

## Klickitat County Water Conservancy Board

### Certificate of Conditional Approval and Record of Decision

October 17, 2000

#### Water Board Decision for Conditional Approval:

The Klickitat County Water Conservancy Board authorizes and provides for conditional approval of the change of water right request, for additional place of use as described below and within the attached application form and supporting technical materials. This conditional approval is for Water Right No. G3-00979C.

#### BACKGROUND

The existing certificate is G3-00979C with a priority date of March 13, 1971. The applicant is Dave Groth, Groth Vineyards NW. Telephone 509-894-2919 Conservancy Board contact is Brooks Heard

The existing certificate (No. G3-00979C is for irrigation from March 1 to November 1 each year, for a maximum of 1200 gpm, 1215 acre-ft annually. The existing water source is ground water, provided from a well located 100 feet west and 225 feet south of the NE Corner of Section 27, T5NR22EWM in Klickitat County, Washington.

#### Application Change/Transfer Request:

The applicant is requesting additional places of use for the existing water right No. G3-00979C.

The applicant is requesting to add additional acres to the 300 acres allowed under his current certificate. Both current and additional acreage are to be converted from a crop rotation including winter wheat followed by pasture, hay/pasture, and alfalfa to drip irrigated wine grapes, with a reduction in consumptive crop use from approximately 46 inches per year to approximately 14.5 inches per year.

The existing certificated water use is for irrigation, 1200 gpm maximum and 1215 acre-feet per year, during the period from March 1<sup>st</sup> to November 1<sup>st</sup> each year, covering 300 acres. The applicant's technical report indicates historical average water usage at an amount very close to the certificated amount. The data in the applicant's original technical report is supported by engineering calculations done by Cal Eck Engineering of Battle Ground, Washington (see Attachment 1). In the calculations, kilowatt hour usage data obtained from the PUD #1 of Klickitat County for the previous five years are combined with known static water depth, pump horsepower and overall efficiency. These independent calculations indicate an average flow rate of 2.75cfs (1234gpm) and a total annual water usage of 1118 acre feet. *285 acres Attachment #2*  
*115 + 125 + 45 = 285*  
*Beneficial use?*

The applicant has submitted a certified Crop Rotation statement from Peter Jensen (see Attachment 2), previous owner of the parcels involved, indicating the crops grown under three separate sprinkler systems for the years 1994 through 1999. The water duty calculations for the crops involved - mostly



hay/pasture and alfalfa with some wheat and barley followed by pasture – are developed using WSU's PAWS system. These calculations (see Attachment 3) support and confirm the engineering calculations cited above.

The applicant has submitted crop deficiency estimates from the Public Agriculture Weather System (PAWS) for the previous five years indicating a consumptive use requirement very close to the permitted amount. Earlier stamped calculations by Cal Ek Engineering included in the original bound application for change use the PAWS data to arrive at a consumptive use very similar to the pump and kilowatt data cited above.

*Based on questionable PAWS DATA for winter wheat.*

By using three separate methods to arrive at an average water usage very close to the permitted amount, the applicant has met the 5-year averaging requirements of RCW 90.03.380 to the satisfaction of the Water Conservancy Board.

Regarding return flows, the (PAWS) crop deficiency data and crop history submitted by the applicant closely matches the historic water usage developed by an independent engineer's calculations. This alone would suggest that return flows are minimal. Using the widely used "rule of thumb" estimate of 7 gals per minute per acre for the interior of Washington State, 300 acres would require around 2100 gals per minute. As the applicant's water use history indicates, the farm has used water at a much lower rate, indicating that it has often been operating in deficit irrigation during the previous 5 years of beneficial use. Additionally a daily water balance calculation done by Cal Ek Engineering (see Attachment 4) clearly demonstrates a pattern of deficit irrigation for both historic and proposed uses. Therefore, return flows are assumed to be insignificant and would be unaffected by the proposed change.

*01 NONE?*

#### **Change/Transfer Location (Existing and Requested):**

The existing water use is for a maximum of 300 acres (rotation allowed under the certificate) within the SE1/4Sec22, SW1/4Sec23, NE1/4Sec27, and the NW1/4Sec26, all in T5NR22EWM. Most of the historic usage has rotated between 3 pivot systems that were located in the SE1/4Sec22, the NE1/4Sec27, and the NW1/4Sec26, with a smaller acreage irrigated by wheel and hand lines in the SW1/4Sec23. The original application contained a typographic error that was corrected in an amendment to the application (see Attachment 5)

The existing well location is identified within the application documents, maps and technical report and is located 100 feet west and 225 feet south of the NE Corner of Section 27, T5NR22EWM. The well is located near the center of the four quarter sections listed above.

The original well was drilled in 1971 to a depth of 1069 feet by Moore Anderson of Walla Walla, Washington. The well log for the original well was included in the file submitted directly to the Conservancy Board by Ecology. A replacement well was later drilled less than 10 feet to the east of the original well. Both wells were apparent at the time of the Water Conservancy Board's site visit on May 16, 2000. Additionally both wells were noted on Kevin Brown's field report of 4/15/93.

Not included in the file submitted directly to the Conservancy Board by Ecology was the log for the replacement well deepened in 1979 to a depth of 860 feet. The applicant obtained the log for replacement well, which yielded a pump test result of 1806 gals/min with 145ft. of drawn-down. The static level of the replacement well was 72 feet at the time of testing.

Apparently the original well was converted to domestic use with a small horsepower submersible pump installed. According to a statement from the applicant (see Attachment 3), and as noted by Kevin Brown of Ecology in his field report of 4/15/93, the sound of falling water was caused by a small hole intentionally placed in the pump column to relieve pressure and thus prevent the submersible pump from overheating.

According to the applicant, previous owner Pete Jensen had a camera test probe of the irrigation well done by an outside consultant, and the camera test showed no cascading water.

The applicant's attached existing water permit (and supporting materials) and technical reports contain additional information about well location, construction and design, and pump unit performance. All these materials have been reviewed by the Water Board, along with any comments received from the WADOE staff. Under the existing permit, the wells may be pump tested at the request of the WA Dept. of Ecology, and at the WADOE's request, power meter and/or flow meter readings shall be submitted to the Central Regional Office of the WADOE.

The applicant is requesting to expand the number of acres irrigated to 900 acres of wine grapes and 20 acres of turf and pasture. This expansion would add 620 acres to the existing permitted acreage. The new total of 920 acres would include all of the land currently permitted and add lands adjacent such that the total acreage in which irrigation would allowed is described as follows:

1. Tax Lot 05-22-2700-0001/001, including the NE1/4 & N1/2SE1/4 & N1/2NW1/4Sec27 T5N, R22EWM
2. Tax Lot 05-22-2600-0001/00, the NW1/4 Sec26 T5N, R22EWM
3. Tax Lot 05-22-2300-0002/00, including the SW1/4 & S1/2NW1/4 Sec23 T5N, R22EWM
4. Tax Lot 05-22-2200-000/00, all of Sec22 T5N, R22EWM excepting the north 660 ft.

The applicant's technical reports identifies the existing well as the source for the additional acreage proposed to be irrigated. The Water Board has reviewed this information in detail and made a field investigation which verifies the information contained within the technical report and the application.

## **INVESTIGATION**

### **Water Right Adjudication Process:**

Water right adjudication does not affect this applicant.

### **Public Notification of Applicant Request for Water Right Change/Transfer:**

Public notification for the applicant's request has been provided; see attached affidavit of publication.

### **Compliance with State Environmental Policy Act:**

Not applicable.



### Verification of Existing Right and Water Use:

RCW 90.03.380 states: “ For purposes of this section, “annual consumptive quantity” means the estimated or actual annual amount of water diverted pursuant to the water right...” The applicant has estimated his water use “...averaged over the most recent five year period of continuous beneficial use...” using three separate methods (PAWS data, crop rotation history, and calculations based on pump data, head and kilowatt data) and has “... reduced by the estimated annual amount of return flows...” All three methods show that the estimated annual consumptive use averaged over 5 years has been close to the actual amount of water certificated by right. The most specific data is the calculation produced by Cal Ek Engineering showing an average use of 1118 acre feet per year.

Additionally, the following calculation of 24-hour, full-capacity, pumping days within the existing allowed irrigation period shows the following:

$$(1200 \text{ gals per minute}) \times (60 \text{ minutes per hour}) \times (24 \text{ hours per day}) = 1,728,000 \text{ gals per day}$$

$$\frac{1,728,000 \text{ gals per day}}{325,851 \text{ gals per acre ft.}} = 5.30304 \text{ acre feet per day}$$

$$\frac{1118 \text{ acre feet annually}}{5.30304 \text{ acre feet per day}} \quad (Qa) \quad (Qi \text{ max}) = 210.82 \text{ days} \quad (210 \text{ days, } 19 \text{ hrs, } 44 \text{ minutes, } 36 \text{ secs})$$

The original certificate allows 255 days for irrigation. Kilowatt data from the PUD indicates an average five-year irrigation period of 214 days (see both engineering calcs and PUD data) for both current and former farm operators. The above calculations show that a maximum of 211 days of full-capacity pumping within the allowed time frame would not exceed the new allowable annual quantity of 1118 acre feet. This flexibility within the overall allowed period will encourage future possible best management practices, including early season pumping into a reservoir, off-peak pumping (if off-peak rates are available in the future) and reduced irrigation after seasonal precipitation. The existing water use retains a certificate of water right granted by the Washington State Dept. of Ecology.

The applicant's technical report and supporting materials confirms perfection of the existing water right. The technical reports provide engineering estimates of water use consistent with the certificated water right.

The field examination confirmed that water is being put to beneficial use consistent with the water right certificate and information contained within the applicant's technical report.

### Field Examination for Existing Use and Site of Change/Transfer:

The field examination was conducted by Brooks Heard and Robert Andrews of the Klickitat County Water Conservancy Board on May 16, 2000. The examination confirmed the information within the application for request of change of place of use (additional places of use) and within the applicant's technical report. The applicant was available to answer any questions.

Brooks Heard and Robert Andrews also noted that the 80 acres mentioned in Kevin Brown of DOE's field investigation of 4/15/93 as being outside of the permitted area and therefore illegally irrigated, was no longer under irrigation. The wheel line had been removed from the field and was stored elsewhere on the farm.

### **Technical Information, Investigations, or Reports Requested or Reviewed:**

The Water Board has reviewed the applicant's complete WADOE file and records contained therein.

The applicant has provided an original bound application with supporting data from PUD of Klickitat County(kilowatt usage) , PAWS (crop deficiency data from the Paterson station) and calculations by a registered professional engineer. Additionally the applicant has provide information through personal communications, and responded to requests for technical information by the Water Board. The applicant has communicated with individual Water Board members to answer specific questions about the change in place of use request.

The applicant has provided additional information beyond that contained in the original bound application:

1. Review of Irrigation Usage Relative to Existing Water Rights. (Attachment 1)
2. Certified Statement of Jensen Seed, Inc. (Attachment 2)
3. Amendment to Change/Transfer Application dated August 3<sup>rd</sup> (Attachment 3)
4. Return Flow Analysis (Attachment 4)
5. Amendment to Change Transfer Application dated June 29<sup>th</sup> (Attachment 5)

The Water Board conducted a field examination to verify the information contained within the applicant's permit of water right and technical report.

The Water Board has reviewed in detail all materials provided to it from WADOE, as well as any issues raised by WADOE concerning the initial application.

### **Associated Water Rights and Uses Related to Current and Proposed Action(s):**

This application seeks only to expand the acreage irrigated by changing both the crop and the method of irrigation. There is no change in point of diversion, and no change in purpose of use. Place of use will expand to include property owned by the applicant and adjacent to land already irrigated under the existing certificate. Therefore, no impact to associated water rights and uses by the proposed action can be discerned by the Water Board.

The applicant has requested that the full 20 acres of pasture and turf be allowed under this application and has indicated a willingness to reduce the grape acreage to 850 acres to insure an adequate water duty for pasture and turf. The water duty for turf/pasture in the applicant's area is approximately 48 inches per year. The PAWS data for grapes at the Paterson measuring station states indicates an average deficiency of 14.14 inches. However, The Board finds the average water duty of 14.14 inches per year (PAWS data) does not reflect the real water duty in a dry year. Using 14.5 inches (a figure slightly above the highest water duty in the five year PAWS data) yields an annual consumptive use of:

$$\underline{14.5 \text{ inches} \times 850 \text{ acres}} = 1027.1 \text{ acre feet}$$

(Grapes)



12 (inches per foot)

+

$$\frac{48 \text{ inches} \times 20 \text{ acres}}{12 \text{ (inches per foot)}} = 80.0 \text{ acre feet} \quad (\text{Turf/Pasture})$$

Total = 1107.1 acre feet < 1118 acre feet (average 5-year water use available for spreading under RCW 90.03.380)

In considering both the documented existing usage during the most recent five-year period of beneficial use and the proposed water duty for the grape and turf/pasture acreage, the Board finds that 850 acres of grapes and 20 acres of turf/pasture will use slightly less water than the current water usage under RCW 90.03.380.

#### **Review of Potential Impairment:**

Because the proposed action will not increase the existing certificated water use, or increase the water put to actual beneficial use based on historic use, or affect other existing water rights or applications for new water rights, no impairment is discernible.

The Water Board has published public notice of the proposed action and has not received a request from a water right holder (consistent with RCW 90.80) to receive intervenor status on the application review. Existing water right holders have identified no impairment; nor has the Board received public comment from Klickitat County residents - or others - raising concerns about the proposed action.

The field investigation revealed that the applicant's request for change of place of use (additional places of use) is consistent with existing land and water use practices within the immediate area, reflecting the development of the southeasterly slope of the Horse Heaven Hills as a good location for high-quality wine grapes.

The change of use is consistent with net beneficial use and return flow considerations contained in RCW 90.03.380. The change will not increase water withdrawals or net depletions from the ground water source.

Given that a change of place of use (additional places of use) is requested and that no increase in water withdrawal from the existing ground water source will occur, there is no reason to expect any impairments to other ground water (or surface water) sources, consistent with the conditions/provisions provided under the existing water right permit granted by the WADOE.

#### **Effect or Detriment to Public Interest:**

Because the proposed action will not increase the existing permitted water use, or increase the water put to actual beneficial use, or affect other existing water rights applications for new water rights, it does not change the existing status quo for water use impacts. No impairment is discernible by the Water Board.

No impairment to other water rights will occur as a result of granting permit status for additional places of use; no impairment is consistent with the public interest. The Water Board addresses this issue above and has included conditions within this ROD to further protect the public interest.

The proposed action does provide for a continuation of the existing beneficial use (as stated within the applicant's permit of water right), increasing economic benefits to the state and local area.

This action is consistent with the intent of RCW 90.03.380, 90.44.100, and 90.80 and other applicable statutes; it is consistent with Klickitat County's Comprehensive Land-Use Plan.

### **Consideration of Pending Applications:**

The applicant's request will not affect the priority for action on pending water change/transfer applications filed with the Washington State Dept. of Ecology, for Klickitat County.

Public notice has been provided by the Water Board requesting all water right holders within Klickitat County to submit existing or new water right change/transfer applications to the Water Board. Applications received by the Water Board are acted on by a first-come, first-serve basis, taking into account the received application's priority date and technical review requirements.

## **CONCLUSIONS**

### **Water Board Findings and Conclusions Regarding Decision for Conditional Approval:**

1. The certificate of water right and existing beneficial use is verified; the applicant's current and historic water usage is consistent with the certificate.
2. The annual consumptive quantity over the previous most recent five-year period of beneficial use has been established. Both estimated and actual amounts have been calculated. In a supplemental letter, the applicant has amended his request to reflect that the lower of the two amounts, in this case the actual usage, be used as a basis to transfer to additional places of use.
3. The change request will not increase the permitted water right or the amount of water currently being put to beneficial use; the change may actually reduce water use under the existing permit by increases in efficiency with drip irrigation.
4. Public notice has been provided for the proposed action; no objections or concerns have been voiced to the Water Board.
5. The proposed action creates no detrimental impacts or impairments to other water rights holders or permit applicants.



6. No one with standing before the Water Board has requested intervenor status; no resident of Klickitat County has objected to the proposed action.
7. The proposed action is consistent with the intent of RCW 90.03.380, 90.44.100, 90.80 and recent case reviews by the Washington State Supreme Court.
8. The proposed action supports the public interest; that is to say there are no discernible impairments and it is consistent with allowed beneficial uses. Additionally it is consistent with local area economic development goals and preferred land uses.
9. All applicable fees have been paid and the complete file submitted to and reviewed by the Water Board.
10. The Water Board has provided for specific conditions in granting the conditional approval and Record of Decision.

## **PROVISIONS**

### **Limitations Affecting Conditional Approval:**

The Water Board conditions the applicant's request for additional places of use with the following provisions:

**First Condition:** The total annual water usage allowed under the existing water right No. G3-00979C shall be reduced from 1215 acre feet by 97 acre feet per year to 1118 acre feet.

**Second Condition:** The total proposed acreage for wine grapes shall be reduced to 850 acres. The total irrigated acreage shall be limited to 870 acres.

**Third Condition:** By January 1, 2008 the applicant will notify the Water Resources Program, Central Region Office, WADOE, that construction and water use application, as specified within this ROD, has been completed. The board accepts this extended development period for two reasons:

1. A vineyard of this size takes time to plan and develop.
2. Phasing the installation of the vineyard over this development period will ensure that the water demands of the overall crop do not exceed the permitted amount. Water demand by new wine grape plantings drops off after the first and second year, hence ensuring that the 14.5 inches per acre is adequate for the vineyard's phased development.

**Fourth Condition:** The applicant will specifically provide the WADOE with flow meter estimates of water use for the total water right. A measuring device approved by WADOE must be installed and the applicant will follow a metering plan, as requested by WADOE. The meter shall be installed at the sources (wells), and twice weekly readings shall be documented. Within 30-days of the end of each year, the permittee shall send a copy of this data, on a form prescribed by WADOE, to the Central Regional Office. Meter information shall indicate the meter type, the date of recording, and the name of the person taking the meter reading.



**Mitigation Requirements:**

None

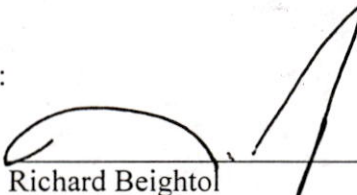
**Development Schedule and Beneficial Use:**

By January 1, 2008 the applicant will notify the Water Resources Program, Central Region Office, WADOE, that construction and water use application, as specified within this ROD, has been completed. The applicant will specifically provide the WADOE with new engineering or flow meter estimates of water use relying on the improved efficiency measures and practices implemented, according to the metering requirements specified above.

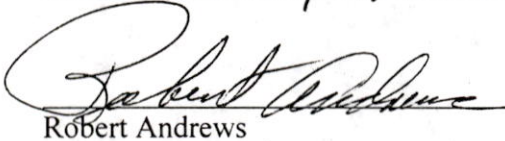
**APPROVAL**

The Klickitat County Water Conservancy Board hereby accepts conditional approval for the water right change/transfer described within this record decision on 10-17-00 (date) and submits this certificate and record of decision for conditional approval to the Director of the Washington State Department of Ecology for final review or consideration.

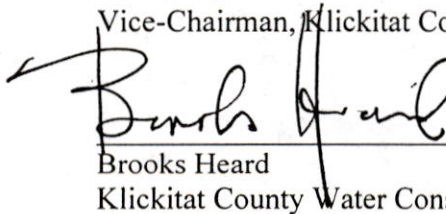
Signed:

 Date: 10-17-00  
Richard Beightol

Chairman, Klickitat County Water Conservancy Board

 Date: 10/17/00  
Robert Andrews

Vice-Chairman, Klickitat County Water Conservancy Board

 Date: 10.17.2000  
Brooks Heard  
Klickitat County Water Conservancy Board

Rejection Opinion:

None.

Certified Mailed to the Director, Washington State Dept. of Ecology and Central Region Office of WADOE:

Date Mailed: