WR File NR CG2-20039C
WR Doc ID

DEPARTMENT OF
ECOLOGY
State of Washington

State of Washington
Report of Examination for Water Right Change

PRIORITY DATE
March 16, 1972

WATER RIGHT NUMBER
CG2-20039

MAILING ADDRESS
Peterson Farms
2526 Dike Road
Woodland WA, 98674

SITE ADDRESS (IF DIFFERENT)

Total Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
300	GPM	159

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE ADDITIVE	WITHDRAWAL OR DIVERSION RATE UNITS	ANNUAL QUANTITY (AF/YR) ADDITIVE	PERIOD OF USE (mm/dd)
Irrigation	300	GPM	159 acre-ft/yr	05/01-10/1

REMARKS
See source limitations below

IRRIGATED ACRES ADDITIVE		PUBLIC WATER SYSTEM INFORMATION WATER SYSTEM ID	CONNECTIONS
94			

Source Limitations

SOURCE FACILITY/DEVICE	A|S	WITHDRAWAL OR DIVERSION RATE	ANNUAL QUANTITY (AF/YR)	PERIOD OF USE (mm/dd)
Well No. 1	A	300 gpm	159	05/01-10/1

A|S: A=Alternate; S=Standby/Reserve

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Cowlitz			27

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Well	60532	WE12801	5	1W	22	SW	45°53'53"	122°47'42"

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

Parcel Nos. WB2608001,WB2608003, 60431, 6043201, 60432, 60433, WB2216001, WB2311004, WB2204001, 60512, 605190100, 60515, 605160200, 60518, 605160100, 60513, 60517, 60544, 605440100, WB1501002, WB1015003, WB1016001, WB1103001, WB2311001, WB2311002, 60444, 60527, 60531, and WB1515001, all within portions of Sections 10,11,14,15,22,23,26, and 27 of T5N, R1W, Cowlitz County.

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

See attached map

Proposed Works

A 16-inch diameter casing well, 131 feet deep, screened from 74 to 80 feet and 85.5 to 115.5 feet was completed on May 3, 2011. Piping from this new well has been connected to the existing irrigation mainline which is buried under the Dike Road. The existing mainline is a 10-inch diameter pipe which is encased in a 12-inch diameter steel casing. The existing surface water pumping facility from the Columbia River, which was approved under Surface Water Certificate No. S2-25864, has a 125 hp motor with a pump rating of 1,500 gpm.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	May 1, 2014	May 1, 2015

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Annually
What volume should be reported?	Total Annual Volume (AF/Y)
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

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", WAC 173-173, 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 for modifications to some of the requirements.

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

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.

Easement and Right-of-Way

The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Proof of Appropriation

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

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest. Therefore, I ORDER approval of Change Application No. CG2-20039C, subject to existing rights and the provisions specified above.

Signed at Olympia, Washington, this 5th day of June 2013.

Michael J. Gallagher

Michael J. Gallagher, Section Manager

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearing 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.

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

Please send a copy of your appeal to:

Michael J. Gallagher, Section Manager
Water Resources Program
Southwest Regional Office
P.O. Box 47775
Olympia WA 98504-7775

INVESTIGATOR'S REPORT

BACKGROUND

Cost Reimbursement

This application is being processed under a cost reimbursement agreement between the applicant and the Department of Ecology (Ecology). This report has been prepared by HDR Engineering under a contract and Work Assignment with Ecology which was signed by Ecology on August 14, 2012.

Water Right Change Application

A water right change application was submitted to Ecology on January 25, 2012 by Marty Peterson for Peterson Farms (Peterson) of Woodland, WA, to change the point of withdrawal and place of use for 300 gpm and 159 acre-feet per year for irrigation, under Ground Water Certificate No. G2-20039 C for irrigation of 94 acres.

Attributes of the water right as currently documented

Name on certificate, claim, permit: Robert J. Smith and Eugene E. Swett **Water right document number**: G2-20039 C **As modified by certificate of change number:** N/A
Priority date: March 16, 1972
Water quantities: Qi: 300 gpm Qa: 159 acre ft./ year
Source: Well
Point of diversion/withdrawal: 1300 feet north and 310 feet east of the south west corner of Section 23, within the SW ¼ SW ¼ of Section 23, T 5N, R1WWM.
Purpose of use: Irrigation of 94 acres
Period of use: May 1 to October 1
Place of use: That part of Government Lots 6 and 7, and H.L. Caples D.L.C. No. 53; in Sec. 22, lying southerly and easterly of Goerig Slough; AND in Sec. 23, the SW ¼ SW ¼; Government Lot 4; AND that part of the Stephen Butts D.L.C. No 52 described as follows: beginning at the northwest corner of said Stephen Butts D.L. C. No 52; thence south 801.24 feet; thence north $88^0 30'$ east 1249 feet; thence north 942 feet; thence south 82^0 west 1261.2 feet to the point of beginning; All in T. 5N., R. 1 W.W.M, Cowlitz County.

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 feet 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.

Comments and Protests

Public notice of the application was given in the Daily News, published in Cowlitz County on March 31 and April 7, 2012. There were no comments or protests received during the 30 day protest period following the last date of publication.

INVESTIGATION

Site Visit

The following information was obtained from a site inspection conducted by Jerry Louthain on November 8, 2012, with the applicant's representative Mr. Marty Peterson. Additional information relating to this application was provided by the applicant following the site visit.

Project Description

Peterson Farms is a large scale farming operation located west of Woodland and adjacent to the right bank of the Columbia River, with total land holdings of approximately 1,500 acres. The farming operation is also known as Columbia Fruit, as well as M and J Farms. Two brothers, Marty and Matt Peterson, now manage this business venture, which was formerly managed by their father, Jerry Peterson.

Proposed Project

The intent of this filing is to change the point of withdrawal from this existing water right to a new well (Well No. 1) near the Columbia River. The new well is the same source that was recently approved for S2-25864C by adding an additional point of withdrawal to this existing certificate for irrigation from the Columbia River. Some problems with water quality have been experienced at times from the existing

point of withdrawal for Certificate No. G2-20039C, so the applicant is requesting approval for this change in point of withdrawal in order to obtain a more reliable source of irrigation water.

In addition, the applicant is requesting that the place of use be changed from the limited amount of property (approximately 94 acres) described on the existing certificate to include any of the acreage that the Petersons irrigate under S2-25864C.

Other Water Rights Appurtenant to the Proposed Place of Use

Certificate No. S2-25864C for 2.67 cfs and 600 acre-feet per year for irrigation of 300 acres, which was recently approved to add a ground water source to the existing source on the Columbia River has the same place of use as that requested under this application for change.

Surface Water Certificate No. 9586 is for diversion of 0.75 cfs and 150 acre-feet per year for irrigation of 75 acres from Goerig Slough, a tributary of the Columbia River. This certificate was issued in 1963 with the entire place of use being within the place of use for Certificate No. S2-25864C.

The total for these two existing water rights and Certificate No. G2-20039C, which is the subject of this change application is 469 acres and an annual quantity of 909 acre-feet per year. All of these rights have their place of use being within the proposed place of use for this application for change,

Another new application, No. G2-30592, was filed at the same time as this application for change, and is for 2.67 cfs/1,200 gpm for irrigation of 950 acres. The proposed place of use for Application No. G2-30592 is the same as the proposed place of use for the subject application for change. The proposed sources for G2-30592 are the same as those for the recently approved change for Certificate No. S2-25864C.

History of Water Use and Current Water Use

Water has been used every year for irrigation from the existing authorized source and place of use under Ground Water Certificate No. G2-20039C since the right was issued, except during the 2012 irrigation season. No pumping records are available though for water use from this source.

Water has also been used for irrigation from the Columbia River under Certificate No. S2-25864C, and from Goerig Slough under Surface Water Certificate No. 9586.

Some crop rotation is done each year with some of the irrigated acreage being for the same crop every year. Information provided from Mr. Marty Peterson shows that approximately 180 acres of berries, 200 acres of corn and 60 acres of green beans are irrigated every year. Additional crops that are grown in some years are 30 acres of strawberries, 50 acres of wheat, 150 acres of green peas, and 600 acres of grass seed. Not all of these crops are grown or irrigated every year. Mr. Petersen has provided a listing by County Parcel Number of all of the land that the Peterson family owns and leases from others for agricultural use and irrigation. This listing also shows the number of acres for each Parcel Number. In addition, Mr. Peterson has provided a CD of a map of property in this vicinity, which shows the Parcel Number and ownership of each Parcel. The total acreage owned by the Peterson family which is irrigated is 875 acres, with an additional 360 acres which are leased, for a total of 1,235 acres of irrigated agricultural lands, owned or managed by the Peterson family.

Different crops have been grown on the property over the years, so the acreage and the specific types of crops that have been irrigated have varied over the years. Peterson Farms provided power usage records

for the last five years from 2007 through 2011 for the recently approved change to Certificate No. S2-25864C. These records showed the kilowatt hours used on a monthly basis for the existing Columbia River pumping plant from May through September for each of these years.

Since the property only has a total of 469 acres and 909 acre feet per year in authorized water rights, Surface Water Application No. S2-30592 was filed for additional water rights to bring the total approved irrigation acreage up to the maximum number of acres that they have irrigated or intend to irrigate in the future.

Extent and Validity

No specific information or records are available for any water use under the certificate that is the subject of this change application, and the only information that is available is the following information provided for the entire Peterson Farms property.

As described above under **History of Water Use and Current Use**, water has been used on a yearly basis for irrigation under Ground Water Certificate No. G2-20039. The total number of acres, the types of crops that have been irrigated, and the amount of water that has been used for irrigation on a yearly basis for any of their water rights is not known by the applicant and varies each year depending on the particular crop rotation that is being followed in any given year. It is known however that the number of acres irrigated in any given year for the Peterson Farms total land holdings has been well over 1,000 acres. There have been no metering requirements for this water use, so no records have been kept on the amount of water use, other than the power usage records for the last five years from 2007 through 2011 that Peterson Farms provided for the recently approved change to Certificate No. S2-25864. These records showed the kilowatt hours used on a monthly basis for the existing Columbia River pumping plant from May through September for each of these years.

Any new water right to be approved under the new application, S2-30592, will have a metering provision so that water use data will be available on a yearly basis. There will also be a metering requirement applied for this approved change application.

Hydrologic/Hydrogeologic Evaluation

The following information related to hydrogeology was taken from a December 20, 2011 hydrogeological analysis report from Alan Wald, Certified Hydrogeologist with Applied Hydrology Northwest

The static water level in the well could not be measured at the time of the site visit as the casing extends about 12 feet above land surface because of potential floods and is capped. The applicant reports that water levels in the well during drilling fluctuated with water levels (stage) in the river. The static water level is shown on the well driller's log as being 10 feet below the top of the well casing on May 2, 2011.

Geologic materials along the lower Columbia River in this area are principally flood deposits of unconsolidated fine sediments and alluvium over deeper Quaternary (Recent) sediments and debris of fluvial origin. The water well report describes 115 ft of sands and occasional gravel over a thin sequence of clay and fine sand at 115 to 131 ft. The well is screened from 74 to 115.5 ft.

The water well shows that the well was pump tested on April 29-30, 2011 at 1,387 gpm with 39 ft of drawdown after 24 hours, for a specific capacity of 36 gpm/ft. The pump test showed sufficient yield for the proposed use.

Pumping the well at the proposed rate is expected to induce recharge from the Columbia River since the static water level in the well is approximately river stage and less than 50 ft from the river. The specific capacity test data was analyzed using the method described in Bradbury and Rothschild (1985) to obtain the aquifer hydraulic parameters necessary to compute the drawdown under the river from pumping the well. The analysis assumed an aquifer thickness of about 110 feet and a specific yield ranging from 0.15 to 0.20 resulting in a calculated transmissivity of 16,000 to 17,000 ft^2/day and a hydraulic conductivity of 150 to 160 ft/day. Solution of the Theis equation for a transmissivity, T of 16,600 ft^2/day and storage coefficient, S of 0.2 at a pumping rate of 800 gpm for 30 days results in a conceptual drawdown of 5.7 feet at a radius of 50 feet from the well. This drawdown is consistent with the pump test at the time of well construction and clearly within the zone of influence of the river.

Impairment Considerations

The record of water rights within 1/2 mile of the proposed well includes three groundwater right claims (G2-08306CL, G2-067930CL, and G2-067931CL) and two surface water rights (S2-27726GWRIS, and S2-20043CWRIS). The groundwater right claims are for domestic and stock water use and the surface water rights are for irrigation from an unnamed slough, and Goerig Slough, respectively. The nearest water right is more than 1,600 feet landward of the proposed withdrawal.

A supplemental hydrogeologic analysis was performed by Alan Wald to evaluate the potential impacts of pumping at a maximum rate of 1,387 gpm which is the maximum pumping capacity of this well and an additional rate of 587 gpm above the 800 gpm currently authorized from this well. This report is dated December 14, 2012 and is included with this report as Attachment 2.

Mr. Wald's December 2012 report showed that solution of the Theis equation for a transmissivity, T of 16,600 ft^2/day and storage coefficient, S of 0.2 at the maximum total pumping rate of 1,387 gpm for 30 days results in a conceptual drawdown of 1.32 feet at a radius of 1,600 feet from the well. This drawdown is consistent with the pump test at the time of well construction and clearly within the zone of influence of the river. In addition, this report showed that using these same parameters, pumping at a rate of the added amount for this application of 587 gpm would result in a drawdown of 0.56 feet.

Based on the above hydrogeologic analysis, these rights would not be impaired by the proposed change in point of diversion/withdrawal. In addition, no additional withdrawal is proposed under this application so there would not be any additional impairment to the surface water rights from Goerig Slough.

Because this application addresses a change of an existing water right, it represents no net increase in water quantity. Due to the proximity of this newly constructed well to the Columbia River with water levels in the well reflecting the water levels of the Columbia River, the proposed additional ground water source is essentially Columbia River water and would not result in any additional impairment to surrounding water users.

Beneficial Use

The use of water for irrigation purposes is defined in statute as a beneficial use of water (RCW 90.54.020(1)). The stated purpose of use for the Peterson well qualifies as a beneficial use.

Public Interest Considerations

Approval of this application to change the point of withdrawal and place of use for continuing use of water for irrigation purposes is not contrary to the public interest.

The attached hydrogeological analysis by Alan Wald reviews the State requirements for instream flows and discusses current practice for water right reviews in this area including a consultation with Steve Boessow, the Washington State Department of Fish and Wildlife Instream Flow Biologist. Based on this review, it was concluded there are no instream flow requirements on the Columbia River downstream of Bonneville Dam.

In addition, there were no protests filed or objections made to the approval of this application.

Four Statutory Tests

This Report of Examination (ROE) evaluates the application based on the information presented above. To approve the application, Ecology must issue written findings of fact and determine that each of the following four requirements of RCW 90.03.290 has been satisfied:

1. The proposed appropriation would be put to a beneficial use;
2. Water is available for appropriation;
3. The proposed appropriation would not impair existing water rights; and
4. The proposed appropriation would not be detrimental to the public welfare.

CONCLUSIONS

The conclusions based on the above investigation are as follow:

1. The proposed appropriation for irrigation is a beneficial use of water;
2. The approved quantity) is available for appropriation;
3. The proposed appropriation will not impair senior water rights; and
4. The proposed appropriation will not be detrimental to the public interest.

RECOMMENDATION

Based on the information presented above, the author recommends that this request to for a water right be approved in the amounts described below, and within the limitations, and provisions on pages 3 and 4 of this report.

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:

300 gpm and 159 acre-ft/yr from a well for irrigation of 94 acres from May 1 to October 1 of each year

Point of Withdrawal: SW¼, Section 22, Township 5 North, Range 1W.W.M.

Place of Use: As referenced on Page 2 of this Report of Examination and described in ATTACHMENT 3.

Report by: _____

Jerry Louthain, P.E. Date
HDR Engineering, Inc.

Reviewed by: Michael J. Gallagher 6/5/13

Michael J. Gallagher, Section Manager Date

ATTACHMENT 1-December 20, 2011 Hydrogeology Report, Applied Hydrology Northwest
ATTACHMENT 2- December, 2012 Hydrogeology Report, Applied Hydrology Northwest
ATTACHMENT 3- Place of Use and point of withdrawal for Change Application No. CG2-20039C