi from 1,500 gpm to 350 the additional drawdown at a nearby well decreases from 19 feet to under 5 feet over the course of 152 days. However, this drawdown would be even less because the additional Qi is only physically available in spring, so the modeled 152 days of pumping is not likely to be achieved. At 350 gpm, impairment considerations of other groundwater users becomes less of a concern.

It is in the opinion of the hydrogeologists that because the original well has been operating well below the original 2,500 GPM which has been split between it and a properly cased and sealed well, that adding an additional Qi of 350 GPM will not impact surface water as originally thought. Any attempt to increase capacity will require the owner to bring both wells into compliance and essentially negate these concerns. In discussions with the owner, the capacity for this additional Qi is usually only available in spring early in the irrigation season. Based on these updates, I believe this decision should be modified to recommend approval of this application for a Qi of 350 GPM.

## Beneficial Use

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The proposed appropriation must be for a beneficial use of water.

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

## Public Interest

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The withdrawal and associated use must not be detrimental to the public interest.

The proposal to increase the rate of withdrawal (to 350 gallons per minute) will not be contrary to the public interest.

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

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

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

The application requests 1500 gallons per minute. It has been amended to 350 gallons per minute.

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

### ***Public Notice***

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted, and used. Notice of this application was published in the Odessa Record on July 16 and 23, 2015 and no protests were received.

I find that:

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

## RECOMMENDATIONS

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

## Recommended Quantities, Purpose of Use, and Project Location

The rate and quantity of water recommended are maximum limits. The permit holder may only withdraw water at a rate and quantity within the specified limits that are reasonable and beneficial:

### Recommended Limits and Location

Maximum Instantaneous Rate (gpm)	350
Maximum Annual Quantity (ac-ft/yr)	0 (non-additive)
Purpose(s) of Use	Irrigation
Point of Withdrawal	N½NE¼ of Section 27, T. 25 N., R. 33 E.W.M.
Place of Use	See above

Report Writer

Date

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

## References

