State of Washington
REPORT OF EXAMINATION
DRAFT
FOR WATER RIGHT APPLICATION

PRIORITY DATE	WATER RIGHT NUMBER
6/20/2013	G3-30690

MAILING ADDRESS	CONTACT
Mark Gregson 34312 Road D NE Coulee City, Washington 99115	Doug Nelson 6913 Avocet Ct Carlsbad, California 92011

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
	GPM	

DENIED

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE ADDITIVE	WITHDRAWAL OR DIVERSION RATE NON-ADDITIVE	UNITS	ANNUAL QUANTITY (AF/YR) ADDITIVE	ANNUAL QUANTITY (AF/YR) NON-ADDITIVE	PERIOD OF USE (mm/dd)
Irrigation						-

IRRIGATED ACRES ADDITIVE	IRRIGATED ACRES NON-ADDITIVE	PUBLIC WATER SYSTEM INFORMATION WATER SYSTEM ID	PUBLIC WATER SYSTEM INFORMATION CONNECTIONS

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Grant			42-Grand Coulee

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE

Datum: NAD83/WGS84

Place of Use

PARCELS (NOT LISTED FOR SERVICE AREAS)

N/A

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Proposed Works

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
n/a	n/a	n/a

Findings of Facts

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

Therefore, I ORDER Denial of Ground Water Application No. G3-30690.

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 Road SW Ste 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Signed at Spokane, Washington, this day of 2014.

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Keith Stoffel, 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

An application to appropriate public ground water was submitted by Mark Gregson to the Department of Ecology on June 20, 2013. The application was accepted and assigned Ground Water Application No. G3-30690. He proposes to withdraw water from three wells in the amount of 4,800 gallons per minute for the seasonal irrigation of 1,000 acres. The proposed points of withdrawal are to be located within the NE¼NE¼ of Section 2 (the well is actually located within the NW¼NE¼ of Section 2), the SW¼SW¼ of Section 2 and the SW¼NE¼ of Section 11, all within T. 24 N., R. 28 E.W.M.

A notice of application was duly published in accordance with RCW 90.03.280 in the Coulee City News-Standard on October 9 and 16, 2013 and no protests were received.

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 would entail the withdrawal of more than 2,250 gallons per minute, it triggers a SEPA determination. However, since this application is being denied no environmental impact statement (EIS) is currently being required. An Environmental Checklist was received on 2/28/2014, and was reviewed for this project. If for any reason this decision is overturned by the Pollution Control Hearing Board (PCHB) or the court system, then the application will be subject to an EIS and the applicant may be required to complete and submit that document.

When an application for appropriation of public waters of the state is made, it is the responsibility of the Department of Ecology, Water Resources Program to determine whether or not the application meets the four tests listed in RCW 90.03.290(3):

1. is water available for appropriation,
2. is the proposed use a beneficial use, and
3. will the appropriation as proposed in the application not impair existing rights,

4. nor be detrimental to the public welfare

The "Wilson Creek – Coulee City Area" is a work area that was designated during the 1980s for new ground water applications. This work area is located primarily within the central portion of WRIA 42, with a small portion being in western WRIA 43 and northern WRIA 41. See hydrogeologic "*Analysis: Coulee City* dated October 3, 2012" for a current description.

INVESTIGATION

In considering the proposed application, the investigation included, but was not limited to, research and review of: (1) appropriate rules and statutes; (2) other water rights, claims, and applications in the vicinity; (3) USGS topographic maps; (4) aerial photographs; (5) Hydrogeologic Analysis: Coulee City dated October 3, 2012; and (6) discussions with Department of Ecology regional program staff.

A field investigation was conducted by Dan Tolleson on January 27, 2014. This site is approximately one mile east of Coulee City, Washington. This proposed project lies within what has been historically referred to as the Wilson Creek – Coulee City Study Area. Mr. Gregson owns the proposed place of use, along with the proposed points of withdrawal.

The proposed place of use describes a 1,400 acre parcel of land that is partially developed and is for the most part relatively flat. The northern and middle portion of the project is currently developed in dryland crops. The western edge of the place of use is undeveloped with relatively steep and rocky terrain that is for the most part not irrigable. The remainder of the project is plowed under with the exception of the few rocky areas that may not be irrigable. Mr. Gregson proposes to irrigate 1000 acres, utilizing a system of seven full sweep pivots and two partial sweep pivots. Withdrawals of 4,800 gallons per minute are proposed to be pumped from three well sites. It appears that this proposed system can be practically utilized within the described place of use.

WATER QUANTITIES

A standard water duty of 2.5 acre-feet per acre was historically determined to be the maximum practical water duty for agricultural irrigation within the Wilson Creek – Coulee City Study Area. This water duty was derived from the standards used in the Odessa Subarea and has been used on all new agricultural water rights issued in this area since the 1980s. Using this standard, this project would call for a water duty of 2500 acre-feet, which is less than the 4000 acre-feet proposed by the applicant.

A typical requirement for irrigation is 10 gallons per minute per acre. This is often less with larger projects since rotation and irrigation systems can vary greatly. The instantaneous quantities of 4,800 gallons per minute proposed for this project appear to be reasonable.

OVERLAPPING AND ADJACENT WATER RIGHTS

A review of Ecology records was conducted for existing water right certificates, permits, and claims within the proposed project and the surrounding area. The search focused primarily on Sections 1, 2, 11 and 12 within T. 24 N., R. 28 E.W.M. The review of Ecology records shows multiple water right certificates and water right claims within the vicinity of the project. One water right claim is appurtenant to the proposed place of use and is as follows:

Water Right Claim No. 097191 claims domestic supply and stockwatering on a claim short form. The place of use claimed on the form is all of Section 2, T. 24 N., R. 28 E.W.M. According to an old protest of a previous application in this area, any actual water use under this claim is located in the NW¼SW¼ of Section 2, T. 24 N., R. 28 E.W.M. Therefore, it appears this claimed water use is not located on the lands proposed under this application.

(The extent and validity of the above listed rights are not determined in this report.)

WILSON CREEK – COULEE CITY STUDY AREA

The "Wilson Creek – Coulee City Area" is a work area that was designated during a hydrogeologic study conducted in the 1980s for new water right applications. The study indicated that there were essentially two aquifers within the area, the shallow Wanapum Basalt aquifer and the deep Grande Ronde Basalt aquifer. At that time there was significant public concern that water was not available and new uses would impair existing rights.

The Wanapum aquifer was determined to have limited physical capacity. The proposed appropriations for new water from the shallow aquifer would exceed the capacity of the formation to yield water and would impair existing rights. A small quantity of water was held in reserve for exempt wells.

The Grande Ronde aquifer was deemed to have adequate water available and water table declines in the 1980s were not considered significant. The declines were found to be from zero to a maximum two feet per year. The average was estimated to be less than one foot.

In the 1980s, applications for new water from the Grande Ronde aquifer requested a total of 18,900 acre-feet per year. The first water right issued after this study, in 1984, was G3-25926. Ecology's decision was appealed to the PCHB, but the appeal was eventually withdrawn. The remaining applications were put on hold pending the PCHB case and further investigation of water availability in the study area. In 1987, 17 additional water rights were issued. To protect existing domestic and stockwater rights, all of the newly authorized wells were required to be cased and sealed into the deeper aquifer.

The majority of the approved water right permits issued in the 1980s were not developed and were subsequently cancelled. As of 2013, only 7 of the original 18 water right approvals remained active. The remaining rights authorized a total of 4,500 acre-feet. The extent and validity of these rights is not determined within this report.

Applications received for new water rights in the Wilson Creek – Coulee City Area after 1987 were put on hold until a new determination of water availability was made. The intent was to monitor the aquifer to determine actual impact of the water rights issued in 1984 and 1987. As of early 2012, there were 19 applications on file for new water rights requesting a total of 74,145 gallons per minute and 8,100 acre-feet per year.

A second water availability study of the area was conducted in recent years and is documented in an Ecology internal report entitled Hydrogeologic *Analysis: Coulee City,* dated October 3, 2012. This study indicated that water levels in the shallow and deep aquifers are declining at a rate of 0.25 to 3 feet per year, an increase in the rate of decline estimated in the 1980s study.

The only area not exhibiting water level declines is the shallow aquifer in the vicinity of Banks Lake and the main irrigation canal. The lack of decline is the result of leakage of waters from the US Bureau of Reclamation project. This leakage water is claimed by the US Bureau of Reclamation and is not available for appropriation through the state permitting system.

In the fall of 2012, letters were sent to each of the 19 applicants requesting new waters. The letters stated that applications would most likely be denied because water was not available for appropriation. Eight of the applications were rejected because applicants were no longer interested in obtaining water or the applicants could not be located by Ecology. The remaining 11 applicants requested that a formal appropriation decision be made by Ecology. One application was approved for non-consumptive use only. The remaining 10 applications were denied, which resulted in several appeals that were eventually withdrawn or dismissed. Currently, two applications for new water rights are now on file within this work area. Each application will be evaluated on its own respective findings.

HYDROGEOLOGIC ANALYSIS

The following hydrogeologic analysis was written by Tracy Band, Hydrogeologist, and was reviewed by Guy J. Gregory, L.G., L.Hg. Hydrogeologist and Unit Supervisor of the Water Resources Program Technical Unit in Ecology's Eastern Regional office.

The existing point of withdrawal and two proposed points of withdrawal for this application are located within the Wilson Creek-Coulee City area. A detailed hydrogeologic analysis of this area was completed by Ecology Eastern Region Water Resource Program hydrogeologists in October 2012. This assessment of water availability for new water rights in this area is based on that 2012 report (and the background reports referenced therein) including water level measurements obtained by Ecology staff over the last 30 years.

The existing well proposed for this application is located within the NW¼NE¼ of Section 2, T. 24 N., R. 28 E.W.M. The well was originally drilled to a depth of 180 feet and deepened in 1978 to a depth of 500 feet. It is drilled through basalt, penetrating the Wanapum Basalt and completed in the Grande Ronde Basalt Group. The well penetrates the Grande Ronde Basalt at a depth of 238 feet below land surface. The land surface elevation of the well is approximately 1740 feet. The well had a static water level of 97 feet below land surface (1643 feet above sea level) at the time of drilling. Yields at the time of construction and casing and sealing information are not known. Head observations and other information suggest the well likely has a composite water level. A composite water level is a head measurement representative of the mixing of two or more aquifer systems with different heads. Because of the shallow static water level and lack of construction details, it is assumed that this well is exhibiting a dominantly Wanapum aquifer hydraulic head, and is likely double completed into both the Wanapum and Grande Ronde aquifer systems.

The project proposes to add two wells to be located within the SW¼SW¼ of Section 2, and the SW¼NW¼ of Section 11, within T. 24 N., R. 28 E.W.M. These two wells do not exist at this time, so they are not discussed as part of this analysis.

The surface geology of the area consists of less than 20 feet of sediments overlying Wanapum Basalt. A shallow aquifer is hosted within both the sediments and the Wanapum. That aquifer has head elevations at or above 1550 feet. Because this aquifer has a similar head to Banks Lake, it is assumed that Banks Lake is one source of recharge for this aquifer in proximity to the lake.

The Grande Ronde Basalt underlies the entire proposed place of use approximately 130 to 250 feet below land surface. Throughout the region, wells which penetrate and are properly cased and sealed into the lower Grande Ronde basalts, generally 200 feet into the Grande Ronde, have water levels approximately 200 feet lower than the elevation of Banks Lake.

The existing well has been measured by Ecology staff from 1983 to 2013. It is a six inch diameter well; the well has not had pumping equipment in it during this time. The well's static water level has risen 1.83 feet in 30 years for an average rise of 0.06 feet a year.

Several other wells in the vicinity have also been measured in the spring of the year by the Department. Hydrographs, or plots of these static water levels over time, are created from these measurements.

A few upper aquifer hydrographs of wells in the area, particularly those wells adjacent to Banks Lake exhibit no long-term declines in hydraulic head. Banks Lake has a maximum surface elevation of 1,570 feet, and the maximum drawdown elevation is 1,540 feet. Water levels in wells that penetrate the upper basalt units in the lake's vicinity generally show the same water

level elevation as Banks Lake, suggesting a hydraulic connection. It is not known how much water from Banks Lake contributes to the groundwater system. The majority of wells near the southern end of Banks Lake are shallow domestic wells.

A map labeled "Shallow and Composite well water level elevations" (Figure 1) shows the Upper Aquifer elevations in wells in the general vicinity of this application. Water levels 3 to 5 miles east of Banks Lake are at an elevation of approximately 1,700 feet above sea level, and they gradually lower as they get closer to the lake, to elevations between 1,540 to 1,600 feet above sea level, a similar elevation of the lake in this area. This suggests that Banks Lake is a likely source of recharge to the overburden and upper basalts in the vicinity of the lake. The proposed well is located approximately one mile southeast of the lake, and has a water level elevation of 1,643 feet above sea level. This elevation relationship suggests it too has at least in part a likely hydraulic connection to Banks Lake.

Hydrographs of the deeper aquifer system are shown in figures 18 through 28 of the 2012 report. There is little evidence of substantial recharge to this system from Banks Lake or from local or regional precipitation. Declines in the lower aquifer system are generally between 1 and 2 feet a year, with largest declines found in areas where there are the most wells. Based on previous studies of the aquifer systems and recharge in the Columbia Basin, and local data, it appears that existing withdrawals from the Grande Ronde Aquifer system are exceeding the rate of recharge to the aquifer. Additional groundwater withdrawals will increase the rate of decline of the water table, and result in additional groundwater mining.

Many wells drilled deeper into the Grande Ronde aquifer are not cased and sealed into the lower aquifer and constructed so to avoid cascading from upper groundwater aquifers. Many of the wells in the 2012 study area show composite water levels, and typically have water cascading within the well from the upper groundwater aquifers to lower portions of the aquifer system. This "cascading water" indicates leakage from the shallow aquifer to the deep. This contributes regionally to declining water levels of the upper aquifer system. Modern well construction rules prohibit this kind of construction. Thus, typically, when modifications to existing water rights are made or new rights considered they are provisioned to require proper reconstruction should the owners recondition the wells in the future. As wells become properly constructed, this also reduces the amount of "recharge" that the lower aquifer receives.

The hydrographs of these composite head wells in the area show that the majority of wells in both the upper and lower portions of the basalt aquifer system are declining at a rate averaging between 0.25 to 3 feet per year.

We conclude that based upon regional water level information, this existing well is constructed into a system which receives artificial recharge. If this well or any proposed wells are constructed in accordance with current rules, they are likely to either contain artificial recharge from Banks Lake, or will be constructed in and contribute to declining aquifers in the area.

WATER AVAILABILITY

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

Physical availability

For water to be physically available for appropriation there must be ground or surface water present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses. To determine whether water is physically available for appropriation, the following factors are considered:

- Volume of water represented by senior water rights, including federal or tribal reserved rights or claims;
- Water right claims registered under Chapter 90.14 RCW
- Ground water uses established in accordance with Chapter 90.44 RCW, including those that are exempt from the requirement to obtain a permit; and
- Potential riparian water rights, including non-diversionary stock water.

Lack of data indicating water usage can also be a consideration in determining water availability, if the department cannot ascertain the extent to which existing rights are consistently utilized and cannot affirmatively find that water is available for further appropriation.

Legal availability

To determine whether water is legally available for appropriation, the following factors are considered:

- Regional water management plans – which may specifically close certain water bodies to further appropriation.
- Existing rights – which may already appropriate physically available water.
- Fisheries and other instream uses (e.g., recreation and navigation). Instream needs, including instream and base flows set by regulation. Water is not available for out of stream uses where further reducing the flow of surface water would be detrimental to existing fishery resources.
- The Department may deny an application for a new appropriation in drainages where adjudicated rights exceed the average low flow supply, even if the prior rights are not presently being exercised. Water would not become available for appropriation until existing rights are relinquished for non-use by state proceedings.

The applicant has requested to obtain a permit to withdraw ground water, but has not identified a specific source or aquifer, other than potentially using an existing well. This area has two aquifers, including the shallow Wanapum Aquifer and the deeper Grand Ronde

Aquifer. The proposed existing well is constructed into both aquifers, which is no longer allowed. The 2012 Study indicated that water levels in the shallow and deep aquifers are generally declining at a rate of 0.25 to 3 feet per year.

The shallow Wanapum Basalt aquifer within the Wilson Creek – Coulee City area provides water to most of the smaller domestic supplies, stockwater and some of the irrigation within the area. This aquifer, within the vicinity of the proposed project, has been determined to produce limited quantities of water. Water within the shallow aquifer is for the most part already appropriated for other existing rights. There have been no new major appropriations from this aquifer since it was determined water was not available for any use except exempt wells, approximately 25 years ago. New water uses within this aquifer have been limited to exempt wells. This lack of availability is consistent with the various hydrogeologic analysis and the water right decisions issued over the years (see Wilson Creek – Coulee City Study Area).

The deep Grande Ronde Basalt aquifer within the Wilson Creek – Coulee City area provides water for many of the large irrigation rights. This includes the junior water rights issued during the 1980s when it was determined that water was not available from the shallow aquifer. Water levels in the deep aquifer within the vicinity of the proposed project are declining. The 2012 analysis indicates water level declines in the aquifer have continued and in some places have accelerated from what was documented in 1980's analysis (see Wilson Creek – Coulee City Study Area). The increased decline indicates the water quantities within the deep aquifer are already appropriated under existing rights and that water is not available from this source.

As stated above, in the Hydrogeologic Analysis section, the existing proposed well is anticipated to intercept water from the US Bureau of Reclamation's (USBR) project. This water is claimed by the USBR, under existing rights, and is not available for appropriation through the state permitting system. This means much of the recharge of the shallow aquifer is not legally available.

State issued municipal rights, excluding claimed uses and small group domestic supplies that may or may not qualify as a municipal supplier, have been issued for approximately 2,425 gallons per minute and 773 acre-feet of water use. Several of the existing water right certificates and a permit do not appear to be fully developed. These municipal rights must be evaluated as described under RCW 90.03.330(2) which does not allow for the diminishment of a certificate except in very limited circumstances. In addition, RCW 90.03.330(3) provides that water rights for municipal water supply purposes documented by certificates issued prior to September 9, 2003 with maximum quantities based on system capacity (known as "pumps and pipes" certificates) are <u>rights in good standing</u>. These municipal quantities of water, although not put to full use yet, have already been spoken for and are not available for new appropriations. The proposed appropriation is likely to have a negative impact to the existing municipal rights, meaning water is not available.

The Pollution Control Hearings Board, in <u>Smasne Farms Inc. v. Ecology</u> PCHB No. 94-114, found that with 10 years of data indicating a decline in ground water of 2.5 feet per year, in a

geographic area, that water was not available for allocation. This finding of water non-availability was considered consistent with protecting prior appropriations and ensuring a safe sustaining yield. This decision is similar to the proposed project, in that water levels are generally declining at a similar rate from a comparable formation.

In July of 2013, ten applications for new water rights were denied within the Wilson Creek – Coulee City area. Each of these prior applications had a similar request to this project and were denied in part due to the lack of water availability. This history of denials shows that water is not available for new consumptive water rights within this area.

The Wilson Creek-Coulee City study area generally has a declining ground water level of up to three feet per year. Although, within the immediate vicinity of the project the shallow aquifer is stable, this water is not available since it is claimed by the USBR. The deep aquifer in this area is declining and being mined. Further appropriations, will increase aquifer mining and/or impact the USBR water rights. Increased mining does not ensure a safe sustainable yield of the aquifer. In consideration of the uses under existing water rights, appurtenant case law, and aquifer situation defined in the Hydrogeologic Analysis, it is determined that water is not available for appropriation.

IMPAIRMENT ANALYSIS

"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 flow 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 use in this region is predominately for agricultural irrigation, with other uses being comparatively small. Since most of these rights are for commercial irrigation they tend to be for larger quantities, so each appropriation has a significant potential for impact. This proposed appropriation is located in the vicinity of the most heavily pumped region of the Wilson Creek – Coulee City Area.

In July of 2013, ten applications for new water rights were denied within the Wilson Creek – Coulee City area. Each of these prior applications had a similar request to this one and were denied in part due to the impairment issues. This history of denials shows that water is not available for new consumptive water rights within this area due to impairment.

As stated above, in the Hydrogeologic Analysis section, this proposed withdrawal of ground water is anticipated to intercept water from the US Bureau of Reclamation's (USBR) project. This water

is claimed by the USBR, under existing rights, and is not available for appropriation through the state permitting system. This means the project would impair USBR water rights.

The following portion of the impairment analysis was written by Tracy Band, Hydrogeologist, and was reviewed by Guy J. Gregory, L.G., L.Hg. Hydrogeologist and Unit Supervisor of the Water Resources Program Technical Unit in Ecology's Eastern Regional office.

Potential impact to wells in the vicinity by this proposed withdrawal was examined. The effects of pumping the existing well was examined against the two closest wells, one used for domestic and the other for irrigation purposes, to determine if there could be potential impairment issues. The domestic well considered is located northwest of the existing well, approximately 2100 feet away, in the NW¼NW¼ of Section 2, T. 24 N., R. 28 E.W.M. The irrigation well considered is issued under Groundwater Certificate 2482-A. This certificate withdraws water from three wells, all in Section 35, T. 25 N., R. 28 E.W.M. The closest of these to the existing well for this application is approximately 3200 feet to the Northwest. Since the applicant requested use from three wells, with a total withdrawal of 4,800 gallons per minute, different pumping rates were examined to determine if drawdown impacts would occur. For this purpose, the Theis Analysis of drawdown effects from spreadsheets published in Halford, K.J. and E. Kuniansky 2002, USGS OFR 01-197, and the median values for aquifer properties in the vicinity from Washington State Department of Ecology, Water-Supply Bulletin No. 33 and U.S. Geologic Survey Scientific Investigations Report 2011-5124 were used. Drawdown impacts, in feet, after time in hours is shown in the tables below for both the domestic and irrigation wells:

Drawdown impacts on Domestic Well

Hours after pumping begins	Drawdown 4800 gpm	Drawdown 3200 gpm	Drawdown 1600 gpm
1	0	0	0
24	2.07	1.38	0.69
168	30.55	20.37	10.18
1440	68.09	45.39	22.69

Drawdown impacts on Irrigation Well

Hours after pumping begins	Drawdown 4800 gpm	Drawdown 3200 gpm	Drawdown 1600 gpm
1	0	0	0
24	0.12	0.08	0.04
168	13.91	9.27	4.64
1440	45.51	30.34	15.17

The domestic well was drilled in 1990 through the overburden and into basalt, and is 130 feet deep. The static water level at the time of drilling was 60 feet below land surface. If the current static water level in the well is still near 60 feet below land surface, and the applicant

were to withdraw the 4,800 gpm as requested from the existing well, the domestic well would be pumped dry in one month, according to the Theis equation. It is therefore anticipated, that issuing this application for the withdrawal requested would cause impairment to this existing domestic well. Lesser, but similar impacts could be expected to the irrigation well under existing certificate 2482-A.

Future drilling and irrigation production from upper aquifers in this area may impair existing municipal and irrigation rights and shallow domestic water users, within the meaning of RCW 90.54.050. Domestic wells found in proximity to Banks Lake generally only penetrate the shallow groundwater zones.

RCW 90.44.070 indicates that "No permit shall be granted for the development or withdrawal of public ground waters beyond the capacity of the underground bed or formation in the given basin, district, or locality to yield such water within a reasonable or feasible pumping lift in case of pumping developments, or within a reasonable or feasible reduction of pressure in the case of artesian developments. The department shall have the power to determine whether the granting of any such permit will injure or damage any vested or existing right or rights under prior permits and may in addition to the records of the department, require further evidence, proof, and testimony before granting or denying any such permits."

The above analysis indicates current appropriations exceed available recharge and approval of additional withdrawal from this basin as requested in this permit application will further exceed the available recharge within the study area. The only data available to the department indicates current levels of water use are resulting in a decline in wells at a rate between 0.25 and 3 feet per year. Taken together, this suggests that issuance of additional withdrawal in this area may injure or damage existing vested rights due to increasing the withdrawal beyond the capacity of the formation in this basin to yield water. Ecology concludes this long term regional decline indicates issuance of water for this permit would exceed the capacity of the formation to provide it, thus there is no water available for this application in consideration of the criteria of RCW 90.44.070.

This proposal to withdraw water from this well and two additional wells would enlarge the quantity of water withdrawn from the aquifer and increase the irrigated acres. The instantaneous rate of withdrawal for the wells would be 4,800 gpm. Several wells already exist in the vicinity of the proposed location with similar depths and water levels. There has been documented history of pumping interference problems between existing water rights in the Coulee City study area, and it is anticipated that this proposal to withdraw additional water from the aquifer systems would cause impairment to existing water rights.

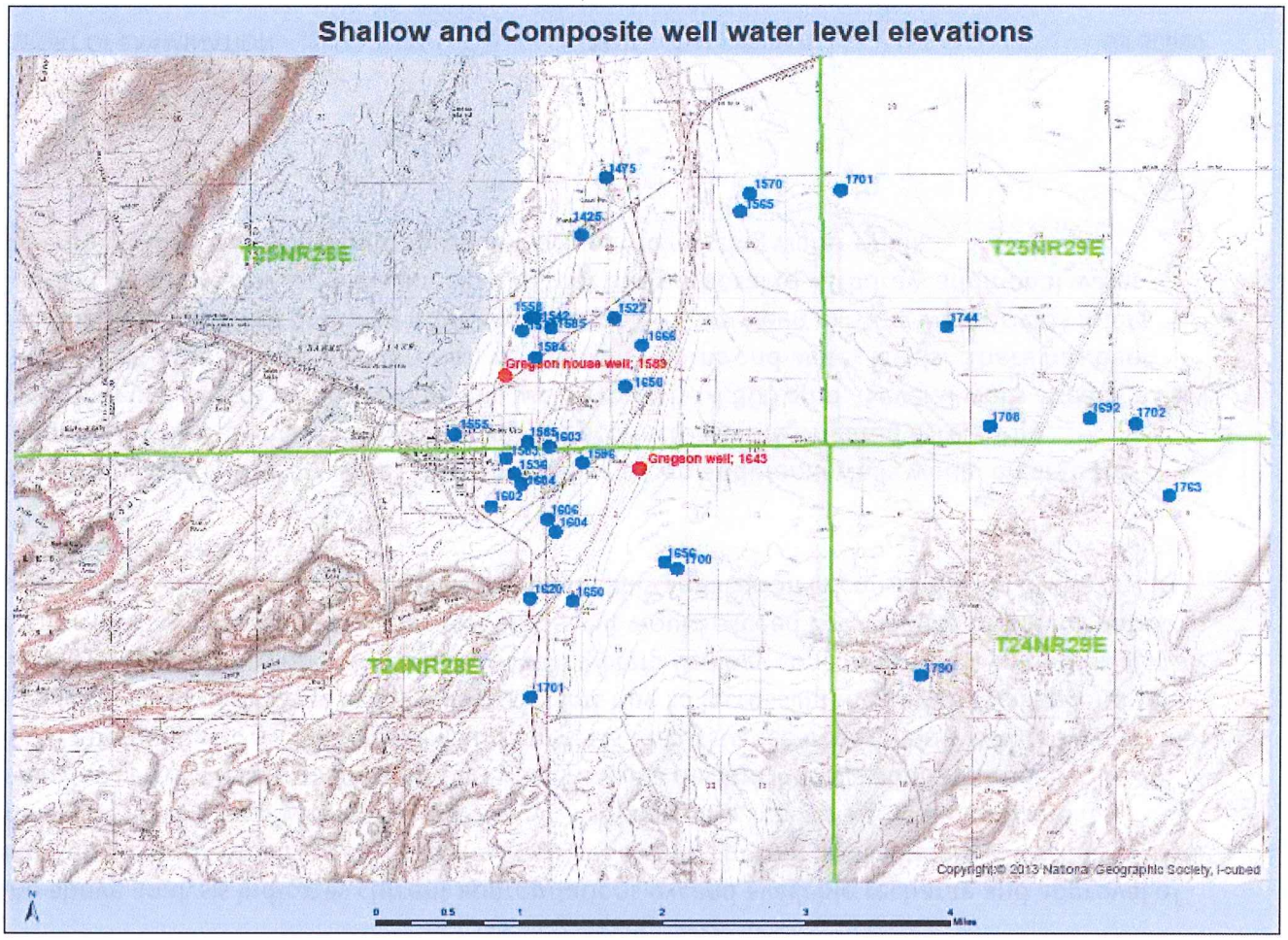

Figure 1. Shallow and Composite well water level elevations near the southern end of Banks Lake.

PUBLIC INTEREST AND CONSIDERATION OF PROTESTS

No protests were received against granting this water right permit, in response to the public notice. The Bureau of Reclamation has made the following comments about new appropriations in the Wilson Creek – Coulee City area:

Bureau of Reclamation Comments

The United States Department of the Interior, Bureau of Reclamation's comments were received on February 4, 2013. They indicated that they agree, absent further investigation, with Ecology's Hydrogeologic *Analysis: Coulee City* dated October 3, 2012. In particular, Reclamation agrees with the conclusion that the shallow aquifer lying immediately east and southeast of Banks Lake is in direct continuity with Banks Lake. Reclamation has requested that Ecology deny any applications in these areas, on the

basis they would impair existing water rights. The Bureau of Reclamation has proposed to work with the applicants to identify alternate water sources. Further information can be obtained from Ms. Christi Davis-Kernan, Water & Contracts Specialist at cdaviskernan@usbr.gov or by phone at 509-754-0227.

As stated above, in the Water Availability section, there are several existing municipal water right certificates and a permit that do not appear to be fully developed within the Wilson Creek-Coulee City area. These inchoate rights must be evaluated under RCW 90.03.330, which indicates they are rights in good standing. The water under these rights has not yet been put to full use, with some quantities held in reserve for future development. Municipal suppliers ultimately depend on these rights for growth and certainty of water supply for their community. The proposed appropriation is anticipated to have a negative impact to the existing municipal rights, which is not in the public interest.

In July of 2013, ten applications for new water rights were denied within the Wilson Creek – Coulee City area. All of these prior applications had a similar request to this one and were denied in part due to not being in the public interest. This history of denials shows that issuing new consumptive water rights within this area is not in the public interest.

As stated above, in the impairment section, this proposed withdrawal of ground water will negatively impact existing ground water rights and domestic wells. This impact is anticipated to result in limiting water quantities to which they are entitled, which is not in the public interest.

In general, there has been a significant public expression of protest and concerns regarding applications in the Wilson Creek – Coulee City area. This includes the protests of many of the other applications for new water rights within the work area that were issued a decision in 2013. The protestants of these other applications hold a variety of rights including state issued certificates, claims and permit exempt wells. This area is generally experiencing significant ground water level declines. The result of issuing new water rights in the area would create greater water level declines and negatively impact domestic wells. In addition, it would impair existing water rights and would not be beneficial to the long term economic stability of the area which relies heavily on agriculture and ranching. Therefore, issuance of this application is not in the public's interest.

BENEFICIAL USE

The proposed use of water is defined in statute as a beneficial use (RCW 90.54.020(1)). This use in only beneficial on the lands that are practically irrigable as described above in the investigation.

CONCLUSIONS

It is the conclusion of this examiner that although the proposed use is a beneficial use, water is not legally and physically available for further appropriation. The proposed new appropriation within this area will cause impairment to existing rights. This appropriation would further exceed the capacity of the formation, which would be contrary to the public interest and would be detrimental to the public welfare.

RECOMMENDATIONS

Therefore, it is recommended this application be **DENIED.**

Dan Tolleson, Report Writer *Date*

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