

Oregon Water Resources Department
Water Rights Division

Water Rights Application
Number G-12971

Final Order

Application History

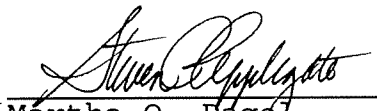
On June 5, 1992, CASCADE HIGHLANDS LTD PARTNERSHIP submitted an application to the Department for a water use permit. The Department issued a Proposed Final Order on March 12, 1996. The protest period closed April 26, 1996, and no protest was filed.

The proposed use would not impair or be detrimental to the public interest.

Order

The application therefore is approved as proposed by the Proposed Final Order, and Permit Number G-12494 is issued as limited by the conditions proposed by the Proposed Final Order.

DATED June 19, 1996

for 
Martha O. Page
Director

Appeal Rights

Under the provisions of ORS 183.484, the applicant may appeal this order by filing a petition for review in the Circuit Court for Marion County or the circuit court for the county in which the applicant resides or has a principal business office. The petition for review must be filed within 60 days after the date this order is served.

Superseded 12/1/2014

**CLAIM OF
BENEFICIAL USE
for Permits claiming more
than 0.1 cfs and All Transfers**



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**A fee of \$150 must accompany this form to be accepted for permits
with a priority date of July 9, 1987, or later. (ORS 536.050(1))**

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:
http://www.wrd.state.or.us/OWRD/WR/cwre_info.shtml#.

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

If you have questions regarding the completion of this form, please call 503-986-0900 and ask for the Certificate Section.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see http://www.wrd.state.or.us/OWRD/mgmt_reimbursement_authority.shtml.

**SECTION 1
GENERAL INFORMATION**

1. File Information

APPLICATION # (G, R, S OR T)	PERMIT # (IF APPLICABLE)	PERMIT AMENDMENT # (IF APPLICABLE)
G-12971	G-12494	T-9625

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2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME Highlands at Broken Top Community Association co/Stephen Herr		PHONE NO. 541 318-3430	ADDITIONAL CONTACT NO.
ADDRESS 855 SW Yates Drive Suite 102			
CITY Bend	STATE OR	ZIP 97702	E-MAIL gmbtca@brokentop.org

APPLICANT/BUSINESS NAME Tetherow Golf Course LLC co/Chris Condon		PHONE NO. 541 388-2626	ADDITIONAL CONTACT NO.
ADDRESS 61240 Skyline Ranch Road			
CITY Bend	STATE OR	ZIP 97701	E-MAIL ccondon@tetherow.com

If the current property owner is not the permit or transfer holder of record, it is recommended that an assignment be filed with the Department. **The COBU must be signed by the permit or transfer holder of record.**

3. Is the Property Owner the permit or transfer holder of record?

☒ YES ☐ NO

If "YES" the remainder of this item may be deleted.

Permit or transfer holder of record (this may, or may not, be the current property owner)

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PERMIT OR TRANSFER HOLDER OF RECORD Highlands at Broken Top Community Association co/Stephen Herr		
ADDRESS 855 SW Yates Drive Suite 102		
CITY Bend	STATE OR	ZIP 97702

Are there additional permit or transfer holders of record?

☒ YES ☐ NO

If "NO" the following box may be deleted.

ADDITIONAL PERMIT OR TRANSFER HOLDER OF RECORD Tetherow Golf Course LLC		
ADDRESS 61240 Skyline Ranch Road		
CITY Bend	STATE OR	ZIP 97701

4. Date of Site Inspection: **9-23-14**

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
Stephen Herr	9-23-14	Manager, Highlands at Broken Top CA
Ron Kidder, Botanical Dev.	01-10-11	Landscape/irrigation designer-contractor
Chris Condon	9-22-14	Manager, Tetherow Golf Course LLC irrigation system

6. County: **Deschutes**

7. If any property described in the place of use of the permit or transfer final order is excluded from this report, identify the owner of record for that property (ORS 537.230(4)):

**Mark "NA" if there are no owners of property not included in this claim

OWNER OF RECORD		
NA		
ADDRESS		
CITY	STATE	ZIP

Are there additional Owners of Record?

YES NO

Additional Owners of Record are listed in Appendix A included with this form, per e-mail dated Sept. 4, 2013 by Gerry Clark, Water Rights Services Division, OWRD.

SECTION 2 SYSTEM DESCRIPTION

A. Points of Diversion/Appropriation

1. Point of diversion/appropriation name or number:

POINT OF DIVERSION/APPROPRIATION (POD/POA) NAME OR NUMBER (CORRESPOND TO MAP)	WELL LOG ID # FOR ALL WORK PERFORMED ON THE WELL (IF APPLICABLE)	WELL TAG # (IF APPLICABLE)
POD 1 (HBT)	DESC 51899, DESC 55459	L 23814
POD 2 (TGC)	DESC 51900	L 23815

Attach each well log available for the well (include the log for the original well and any subsequent alterations, reconstructions, or deepenings)

2. Point of diversion/appropriation source and, if from surface water, the tributary:

POD/POA NAME OR NUMBER	SOURCE	TRIBUTARY
POD 1	Deschutes Basin	N/A
POD 2	Deschutes Basin	N/A

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3. Developed use(s), period of use, and rate for each use:

POD/POA NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	RATE OR VOLUME FOR USE (CFS, GPM, OR AF)
POD 1	Irrigation	No crop - grasses	Irrigation season Typically from April to October	Varies 1.78 CFS max
POD 2	Irrigation	No crop - grasses	Irrigation season Typically from April to October	Varies 1.78 CFS max
Total Quantity of Water Used				Varies 3.6 CFS max

4. Provide a general narrative description of the distribution works. This description must trace the water system from **each** point of diversion or appropriation to the place of use:

Irrigation water is accessed via well #L23814 as noted above. The well is equipped with a vertical turbine pump. Piping from the well pump conveys water to the storage lake (Reservoir #1 on the map). A supply pipe from the storage lake conveys water to the irrigation pump station which pressurizes and supplies water to the irrigation distribution piping and irrigation sprinkler heads distributed across the irrigated lands. The well pump and the irrigation pump station are housed within the same building adjacent to the storage lake.

Irrigation water is also accessed via well #L23815 as noted above. The well is equipped with a vertical turbine pump. Piping from the well pump conveys water to the storage lake s (Reservoir #2 and Reservoir #3 on the map). A supply pipe from the storage lake conveys water to the irrigation pump station which pressurizes and supplies water to the irrigation distribution piping and irrigation sprinkler heads distributed across the irrigated lands. The well pump and the irrigation pump station are both near Reservoir #2.

SECTION 2

SYSTEM DESCRIPTION (B through H)

Are there multiple PODs or POAs?

YES NO

If "YES" you will need to copy and complete Sections 2B through 2H for each POD/POA.

POD/POA Name or Number this section describes (only needed if there is more than one):

POD 1, POD 2

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B. Place of Use

1. Is the right for municipal use?

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YES ☒ NO*If "YES" the table below may be deleted.*

TWP	RNG	MER	SEC	Q-Q	GLot	DLC	USE	IF IRRIGATION, # PRIMARY ACRES	IF IRRIGATION, # SUPPLEMENTAL ACRES
17S	11E	WM	35	SE-SW			IRR	3.2	
17S	11E	WM	35	SW-SE			IRR	4.0	
17S	11E	WM	35	SE-SE			IRR	5.1	
18S	11E	WM	2	NW-NW			IRR	0.2	
18S	11E	WM	2	NE-NW			IRR	17.8	
18S	11E	WM	2	SW-NW			IRR	1.9	
18S	11E	WM	2	SE-NW			IRR	23.0	
18S	11E	WM	2	NW-NE			IRR	19.3	
18S	11E	WM	2	NE-NE			IRR	9.9	
18S	11E	WM	2	SW-NE			IRR	11.5	
18S	11E	WM	2	SE-NE			IRR	1.6	
18S	11E	WM	2	NE-SW			IRR	11.4	
18S	11E	WM	2	SE-SW			IRR	5.2	
18S	11E	WM	2	NW-SE			IRR	9.8	
18S	11E	WM	2	NE-SE			IRR	4.4	
18S	11E	WM	2	SW-SE			IRR	5.4	
18S	11E	WM	2	SE-SE			IRR	1.3	
								135.0	SUB TOTAL
18S	11E	WM	2	SE-SE			IRR	1.6	
18S	11E	WM	1	SW-SW			IRR	4.3	
18S	11E	WM	11	NE-NE			IRR	19.0	
18S	11E	WM	11	SE-NE			IRR	6.3	
18S	11E	WM	11	NE-SE			IRR	17.0	
18S	11E	WM	11	SE-SE			IRR	9.5	
18S	11E	WM	12	NW-NW			IRR	11.8	
18S	11E	WM	12	NE-NW			IRR	11.0	
18S	11E	WM	12	NW-NE			IRR	3.9	
18S	11E	WM	12	SW-NW			IRR	13.4	
18S	11E	WM	12	SE-NW			IRR	14.4	
18S	11E	WM	12	SW-NE			IRR	5.3	
18S	11E	WM	12	NW-SW			IRR	24.9	
18S	11E	WM	12	NE-SW			IRR	1.4	
18S	11E	WM	12	SW-SW			IRR	5.6	
18S	11E	WM	12	SE-SW			IRR	0.6	
								150.0	SUB TOTAL
Total Acres Irrigated								285.0	TOTAL

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (Gov Lot), Quarter-Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, Gov Lot, and QQ.

C. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion/appropriation to the place of use.

1. Is a pump used?

YES NO

If "NO" items 2 through item 6 may be deleted.

2. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Robbco	9THE	23355	Vertical turbine (HBT well)	9-IN	8-IN
Cornell	3YH-CC	154918944	Centrifugal end suction (HBT booster)	8-IN	8-IN
N/A	N/A	N/A	Vertical turbine (TGC well)	8-IN	8-IN
Flowserv	10EMM-9	0610NSH00672-4	Centrifugal end suction (TGC booster)	8-IN	8-IN

3. Motor Information

MANUFACTURER	HORSEPOWER
US Motors (HBT well)	150 hp
Cornell (HBT booster)	125 hp
Emerson (TGC well)	100 hp
Emerson (TGC booster)	75 hp

4. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *If a well, the water level during pumping	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
150		349 feet	15 feet	1.87
125	145 Psi discharge	0	Varies- 85 feet max	1.87
100		301 feet	7 feet	1.80
75				1.34

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5. Provide pump calculations:

Well Pump- theoretical capacity calculation (HBT):

$$Q = 550(e)(hp) / (j) (TDH)$$

$$e = .70$$

$$hp = 150$$

$$j = 62.4$$

$$TDH = 349' + 15' + 26' (\text{minor losses}) = 390'$$

$$Q = 550(.70)(150) / 62.4(390) = 2.37 \text{ cfs}$$
 (Note well pump discharge is controlled to 1.87 cfs maximum by pc controller and variable speed motor drive).

Irrigation Pump Station pump theoretical calculation (HBT):

$$e = .75$$

$$hp = 125$$

$$TDH = 335' (\text{station discharge pressure set} = 145 \text{ psi})$$

$$Q = 550(.75)125 / 62.4(335) = 2.46 \text{ cfs}$$
 (Note irrigation pump discharge is controlled to 1.87 cfs maximum by pc controller and variable speed motor drive).

Well Pump- theoretical capacity calculation (TGC):

$$Q = 550(e)(hp) / (j) (TDH)$$

$$e = .70$$

$$hp = 100$$

$$j = 62.4$$

$$TDH = 301' + 15' + 26' (\text{minor losses}) = 342'$$

$$Q = 550(.70)(100) / 62.4(342) = 1.80 \text{ cfs}$$

Irrigation Pump Station pump theoretical calculation (TGC):

$$e = .75$$

$$hp = 75$$

$$TDH = 370' (\text{station discharge pressure set} = 145 \text{ psi})$$

$$Q = 550(.75)75 / 62.4(370) = 1.34 \text{ cfs}$$

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6. Measured Pump Capacity (using meter if meter was present and system was operating)

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
852,842	852,854	15 min.	1.78 (POD #1 – HBT)
668,724	668,736	15 min.	1.78 (POD #2 – TGC)

Reminder: For pump calculations use the reference information at the end of this document.

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YES NO

7. Is the distribution system piped?

If "NO" items 8 through item 11 may be deleted.

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8. Mainline Information

MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
12 inch diameter	4500 feet	pvc	buried
10 inch diameter	800 feet	pvc	buried
8 inch diameter	3250+10,000 =13,250 feet	pvc	buried
6 inch diameter	18,800+22,960 41,760=feet	pvc	buried
4 inch diameter	400 feet	pvc	buried

9. Lateral or Handline Information

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
2 inch diameter (HBT)	68,000 feet (est)	pvc	buried
2 inch diameter (TGC)	130,000 feet (est)	pvc	buried

10. Sprinkler Information

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)
Rainbird Eagle 900 Series	60-100 psi	20-60	590 (approx.)	N/A	1.8 CFS for any combination of zones at any one time
Rainbird (model varies)	60-100 psi	7-40	2800 (approx.)	N/A	1.8 CFS for any combination of zones at any one time

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Pivot Information

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)
N/A				

12. Additional notes or comments related to the system:

As noted earlier, the Irrigation pumping system is a package system including a pc controller and variable motor drive, which allows for strict discharge control and maximum flow rates, as well as accommodating a wide variety of sprinkler and flow demands/needs.

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☒ YES ☐ NO**D. Groundwater Source Information (Well and Sump)**

1. Is the appropriation from ground water (well or sump)?

If "NO", items 2 through 8 relating to this section may be deleted.

2. Describe the access port (type and location) or other means to measure the water level in the well:

1-1/2" Schedule 40 PVC dedicated access conduit located at well-head.

3. If well logs are not available, provide as much of the following information as possible:

CASING DIAMETER	CASING DEPTH	TOTAL DEPTH	COMPLETION DATE OF ORIGINAL WELL	COMPLETION DATES OF ALTERATIONS	WHO THE WELL WAS DRILLED FOR	WELL DRILLED BY
10" (HBT)	505	532	8/14/1998	6/30/2003	Cascade Highlands LTD Partnership	Jack Abbas-Abbass Well Drilling Co.
12" (TGC)	522	522	7/24/1998	N/A	Cascade Highlands LTD Partnership	Western Water Development Corporation

4. In addition to the information requested in item "3" above, provide any other information which may help the Department locate any well logs associated with this appropriation.

DESC 51899 (original well HBT), DESC 55459 (alteration HBT), DESC 51900 (TGC)

5. Is the appropriation from a dug well (sump)?

☐ YES ☒ NO*If "NO", items 6 through 8 relating to this section may be deleted.***E. Storage**

1. Does the distribution system include in-system storage (i.e. storage tank, bulge in system / reservoir)

☒ YES ☐ NO*If "NO", item 2 and 3 relating to this section may be deleted.**If "YES" is it a:*

Storage Tank

☐ YES ☒ NO

Bulge in System / Reservoir

☒ YES ☐ NO*Complete appropriate table(s) below, unused table may be deleted.*

2. Storage Tank:

MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.)	CAPACITY (IN GALLONS)	ABOVE GROUND OR BURIED
N/A		

3. Bulge in System / Reservoir:

RESERVOIR NAME OR NUMBER (CORRESPOND TO MAP)	APPROXIMATE DAM HEIGHT	APPROXIMATE CAPACITY (IN ACRE FEET)
RES #1 (HBT)	9-FEET	9.0-ACRE FEET
RES #2 (TGC-1)	9-FEET	9.0 ACRE FEET
RES #3 (TGC-2)	8-FEET	8.0 ACRE FEET

F. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES ☒ NO

If "NO", items 2 through 4 relating to this section may be deleted.

G. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

YES ☒ NO

If "NO", items 2 through 4 relating to this section may be deleted.

H. Reservoir

1. Does the claim involve a reservoir modified through a transfer?

YES ☒ NO

Reminder: This section should only be completed if the reservoir right has been modified through the transfer process. If the claim is for a permitted reservoir use the Claim of Beneficial Use form for reservoirs.

If "NO", items 2 through 9 relating to this section may be deleted.

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SECTION 3

CONDITIONS

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Please pay special attention to this section. All conditions contained in the permit, permit amendment, transfer final order, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits, transfer final orders, and any extension final orders contain any or all of the following dates; the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use is to be completed by. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit, extension or transfer final order:

	DATE FROM PERMIT OR TRANSFER	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	June 19, 1996		
BEGIN CONSTRUCTION (A)	June 19, 1997	July 20, 1998 (well desc 51899)	Geotechnical engineering and well design for the well was complete in the time limit.
COMPLETE CONSTRUCTION (B)	October 1, 2013	October 1, 2013	Construction of wells, pumps, storage, and irrigation systems to put the water to beneficial use has been completed.
COMPLETE APPLICATION OF WATER (C)	October 1, 2013	October 1, 2013	

* MUST BE WITHIN PERIOD BETWEEN PERMIT, TRANSFER FINAL ORDER, OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

2. Is there an extension final order(s)?

YES NO

If "NO", you may delete item 3 in this section.

3. If for a transfer extension order, provide the following information:

VOLUME	PAGE	DATE EXTENDED TO

4. Initial Water Level Measurements:

a. Was the water user required to submit an initial static water level measurement?

YES NO

If "NO", items 4b through 4d relating to this section may be deleted.

b. What month was the initial measurement to be taken in?

March

c. Was the measurement submitted to the Department?

YES NO

d. If the initial measurement was not submitted, provide that measurement now, if available:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT
Previously Submitted			

5. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements?

☒ YES ☐ NO

If "NO", items 5b through 5e relating to this section may be deleted.

b. Provide the month in which the static water level measurement was to be made:

March

c. Were the static water level measurements taken in the month required?

☒ YES ☐ NO

d. If "YES", were those measurements submitted to the Department?

☒ YES ☐ NO

e. If the annual measurements were not submitted, provide the measurements now:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT
Previously Submitted			

6. Pump Test (Required for most ground water permits prior to issuance of a certificate)

a. Did the permit require the submittal of a pump test?

☒ YES ☐ NO

If "NO", items 6b through 6d relating to this section may be deleted.

b. Has the pump test been previously submitted to the Department?

☒ YES ☐ NO

c. Is the pump test attached to this claim?

☒ YES ☐ NO

d. Has the pump test been approved by the Department?

☒ YES ☐ NO

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7. Measurement Conditions:

a. Does the permit, permit amendment, transfer final order, or any extension final order require the installation of a meter or approved measuring device?

☒ YES ☐ NO

If "NO", items 7b through 7f relating to this section may be deleted.

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion or appropriation.

b. Has a meter been installed?

☒ YES ☐ NO

c. Meter Information

POD/POA NAME OR #	MANUFACTURER	SERIAL #	CONDITION (WORKING OR NOT)	CURRENT METER READING	DATE INSTALLED
POD#1	Water Specialties	20033059-8	Working	852,854	August 2003
POD #2	Sensus	67419456	Working	668,736	July 2006

d. If a meter has not been installed, has a suitable measuring device been installed and approved by the Department?

☒ N/A ☐ YES ☐ NO

SECTION 4 VARIATIONS

Include a description of variations from the permit, permit amendment final order, extension final order, or transfer final order. (i.e. *"The permit allowed three points of diversion. The water user only developed one of the points."* or *"The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres."*)

SECTION 5 ATTACHMENTS

If you are attaching any documents to this report, provide a list:

ATTACHMENT NAME	DESCRIPTION
Well Report DESC 51899	Original well log- POD #1
Well Report DESC 55459	Well modification report- POD #1
Well Report DESC 51900	Original well log – POD #2

SECTION 6 CLAIM SUMMARY

POD / POA NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
POD #1	1.875 cfs	2.37 cfs	1.78 cfs	irrigation	150	135
POD #2	1.875 cfs	1.8 cfs	1.78 cfs	irrigation	150	150

SECTION 7 CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

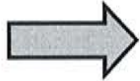
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Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

**Aerial OrthoPhotography with survey ground control and 1.0-foot pixel resolution obtained in September 2010 was used to prepare the claim of beneficial use map. Source of orthographic aerial photograph is 3Di West (GeoTerra Mapping Group). Survey Ground Control set by D'Agostino Parker LLC, Keith Dagostino PLS 2885.
Photograph/flight date: September 2, 2010.
3Di West Job #10-106.**



Map Checklist

Please be sure that the map you submit includes ALL the items listed below.
(Reminder: Incomplete maps and/or claims may be returned.)

- ☒ Map on polyester film.
- ☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- ☒ Township, Range, Section, Donation Land Claims, and Government Lots
- ☒ If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- ☒ Locations of fish screens, fish by-pass devices, meters and measuring devices in relationship to point of diversion or appropriation.
- ☒ Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
- ☒ Point(s) of diversion or appropriation (illustrated and coordinates)
- ☒ Tax lot boundaries and numbers
- n/a** Source illustrated if surface water
- ☒ Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- ☒ Application and permit number or transfer number
- ☒ North arrow
- ☒ Legend
- ☒ CWRE stamp and signature

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SECTION 8 SIGNATURES

CWRE Statement, Seal and Signature

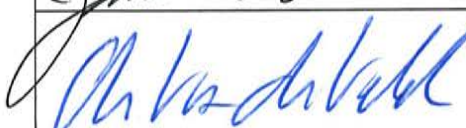
The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



CWRE NAME Keith Dagostino		PHONE NO. 541.322.8807	ADDITIONAL CONTACT NO.
ADDRESS 185 SW Shevlin Hixon Drive, Suite 101			
CITY Bend	STATE OR	ZIP 97702	E-MAIL kdagostino@dp2llc.com

Permit or Transfer Holder's of Record Signature or Acknowledgement

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	DATE
	Highlands at Broken Top Community Association co/Bogdan Dziurzynski	9/23/14
	Tetherow Golf Course LLC co/Chris Van Der Velde	9/19/14

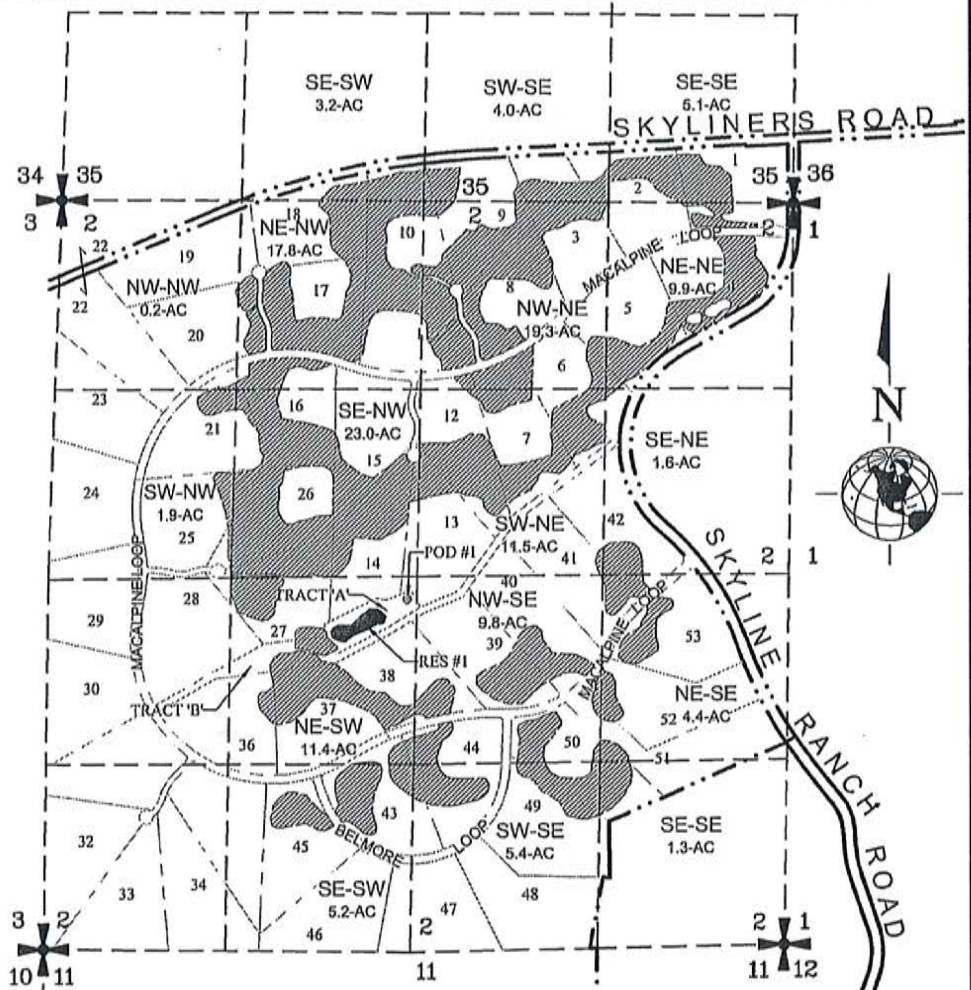
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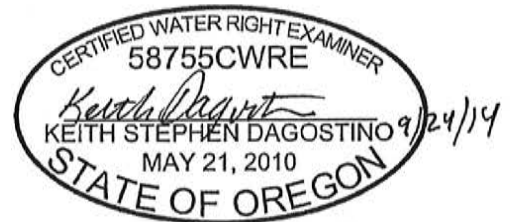
HIGHLANDS AT BROKEN TOP

LOT #	TAXLOT
1	17-11-35-D0-00100
2	17-11-35-D0-00200
3	18-11-02-A0-00100
4	18-11-02-A0-01200
5	18-11-02-A0-01100
6	18-11-02-A0-01000
7	18-11-02-A0-00900
8	18-11-02-A0-00200
9	18-11-02-A0-00300
10	18-11-02-A0-00400
11	18-11-02-A0-00500
12	18-11-02-A0-00800
13	18-11-02-A0-00700
14	18-11-02-B0-00900
15	18-11-02-B0-00800
16	18-11-02-B0-00700
17	18-11-02-B0-00100
18	18-11-02-B0-00200
19	18-11-02-B0-00300
20	18-11-02-B0-00400
21	18-11-02-B0-00600
22	18-11-02-B0-01500
23	18-11-02-B0-01400
24	18-11-02-B0-01300
25	18-11-02-B0-01100
26	18-11-02-B0-01000
27	18-11-02-C0-00200
28	18-11-02-C0-00300
29	18-11-02-C0-00800
30	18-11-02-C0-00900
31	18-11-02-C0-01000
32	18-11-02-C0-01100
33	18-11-02-C0-01200
34	18-11-02-C0-01300
35	18-11-02-C0-01400
36	18-11-02-C0-00600
37	18-11-02-C0-00500
38	18-11-02-C0-01900
39	18-11-02-D0-00400
40	18-11-02-D0-00200
41	18-11-02-D0-00100
42	18-11-02-A0-01400
43	18-11-02-C0-01800
44	18-11-02-D0-00600
45	18-11-02-C0-01500
46	18-11-02-C0-01600
47	18-11-02-D0-00700
48	18-11-02-D0-00800
49	18-11-02-D0-00900
50	18-11-02-D0-01000
51	18-11-02-D0-01100
52	18-11-02-D0-01200
53	18-11-02-D0-01300
TRACT 'A'	18-11-02-C0-00100
TRACT 'B'	18-11-02-C0-00400



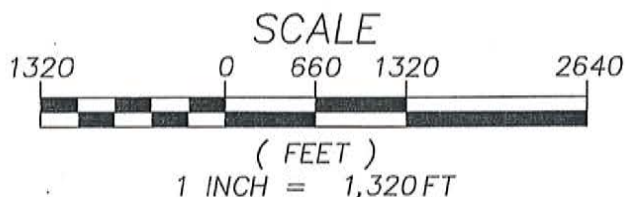
LEGEND

- RIGHT OF WAY LINE
- - - SECTION LINE
- - - TAXLOT - PROPERTY LINE
- AREA OF BENEFICIAL USE



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SEP 30 2014



DISCLAIMER:
THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS
OR LOCATIONS OF PROPERTY OWNERSHIP LINES

SHEET:

1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 9/9/14
PLOT DATE: 9/9/14

SCALE:
1"=1320'

CLAIM OF BENEFICIAL USE MAP FOR ASSIGNMENT OF PERMIT G-12494 (APPLICATION #: 12971)

Township 17 and 18 South, Range 11 East
BEND/DESCHUTES OREGON
PROJECT: HBT001
DRAWING FILE NAME: HBT001_AERIAL



D'Agostino Parker, LLC

CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR, SUITE 101
BEND, OR 97702
P: (541) 322-8807

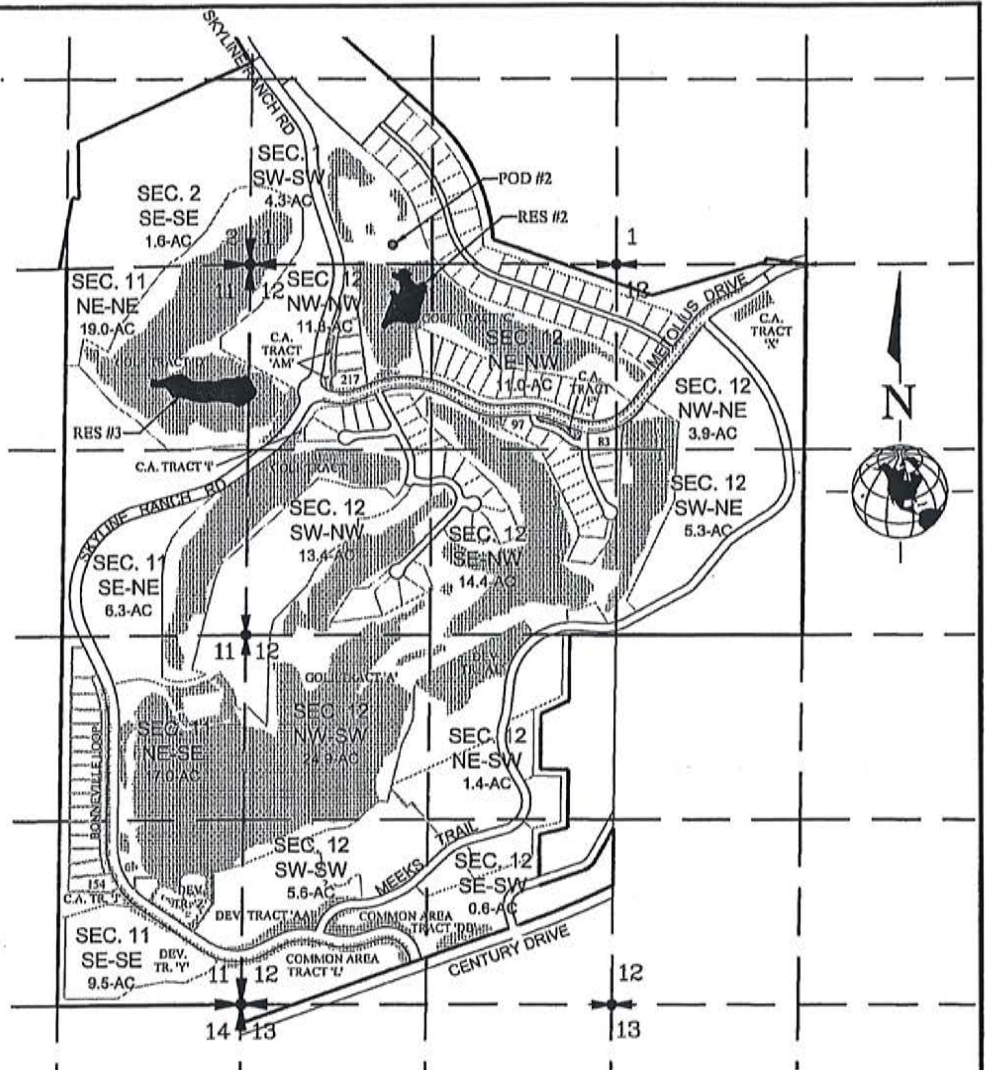
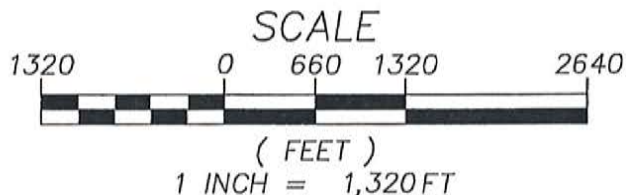
TETHEROW GOLF COURSE

LEGAL LOT	TAXLOT
GOLF TRACT 'A'	18-11-11-00-00500
	18-11-12-00-01700
GOLF TRACT 'B'	18-11-11-00-00400
	18-11-12-00-01500
GOLF TRACT 'C'	18-11-01-C0-17000
	18-11-12-00-01300
GOLF TRACT 'D'	18-11-11-00-00100
DEV. TRACT 'AA'	18-11-11-DD-00100
	18-11-12-00-02100
DEV. TRACT 'Y'	18-11-11-DD-00300
DEV. TRACT 'Z'	18-11-11-DD-00200
C.A. TRACT 'A'	18-11-12-CA-02100
C.A. TRACT 'AM'	18-11-12-BB-01500
C.A. TRACT 'DB'	18-11-12-00-02300
C.A. TRACT 'F'	18-11-12-BA-03800
C.A. TRACT 'I'	18-11-12-BB-00200
C.A. TRACT 'J'	18-11-11-DD-00500
C.A. TRACT 'L'	18-11-12-00-02200
	18-11-11-DD-00400
C.A. TRACT 'X'	18-11-12-00-00900
LOT 83	18-11-12-BA-03900
LOT 97	18-11-12-BA-03400
LOT 154	18-11-11-DD-01000
LOT 217	18-11-12-BB-01600

LEGEND

DEV.	DEVELOPMENT
TR.	TRACT
C.A.	COMMON AREA
POD	POINT OF DIVERSION
RES.	RESERVOIR
AC	ACRES
---	RIGHT OF WAY LINE
---	SECTION LINE
---	TAXLOT - PROPERTY LINE
	AREA OF BENEFICIAL USE

TOTAL AREA OF
BENEFICIAL USE = 150 ACRES



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RENEWES: DEC. 31, 2015

DISCLAIMER:
THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS
OR LOCATIONS OF PROPERTY OWNERSHIP LINES

SHEET:
1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 9/9/14
PLOT DATE: 9/9/14

SCALE:
1"=1320'

CLAIM OF BENEFICIAL USE MAP FOR ASSIGNMENT OF PERMIT G-12494 (APPLICATION #: 12971)

Township 17 and 18 South, Range 11 East
BEND/DESCHUTES OREGON

PROJECT:
TGC001

DRAWING FILE NAME:
TGC001-WTR_RIGHTS-032911



D'Agostino Parker, LLC

CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR. SUITE 101
BEND, OR 97702
P: (541) 322-8807

APPENDIX A
 Highlands at Broken Top and Tetherow Golf
 Owners of Record 9/24/2014

Highlands at Broken Top

Lot #	Taxlot	Owner of Record
1	17-11-35-D0-00100	Weston Investment Co LLC
2	17-11-35-D0-00200	Kyriakos, James Dean and Michelle
3	18-11-02-A0-00100	RKL LLC
4	18-11-02-A0-01200	Davidson Family Trust
5	18-11-02-A0-01100	FC Fund LLC
6	18-11-02-A0-01000	Hardin, Timothy M and Caren M
7	18-11-02-A0-00900	ARGO Capital Group LTD
8	18-11-02-A0-00200	Zehnder, Werner and Susan
9	18-11-02-A0-00300	Bien, Rodney W and Kathryn W
10	18-11-02-A0-00400	Bledsoe, Drew and Maura
11	18-11-02-A0-00500	Thomas E Strange Rev Trust ETAL
12	18-11-02-A0-00800	Ryan, Michael G and Moore, Kathleen R
13	18-11-02-A0-00700	Wright, Kenton D
14	18-11-02-B0-00900	Sandgren Living Trust
15	18-11-02-B0-00800	Steelhammer, Geoffrey G and Brandy R
16	18-11-02-B0-00700	Durkin, David A and Mardi L
17	18-11-02-B0-00100	Johnson, Kenneth Jeffrey ETAL
18	18-11-02-B0-00200	Charno, John and Sandra
19	18-11-02-B0-00300	Wickham, Douglas John ETAL
20	18-11-02-B0-00400	Bryand, Andy D and Nancy K
21	18-11-02-B0-00600	Dostal, Kevin Jay and Tamara
22	18-11-02-B0-01500	Breyman Properties LLC
23	18-11-02-B0-01400	Dryden, Jeff and Dryden, Mike
24	18-11-02-B0-01300	Allen, James P and Brenda Scarlett
25	18-11-02-B0-01100	Brooks and Sheri Hilton Joint Trust
26	18-11-02-B0-01000	NTC & Co LLP FBO Patrick L Radecki IRA
27	18-11-02-C0-00200	Lea A Dziurzynski Rev Trust ET AL
28	18-11-02-C0-00300	Azur, Bryan and Angela
29	18-11-02-C0-00800	Van Velzen, Femke
30	18-11-02-C0-00900	Warta Family Trust
31	18-11-02-C0-01000	Equinox Holdings LTD
32	18-11-02-C0-01100	Valentine Revocable Trust
33	18-11-02-C0-01200	Douglas F Berry MD Profit ET AL Trust
34	18-11-02-C0-01300	Farver Benjamin and Meaghan
35	18-11-02-C0-01400	M Louis Pengue JR Rev Trust ETAL
36	18-11-02-C0-00600	Jones, Tracy A and Tammy J
37	18-11-02-C0-00500	Denson Investments LLC
38	18-11-02-C0-01900	Lovejoy, Winfield Scott III and Kristy Marie
39	18-11-02-D0-00400	Zidek Family QSST Trust FBO Brian P Zidek

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40	18-11-02-D0-00200	Fox, Matthew Chandler and Margherita
41	18-11-02-D0-00100	Worthington, Roger G
42	18-11-02-A0-01400	Moore, Gary L and Kelly C
43	18-11-02-C0-01800	Egeland, Daniel E
44	18-11-02-D0-00600	Fourneir, Bruce R and Joanne E
45	18-11-02-C0-01500	Butterworth Family Rev Trust
46	18-11-02-C0-01600	Laakmann Living Trust
47	18-11-02-D0-00700	Laakmann Living Trust
48	18-11-02-D0-00800	Todd Allen Craig
49	18-11-02-D0-00900	Potter Michael J and Tressi L
50	18-11-02-D0-01000	Linda G Storch Revocable Trust
51	18-11-02-D0-01100	Lilly, Albert Jackson III and Soma I
52	18-11-02-D0-01200	Tucker Family Revocable Trust
53	18-11-02-D0-01300	2004 Herold Family Trust
Tract 'A'	18-11-02-C0-00100	Cascade Highlands LLC
Tract 'B'	18-11-02-C0-00400	Highlands At Broken Top Comm Assoc Inc

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Tetherow Golf

Lot #	Taxlot	Owner of Record
Golf Tract 'A'	18-11-11-00-00500	Tetherow Golf Course LLC
	18-11-12-00-01700	Tetherow Golf Course LLC
Golf Tract 'B'	18-11-11-00-00400	Tetherow Golf Course LLC
	18-11-12-00-01500	Tetherow Golf Course LLC
Golf Tract 'C'	18-11-01-C0-17000	Tetherow Golf Course LLC
	18-11-12-00-01300	Tetherow Golf Course LLC
Golf Tract 'D'	18-11-11-00-00100	Tetherow Golf Course LLC
Dev. Tract 'AA'	18-11-11-DD-00100	Weston Investment Co LLC
	18-11-12-00-02100	Weston Investment Co LLC
Dev. Tract 'Y'	18-11-11-DD-00300	VRE Tract Y LLC
Dev. Tract 'Z'	18-11-11-DD-00200	Tetherow Golf Course LLC
C.A. Tract 'A'	18-11-12-CA-02100	Weston Investment Co LLC
C.A. Tract 'AM'	18-11-12-BB-01500	SFI Cascade Highlands LLC
C.A. Tract 'DB'	18-11-12-00-02300	Arrowood Tetherow LLC
C.A. Tract 'F'	18-11-12-BA-03800	SFI Cascade Highlands LLC
C.A. Tract 'I'	18-11-12-BB-00200	SFI Cascade Highlands LLC
C.A. Tract 'J'	18-11-11-DD-00500	SFI Cascade Highlands LLC
C.A. Tract 'L'	18-11-12-00-02200	Arrowood Tetherow LLC
	18-11-11-DD-00400	Arrowood Tetherow LLC
C.A. Tract 'X'	18-11-12-00-00900	Tetherow Glen 58 LLC
Lot 83	18-11-12-BA-03900	Yelas Developments INC
Lot 97	18-11-12-BA-03400	Harris, John and Alma Ruth
Lot 154	18-11-11-DD-01000	SFI Cascade Highlands LLC
Lot 217	18-11-12-BB-01600	Alexander, Scott and Tricia

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SALEM, OR

STATE OF OREGON
WATER SUPPLY WELL REPORT

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form

DESC 51899

WELL ID # 112814 23814

(START CARD) # 102029

(1) OWNER: Well Number: CH2
Name: Cascade Highlands Ltd. Partnership
Address: P.O. Box 80054
City: Portland State OR Zip: 97208 97200

(2) TYPE OF WORK:
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 507 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE				SEAL				Amount
Diameter	From	To	Material	From	To	Material	From	To
17.5"	0	507	Cement	0	285			236 Sacks

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:								
Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded	
Casing: 12"	+1	378	.250	☒	☐	☒	☐	
12"	378	504	.375	☒	☐	☒	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
Liner:				☐	☐	☐	☐	
				☐	☐	☐	☐	

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:								
☒ Perforations	Method	Factory						
☐ Screens	Type							
	Slot	Size	Number	Diameter	Tele/pipe	Size	Casing	Liner
From	To							
378	504	3/16"	3024	12"	Pipe		☒	☐
							☐	☐
							☐	☐
							☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian
Yield gal/min Drawdown Drill stem at Time
1000 20' +/- 1hr.

Temperature of Water 54 Depth Artesian Flow found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use?
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County Deschutes Latitude Longitude
Township 18S N or S. Range 11E E or W. of WM.
Section 2 1/4 1/4
Tax Lot 100 R1 Lot Block Subdivision BroknTop
Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:
301 ft. below land surface. Date 8/14/98
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:			
Depth at which water was first found	308		
From	To	Estimated Flow Rate	SWL
308	497	3000+	

(12) WELL LOG:			
	Ground elevation		
Material	From	To	SWL
Brown Sandy Top Soil	0	3	
Boulders	3	18	
Brown & Pink Pumice	18	29	
Lt. Blue Gray Basalt	29	33	
Cement Grout 4 yds. from 6'-33'	33	33	
Lt. Blue Gray Basalt	33	54	
Brown Volcanics	54	64	
Gray Basalt	64	114	
Brown & Red Cinders	114	126	
Gray & Black Basalt & Cinders	126	140	
Lt. Gray Ash (Firm)	140	156	
Hard Gray Basalt	156	210	
Lt. Gray Ash	210	219	
Hard Gray Basalt	219	233	
Brown Ash & Basalt	233	246	
Gray Basalt with Ash	246	296	
Lt. Gray Volcanic Tuft	296	308	
Brown Conglomerate WB	308	420	301
Broken Basalt WB	420	433	301
Red Cinder Rock WB	433	450	301
Brown & Red Conglomerate WB	450	475	301
Brown & Gray Basalt WB	475	497	301
Hard Gray Basalt	497	507	301

Date started 7/20/98 Completed 8/14/98

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.
Signed _____ WWC Number _____ Date _____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
Signed Robert Buchner WWC Number 1385 Date 9/6/98
Western Water Development Corporation

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER

RECEIVED BY OWRD WATER RESOURCES DEPT SALEM, OREGON

SEP 30 2014

SALEM, OR

Instructions for completing this report are on the last page of this form

DESC
51900

(START CARD) # 102027

Page 2

Well Number:

Address

City	State	Zip
-------------	--------------	------------

☐ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

☐ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

Special Construction approval ☐ Yes ☐ No Depth of Completed Well _____ ft.
Explosives used ☐ Yes ☐ No Type _____ Amount _____

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds

☐ Other

Backfill placed from	ft. to	ft.	Material
----------------------	--------	-----	----------

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s)

☐ Perforations Method _____

☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Telo/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

☐ Pump ☐ Bailer ☐ Air ☐ Flowing
Artesian

Yield gal/min	Drawdown	Drill stem at	Time
---------------	----------	---------------	------

Temperature of Water	Depth Artesian Flow found
----------------------	---------------------------

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

County _____ Latitude _____ Longitude _____
Township **18S** N or S. Range **11E** E or W. of WM.
Section **12** $\frac{1}{4}$ $\frac{1}{4}$
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

_____ ft. below land surface. Date _____

Artesian pressure _____ lb. per square inch. Date _____

Depth at which water was first found

From	To	Estimated Flow Rate	SWL

Ground elevation

[illegible]

Date started	Completed
--------------	-----------

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Robert Buck WWC Number 1385
Date 9-6-98
Western Water Development Corporation

DESC 55459

DESC 55459

DESC

Received Date: 07-14-2003

Well ID Tag # L 23814

Start Card # 156243

STATE OF OREGON Water Supply Well Report

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

(1) Owner

Well Number: 2

Name:

CASCADE HIGHLANDS LTD

Street: 61999 BROKENTOP DR

City: BEND

State: OR Zip Code: 97702

(2) Type of Work

- ☐ New ☐ Alter (Recondition) ☒ Alter (Repair)
☐ Deepening ☐ Abandonment

(3) Drill Method

- ☒ Rotary Air ☐ Rotary Mud ☒ Cable ☐ Auger
 Other:

(4) Proposed Use

- ☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation ☐ Injection
☐ Livestock ☐ Thermal Other:

(5) Bore Hole Construction

- ☐ Special Standards: Depth of completed well: 532.00 ft.
☐ Explosives Used: Amount: Type:

Hole			Seal		
Diameter	From	To	Mtrl	From	To
10.00	505.00	532.00			

How was seal placed?

Other: DID NOT DISTURB

Back fill placed from:

Material:

Filter pack from:

Size:

(6) Casing / Liner

Csng/ Liner	Diameter	From	To	Gauge	Mtrl	Weld	Thrd	Shoe at	Shoe used
C	10.00	2.00	505.00	.250	S	X		505	In

(7) Perforation / Screens

Perforations:

Csng/

Mtrl From To Width Height #Slots Dia. t/pSize Lnr Method

Screens:

Mtrl From To S Size #Slots Dia. t/pSize Type Gauge

(8) Well Tests (Minimum testing time is one hour)

Type	Yield	Units	Drawdown	Stem at	Duration
A	1000.00	G		530.00	1.00

Temperature of Water: 47 F

Was water analysis done? ☐

Depth of artesian flow:

by whom?

Did any strata contain water unsuitable for use? ☐ Too Little ☐ Salty☐ Muddy ☐ Odor ☐ Colored other:

Depth of strata:

(9) Location of Hole by legal description

County: DESC

Latitude: 44°2'23"

Longitude: 121°22'43"

Township: 1000 S 185

Range: 11.00 E

Section: 2 NESW

Lot:

Block:

Tax Lot: 100

Subdivision: BROKENTOP

Street Address of Well (or nearest address):

NA

NOT YET ASSIGNED

MAP, with location identified, must be attached.

(10) Static Water Level

Feet below land surface: 347.0

Date: 06 / 30 / 2003

Artesian Pressure:

Date:

(11) Water Bearing Zones

Depth at which water was first found: 505.00 ft.

From	To	est Flow	swl
505.00	532.00	1000.00	347

(12) Well Log

Ground Elevation: 3797 ft.

Material	From	To	swl
BEGINNING SWL 347	0.00	0.00	
FRAC BASALT/LAVA GRAY RED	505.00	532.00	347
RAN 10" CASING	0.00	0.00	
TO SHUT OFF SAND	0.00	0.00	
TAG NUMBER ON WELL DOES NOT	0.00	0.00	
MATCH TAG NUMBER ON	0.00	0.00	
DESC51899 WELL LOG	0.00	0.00	

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WATER RESOURCES DEP.
SALEM, OREGON

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SALEM, OR

Date Started: 06 / 18 / 2003

Date Completed: 06 / 30 / 2003

(unbonded) Water Well Constructor Certification:

I certify that the work I perform on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

Signed by: THOMAS R PECK

WWC #: 758

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed by: JACK ABBAS

WWC #: 1720

ABBAS WELL DRILLING CO

Phone: 541-548-2787

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)
Instructions for completing this report are on the last page of this form

SEP 16 1998

WELL ID # **L12815**
(START CARD) # **102027**

(1) OWNER:

Well Number: **CH1**

Name **Cascade Highlands Ltd. Partnership**
Address **P.O. Box 80054**
City **Portland** State **OR** Zip **97280**

(2) TYPE OF WORK:

☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well **522** ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
17.5"	0	548	Cement	0	285	176 Sacks

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	12"	+1	362	.250	☒	☐	☒	☐
	12"	362	522	.375	☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

☒ Perforations Method **Factory**
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
362	522	3/16"	3840			☒	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour

☒ Pump ☐ Bailor ☐ Air ☐ Flowing
Artesian

Yield gal/min **1000** Drawdown **22** Drill stem at **24 hr.** Time

Temperature of Water **54** Depth Artesian Flow found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☒ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata: **286**

WATER RESOURCES DEPT
SALEM, OREGON

LEGAL DESCRIPTION OF WELL by legal description:

County **Deschutes** Latitude Longitude
Township **18S** N or S. Range **11E** E or W. of WM.
Section **12** NW $\frac{1}{4}$ NW $\frac{1}{4}$
Tax Lot **10R** Lot Block Subdivision **Broken Top**
Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:

301 ft. below land surface. Date
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found

From	To	Estimated Flow Rate	SWL
286	289	25+	286
302	542	3000	302

(12) WELL LOG:

Ground elevation

Material	From	To	SWL
Brown Sandy Soil	0	6	
Brown Sand & Ash	6	9	
Brown Ash Tuft	9	19	
Gray Ash Tuft	19	25	
Gray Basalt	25	110	
Red Volcanic Conglomerate	110	132	
Brown Ash & Basalt	132	180	
Hard Gray Basalt	180	191	
Brown Ash & Basalt	191	195	
Red Cinder Conglomerate	195	226	
Black Cinder Rock	226	248	
Brown Ash & Basalt	248	266	
Broken Gray Basalt WB	266	269	266
Broken Gray Basalt	269	305	266
20 cyds Cement Grout 93' to 302	306	306	266
Medium Brown Ash WB	306	324	266
Red Volcanic Conglomerate WB	324	332	266
Hard Gray Broken Basalt WB	332	369	266
Brown & Red Volcanics WB	369	402	266
Hard Gray Volcanics WB	402	426	266
Lost Circulation	426	430	266
Red & Brown Cinders WB	430	443	266
Hard Gray Broken Basalt WB	443	469	266
Soft Brown Volcanics WB	469	510	266
Continued on next page			

Date started **6/29/98** Completed **7/24/98**

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed **Robert Buckner** WWC Number **1385**
Date **9-6-98**
Western Water Development Corporation

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER

SEP 30 2014

SALEM, OR

Completion Checklist for Claims of Beneficial Use

Application # G12971
Date Received 9/30/2014
CWRE Name Keith Dargastino
File Marked ✓
Oversized Map #
Reviewer C.U.

Transfer #
Claim Logged ✓

*Revised Claim
Submitted
12/1/2014*

Map Review:

- No Map on polyester film (OAR 690-014-0170(1) & 310-0050(1)(b))
Application & permit #; or transfer # (OAR 690-014-0100(1))
Disclaimer (OAR 690-014-0170(5))
North arrow (OAR 690-310-0050(2)(c))
CWRE stamp and signature (OAR 690-014 & 310-0050)
Appropriate scale (1" = 1320', 1" = 400', or the original full-size scale of the county assessor map) (014 & 310)
Township, range, section, and tax lot numbers (OAR 690-310-0050(4))
Source illustrated if surface water (OAR 690-014-0170(3))
Point(s) of diversion or appropriation (illustrated) (OAR 690-014(4) & 690-310-0050)
No Point(s) of diversion or appropriation (coordinates) (OAR 690-014(4) & 690-310-0050)
No Conveyance structures illustrated (pump, pipelines, ditches, etc.) (OAR 690-310-0050)
Description of the location, in relation to the point of diversion or appropriation, of any fish screens, by-pass devices, and measuring devices required (OAR 690-014-0170(4))
Place of use (1/4 1/4, or projected 1/4 1/4 lines within DLCs, or Gov Lots; if irrigation; # of acres in each subdivision; if for domestic or human consumption, location of dwelling or spigot) (OAR 690-310-0050, 690-014, 690-380-6010)

Report Review:

- ✓ On form or format provided by the Department (OAR 690-014-0100(1)) *ok DE*
✓ Application & permit #; or transfer # (OAR 690-014)
Ownership information (OAR 690-014) *3 owners only 2 listed*
✓ Date of survey (OAR 690-014) *only 2 permit holders*
Person interviewed (OAR 690-014)
County (OAR 690-014)
Description of conveyances system (from POD to POU) (OAR 690-014-0100)
Source(s) of water (OAR 690-014-0100)
Place of use location (OAR 690-014-0100)
Type of use (OAR 690-014-0100)
Extent of use (OAR 690-014-0100)
Rate and Duty (OAR 690-014-0100)
Diversion rate for each use (OAR 690-014-0100)
Diversion works description (pump make, serial model, capacity, and description) (OAR 690-014-0100)
System capacity (OAR 690-014-0100)
Calculated capacity of system (required)
Measured amount of use (optional)
Permit/Transfer Final Order Conditions (OAR 690-014-0100)
Time limits
Initial water level measurements
Annual static water level measurements
Measurement, recording, and reporting
Meter/measuring device
Water use reporting
Fish screening and/or by-pass
Pump test (ground water)
Other conditions

✓ CWRE stamp and signature (OAR 690-014-0100)

OK Signature(s) of permittee of transfer holder (OAR 690-014-0100) *partial need sig from*
Accounting Approval Developer

DEF = deficient

N/A = Not Applicable

S:\groups\wr\certs\Resource Center\Forms_Checklists_Mailing Instructions\COBU Checklist 11-20-2012.rtf

Certificate Issuance Processing Checklist

_____ Map and COBU reviewed
_____ Conflict check Any Conflicts? _____
_____ Check for ownership

Check Area of Interest ☐ YES ☐ NO

Identified Party _____

Staff Recommendations:

_____ Proof to the Satisfaction has been established to the full extent as described in the permit or transfer order.

_____ Proof to the Satisfaction has been not been established to the full extent as described in the permit or transfer order and the right should be limited as follows: _____

_____ Proof to the Satisfaction has not been established for the following reasons: _____

_____ **Proposed Actions:**
Send letter requesting the following items/information: _____
Send letter recommending extension to cure deficiencies: _____

Can certificate be processed further?

_____ Yes

If "Yes":

_____ Proposed
_____ Final

Certificate # _____

Mailing list:

Proposed:

Final:

**CLAIM OF
BENEFICIAL USE
for Permits claiming more
than 0.1 cfs and All Transfers**



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**A fee of \$150 must accompany this form to be accepted for permits
with a priority date of July 9, 1987, or later. (ORS 536.050(1))**

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:
http://www.wrd.state.or.us/OWRD/WR/cwre_info.shtml#.

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

If you have questions regarding the completion of this form, please call 503-986-0900 and ask for the Certificate Section.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see http://www.wrd.state.or.us/OWRD/mgmt_reimbursement_authority.shtml.

**SECTION 1
GENERAL INFORMATION**

1. File Information

APPLICATION # (G, R, S OR T)	PERMIT # (IF APPLICABLE)	PERMIT AMENDMENT # (IF APPLICABLE)
G-12971	G-12494	T-9625

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2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME Highlands at Broken Top Community Association co/Stephen Herr		PHONE NO. 541 318-3430	ADDITIONAL CONTACT NO.
ADDRESS 855 SW Yates Drive Suite 102			
CITY Bend	STATE OR	ZIP 97702	E-MAIL gmbtca@brokentop.org

APPLICANT/BUSINESS NAME Tetherow Golf Course LLC co/Chris Condon		PHONE NO. 541 388-2626	ADDITIONAL CONTACT NO.
ADDRESS 61240 Skyline Ranch Road			
CITY Bend	STATE OR	ZIP 97701	E-MAIL ccondon@tetherow.com

If the current property owner is not the permit or transfer holder of record, it is recommended that an assignment be filed with the Department. **The COBU must be signed by the permit or transfer holder of record.**

3. Is the Property Owner the permit or transfer holder of record?

YES NO

If "YES" the remainder of this item may be deleted.

Permit or transfer holder of record (this may, or may not, be the current property owner)

PERMIT OR TRANSFER HOLDER OF RECORD Highlands at Broken Top Community Association co/Stephen Herr		
ADDRESS 855 SW Yates Drive Suite 102		
CITY Bend	STATE OR	ZIP 97702

Are there additional permit or transfer holders of record?

YES NO

If "NO" the following box may be deleted.

ADDITIONAL PERMIT OR TRANSFER HOLDER OF RECORD Tetherow Golf Course LLC		
ADDRESS 61240 Skyline Ranch Road		
CITY Bend	STATE OR	ZIP 97701

4. Date of Site Inspection: **9-23-14**

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
Stephen Herr	9-23-14	Manager, Highlands at Broken Top CA
Ron Kidder, Botanical Dev.	01-10-11	Landscape/irrigation designer-contractor
Chris Condon	9-22-14	Manager, Tetherow Golf Course LLC irrigation system

6. County: **Deschutes**

7. If any property described in the place of use of the permit or transfer final order is excluded from this report, identify the owner of record for that property (ORS 537.230(4)):

****Mark "NA" if there are no owners of property not included in this claim**

OWNER OF RECORD		
NA		
ADDRESS		
CITY	STATE	ZIP

Are there additional Owners of Record?

YES NO

Additional Owners of Record are listed in Appendix A included with this form, per e-mail dated Sept. 4, 2013 by Gerry Clark, Water Rights Services Division, OWRD.

SECTION 2 SYSTEM DESCRIPTION

A. Points of Diversion/Appropriation

1. Point of diversion/appropriation name or number:

POINT OF DIVERSION/APPROPRIATION (POD/POA) NAME OR NUMBER (CORRESPOND TO MAP)	WELL LOG ID # FOR ALL WORK PERFORMED ON THE WELL (IF APPLICABLE)	WELL TAG # (IF APPLICABLE)
POD 1 (HBT)	DESC 51899, DESC 55459	L 23814
POD 2 (TGC)	DESC 51900	L 23815

Attach each well log available for the well (include the log for the original well and any subsequent alterations, reconstructions, or deepenings)

2. Point of diversion/appropriation source and, if from surface water, the tributary:

POD/POA NAME OR NUMBER	SOURCE	TRIBUTARY
POD 1	Deschutes Basin	N/A
POD 2	Deschutes Basin	N/A

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3. Developed use(s), period of use, and rate for each use:

POD/POA NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	RATE OR VOLUME FOR USE (CFS, GPM, OR AF)
POD 1	Irrigation	No crop - grasses	Irrigation season Typically from April to October	Varies 1.78 CFS max
POD 2	Irrigation	No crop – grasses	Irrigation season Typically from April to October	Varies 1.78 CFS max
Total Quantity of Water Used				Varies 3.6 CFS max

4. Provide a general narrative description of the distribution works. This description must trace the water system from **each** point of diversion or appropriation to the place of use:

Irrigation water is accessed via well #L23814 as noted above. The well is equipped with a vertical turbine pump. Piping from the well pump conveys water to the storage lake (Reservoir #1 on the map). A supply pipe from the storage lake conveys water to the irrigation pump station which pressurizes and supplies water to the irrigation distribution piping and irrigation sprinkler heads distributed across the irrigated lands. The well pump and the irrigation pump station are housed within the same building adjacent to the storage lake.

Irrigation water is also accessed via well #L23815 as noted above. The well is equipped with a vertical turbine pump. Piping from the well pump conveys water to the storage lake s (Reservoir #2 and Reservoir #3 on the map). A supply pipe from the storage lake conveys water to the irrigation pump station which pressurizes and supplies water to the irrigation distribution piping and irrigation sprinkler heads distributed across the irrigated lands. The well pump and the irrigation pump station are both near Reservoir #2.

SECTION 2

SYSTEM DESCRIPTION (B through H)

Are there multiple PODs or POAs?

YES NO

If "YES" you will need to copy and complete Sections 2B through 2H for each POD/POA.

POD/POA Name or Number this section describes (only needed if there is more than one):

POD 1, POD 2

B. Place of Use

1. Is the right for municipal use?

YES **NO**

If "YES" the table below may be deleted.

TWP	RNG	MER	SEC	Q-Q	GLOT	DLC	USE	IF IRRIGATION, # PRIMARY ACRES	IF IRRIGATION, # SUPPLEMENTAL ACRES
17S	11E	WM	35	SE-SW			IRR	3.2	
17S	11E	WM	35	SW-SE			IRR	4.0	
17S	11E	WM	35	SE-SE			IRR	5.1	
18S	11E	WM	2	NW-NW			IRR	0.2	
18S	11E	WM	2	NE-NW			IRR	17.8	
18S	11E	WM	2	SW-NW			IRR	1.9	
18S	11E	WM	2	SE-NW			IRR	23.0	
18S	11E	WM	2	NW-NE			IRR	19.3	
18S	11E	WM	2	NE-NE			IRR	9.9	
18S	11E	WM	2	SW-NE			IRR	11.5	
18S	11E	WM	2	SE-NE			IRR	1.6	
18S	11E	WM	2	NE-SW			IRR	11.4	
18S	11E	WM	2	SE-SW			IRR	5.2	
18S	11E	WM	2	NW-SE			IRR	9.8	
18S	11E	WM	2	NE-SE			IRR	4.4	
18S	11E	WM	2	SW-SE			IRR	5.4	
18S	11E	WM	2	SE-SE			IRR	1.3	
								135.0	SUB TOTAL
18S	11E	WM	2	SE-SE			IRR	1.6	
18S	11E	WM	1	SW-SW			IRR	4.3	
18S	11E	WM	11	NE-NE			IRR	19.0	
18S	11E	WM	11	SE-NE			IRR	6.3	
18S	11E	WM	11	NE-SE			IRR	17.0	
18S	11E	WM	11	SE-SE			IRR	9.5	
18S	11E	WM	12	NW-NW			IRR	11.8	
18S	11E	WM	12	NE-NW			IRR	11.0	
18S	11E	WM	12	NW-NE			IRR	3.9	
18S	11E	WM	12	SW-NW			IRR	13.4	
18S	11E	WM	12	SE-NW			IRR	14.4	
18S	11E	WM	12	SW-NE			IRR	5.3	
18S	11E	WM	12	NW-SW			IRR	24.9	
18S	11E	WM	12	NE-SW			IRR	1.4	
18S	11E	WM	12	SW-SW			IRR	5.6	
18S	11E	WM	12	SE-SW			IRR	0.6	
								150.0	SUB TOTAL
Total Acres Irrigated								285.0	TOTAL

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Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (Gov Lot), Quarter-Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, Gov Lot, and QQ.

C. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion/appropriation to the place of use.

1. Is a pump used?

YES NO

If "NO" items 2 through item 6 may be deleted.

2. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Robbco	9THE	23355	Vertical turbine (HBT well)	9-IN	8-IN
Cornell	3YH-CC	154918944	Centrifugal end suction (HBT booster)	8-IN	8-IN
N/A	N/A	N/A	Vertical turbine (TGC well)	8-IN	8-IN
Flowserv	10EMM-9	0610NSH00672-4	Centrifugal end suction (TGC booster)	8-IN	8-IN

3. Motor Information

MANUFACTURER	HORSEPOWER
US Motors (HBT well)	150 hp
Cornell (HBT booster)	125 hp
Emerson (TGC well)	100 hp
Emerson (TGC booster)	75 hp

4. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *If A WELL, THE WATER LEVEL DURING PUMPING	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
150		349 feet	15 feet	1.87
125	145 Psi discharge	0	Varies- 85 feet max	1.87
100		301 feet	7 feet	1.80
75				1.34

5. Provide pump calculations:

Well Pump- theoretical capacity calculation (HBT):

$$Q = 550(e)(hp) / (j) (TDH)$$

$$e = .70$$

$$hp = 150$$

$$j = 62.4$$

$$TDH = 349' + 15' + 26' (\text{minor losses}) = 390'$$

$$Q = 550(.70)(150) / 62.4(390) = 2.37 \text{ cfs}$$

(Note well pump discharge is controlled to 1.87 cfs maximum by pc controller and variable speed motor drive).

Irrigation Pump Station pump theoretical calculation (HBT):

$$e = .75$$

$$hp = 125$$

$$TDH = 335' (\text{station discharge pressure set} = 145 \text{ psi})$$

$$Q = 550(.75)125 / 62.4(335) = 2.46 \text{ cfs}$$

(Note irrigation pump discharge is controlled to 1.87 cfs maximum by pc controller and variable speed motor drive).

Well Pump- theoretical capacity calculation (TGC):

$$Q = 550(e)(hp) / (j) (TDH)$$

$$e = .70$$

$$hp = 100$$

$$j = 62.4$$

$$TDH = 301' + 15' + 26' (\text{minor losses}) = 342'$$

$$Q = 550(.70)(100) / 62.4(342) = 1.80 \text{ cfs}$$

Irrigation Pump Station pump theoretical calculation (TGC):

$$e = .75$$

$$hp = 75$$

$$TDH = 370' (\text{station discharge pressure set} = 145 \text{ psi})$$

$$Q = 550(.75)75 / 62.4(370) = 1.34 \text{ cfs}$$

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6. Measured Pump Capacity (using meter if meter was present and system was operating)

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
852,842	852,854	15 min.	1.78 (POD #1 – HBT)
668,724	668,736	15 min.	1.78 (POD #2 – TGC)

Reminder: For pump calculations use the reference information at the end of this document.

7. Is the distribution system piped?

YES NO

If "NO" items 8 through item 11 may be deleted.

8. Mainline Information

MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
12 inch diameter	4500 feet	pvc	buried
10 inch diameter	800 feet	pvc	buried
8 inch diameter	3250+10,000 =13,250 feet	pvc	buried
6 inch diameter	18,800+22,960 41,760=feet	pvc	buried
4 inch diameter	400 feet	pvc	buried

9. Lateral or Handline Information

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
2 inch diameter (HBT)	68,000 feet (est)	pvc	buried
2 inch diameter (TGC)	130,000 feet (est)	pvc	buried

10. Sprinkler Information

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)
Rainbird Eagle 900 Series	60-100 psi	20-60	590 (approx.)	N/A	1.8 CFS for any combination of zones at any one time
Rainbird (model varies)	60-100 psi	7-40	2800 (approx.)	N/A	1.8 CFS for any combination of zones at any one time

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Pivot Information

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)
N/A				

12. Additional notes or comments related to the system:

As noted earlier, the Irrigation pumping system is a package system including a pc controller and variable motor drive, which allows for strict discharge control and maximum flow rates, as well as accommodating a wide variety of sprinkler and flow demands/needs.

D. Groundwater Source Information (Well and Sump)

1. Is the appropriation from ground water (well or sump)?

☒ YES ☐ NO

If "NO", items 2 through 8 relating to this section may be deleted.

2. Describe the access port (type and location) or other means to measure the water level in the well:

1-1/2" Schedule 40 PVC dedicated access conduit located at well-head.

3. If well logs are not available, provide as much of the following information as possible:

CASING DIAMETER	CASING DEPTH	TOTAL DEPTH	COMPLETION DATE OF ORIGINAL WELL	COMPLETION DATES OF ALTERATIONS	WHO THE WELL WAS DRILLED FOR	WELL DRILLED BY
10" (HBT)	505	532	8/14/1998	6/30/2003	Cascade Highlands LTD Partnership	Jack Abbas-Abbass Well Drilling Co.
12" (TGC)	522	522	7/24/1998	N/A	Cascade Highlands LTD Partnership	Western Water Development Corporation

4. In addition to the information requested in item "3" above, provide any other information which may help the Department locate any well logs associated with this appropriation.

DESC 51899 (original well HBT), DESC 55459 (alteration HBT), DESC 51900 (TGC)

5. Is the appropriation from a dug well (sump)?

YES ☒ NO

If "NO", items 6 through 8 relating to this section may be deleted.

E. Storage

1. Does the distribution system include in-system storage (i.e. storage tank, bulge in system / reservoir)

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☒ YES ☐ NO

If "NO", item 2 and 3 relating to this section may be deleted.

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If "YES" is it a: Storage Tank

YES ☒ NO

Bulge in System / Reservoir

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☒ YES ☐ NO

Complete appropriate table(s) below, unused table may be deleted.

2. Storage Tank:

MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.)	CAPACITY (IN GALLONS)	ABOVE GROUND OR BURIED
N/A		

3. Bulge in System / Reservoir:

RESERVOIR NAME OR NUMBER (CORRESPOND TO MAP)	APPROXIMATE DAM HEIGHT	APPROXIMATE CAPACITY (IN ACRE FEET)
RES #1 (HBT)	9-FEET	9.0-ACRE FEET
RES #2 (TGC-1)	9-FEET	9.0 ACRE FEET
RES #3 (TGC-2)	8-FEET	8.0 ACRE FEET

F. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES ☒ NO

If "NO", items 2 through 4 relating to this section may be deleted.

G. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

YES ☒ NO

If "NO", items 2 through 4 relating to this section may be deleted.

H. Reservoir

1. Does the claim involve a reservoir modified through a transfer?

YES ☒ NO

Reminder: This section should only be completed if the reservoir right has been modified through the transfer process. If the claim is for a permitted reservoir use the Claim of Beneficial Use form for reservoirs.

If "NO", items 2 through 9 relating to this section may be deleted.

SECTION 3

CONDITIONS

Please pay special attention to this section. All conditions contained in the permit, permit amendment, transfer final order, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits, transfer final orders, and any extension final orders contain any or all of the following dates; the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use is to be completed by. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit, extension or transfer final order:

	DATE FROM PERMIT OR TRANSFER	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	June 19, 1996		
BEGIN CONSTRUCTION (A)	June 19, 1997	July 20, 1998 (well desc 51899)	Geotechnical engineering and well design for the well was complete in the time limit.
COMPLETE CONSTRUCTION (B)	October 1, 2013	July 31, 2013	Construction of wells, pumps, storage, and irrigation systems to put the water to beneficial use has been completed.
COMPLETE APPLICATION OF WATER (C)	October 1, 2013	July 31, 2013	

* MUST BE WITHIN PERIOD BETWEEN PERMIT, TRANSFER FINAL ORDER, OR ANY EXTENSION FINAL ORDER
ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

2. Is there an extension final order(s)?

☒ YES ☐ NO

If "NO", you may delete item 3 in this section.

3. If for a transfer extension order, provide the following information:

VOLUME	PAGE	DATE EXTENDED TO

4. Initial Water Level Measurements:

a. Was the water user required to submit an initial static water level measurement?

☒ YES ☐ NO

If "NO", items 4b through 4d relating to this section may be deleted.

b. What month was the initial measurement to be taken in?

March

c. Was the measurement submitted to the Department?

☒ YES ☐ NO

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d. If the initial measurement was not submitted, provide that measurement now, if available:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT
Previously Submitted			

5. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements?

☒ YES NO

If "NO", items 5b through 5e relating to this section may be deleted.

b. Provide the month in which the static water level measurement was to be made:

March

c. Were the static water level measurements taken in the month required?

☒ YES NO

d. If "YES", were those measurements submitted to the Department?

☒ YES NO

e. If the annual measurements were not submitted, provide the measurements now:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT
Previously Submitted			

6. Pump Test (Required for most ground water permits prior to issuance of a certificate)

a. Did the permit require the submittal of a pump test?

☒ YES NO

If "NO", items 6b through 6d relating to this section may be deleted.

b. Has the pump test been previously submitted to the Department?

☒ YES NO

c. Is the pump test attached to this claim?

☒ YES NO

d. Has the pump test been approved by the Department?

☒ YES NO

7. Measurement Conditions:

a. Does the permit, permit amendment, transfer final order, or any extension final order require the installation of a meter or approved measuring device?

☒ YES NO

If "NO", items 7b through 7f relating to this section may be deleted.

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion or appropriation.

b. Has a meter been installed?

☒ YES NO

c. Meter Information

POD/POA NAME OR #	MANUFACTURER	SERIAL #	CONDITION (WORKING OR NOT)	CURRENT METER READING	DATE INSTALLED
POD#1	Water Specialties	20033059-8	Working	852,854	August 2003
POD #2	Sensus	67419456	Working	668,736	July 2006

d. If a meter has not been installed, has a suitable measuring device been installed and approved by the Department?

☒ N/A YES NO

8. Recording and reporting conditions

a. Is the water user required to report the water use to the Department?

YES NO

If "NO", item 8b relating to this section may be deleted.

b. Have the reports been submitted?

YES NO

METHOD OF SUBMITTING REPORT (PAPER OR ELECTRONIC)	WATER USER REPORTING ID
Paper	Dan Cardot, Oregon Premier Properties

If the reports have not been submitted, attach a copy of the reports if available.

9. Fish Screening

a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion?

YES ☐ NO ☒

10. By-pass Devices

a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion?

YES ☐ NO ☐

11. Other conditions required by permit, permit amendment final order, extension final order, or transfer final order

- Were there special well construction standards?
- Was submittal of a ground water monitoring plan required?
- Was the water user required to restore the riparian area if it was disturbed?
- Was a fishway required?
- Was submittal of a letter from an engineer required prior to storage of water?
- Was submittal of a water management and conservation plan required?
- Other conditions?

YES ☐ NO ☒

YES NO

YES NO

YES ☒ NO ☐YES ☒ NO ☐YES ☒ NO ☐YES ☒ NO ☐

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

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SECTION 4

VARIATIONS

Include a description of variations from the permit, permit amendment final order, extension final order, or transfer final order. (i.e. *"The permit allowed three points of diversion. The water user only developed one of the points."* or *"The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres."*)

--

SECTION 5

ATTACHMENTS

If you are attaching any documents to this report, provide a list:

ATTACHMENT NAME	DESCRIPTION
Well Report DESC 51899	Original well log- POD #1
Well Report DESC 55459	Well modification report- POD #1
Well Report DESC 51900	Original well log – POD #2

SECTION 6

CLAIM SUMMARY

POD / POA NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
POD #1	1.875 cfs	2.37 cfs	1.78 cfs	irrigation	150	135
POD #2	1.875 cfs	1.8 cfs	1.78 cfs	irrigation	150	150

SECTION 7

CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

A combination of aerial and field surveys was performed to prepare the mapping. Aerial OrthoPhotography with survey ground control and 1.0-foot pixel resolution obtained in September 2010 was used to prepare the claim of beneficial use map. Source of orthographic aerial photograph is 3Di West (GeoTerra Mapping Group).
Survey Ground Control set by D'Agostino Parker LLC, Keith Dagostino PLS 2885.
Photograph/flight date: September 2, 2010.
3Di West Job #10-106.
Additional Field surveys by D'Agostino Parker LLC, Keith Dagostino PLS 2885.



Map Checklist

Please be sure that the map you submit includes ALL the items listed below.
(Reminder: Incomplete maps and/or claims may be returned.)

- ☒ Map on polyester film.
- ☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- ☒ Township, Range, Section, Donation Land Claims, and Government Lots
- ☒ If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- ☒ Locations of fish screens, fish by-pass devices, meters and measuring devices in relationship to point of diversion or appropriation.
- ☒ Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
- ☒ Point(s) of diversion or appropriation (illustrated and coordinates)
- ☒ Tax lot boundaries and numbers
- n/a** Source illustrated if surface water
- ☒ Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- ☒ Application and permit number or transfer number
- ☒ North arrow
- ☒ Legend
- ☒ CWRE stamp and signature

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SECTION 8 SIGNATURES

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.

Seal and Signature

CWRE NAME Keith Dagostino	PHONE NO. 541.322.8807	ADDITIONAL CONTACT NO.	
ADDRESS 185 SW Shevlin Hixon Drive, Suite 101			
CITY Bend	STATE OR	ZIP 97702	E-MAIL kdagostino@dp2llc.com

Permit or Transfer Holder's of Record Signature or Acknowledgement

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	DATE
	Highlands at Broken Top Community Association co/Bogdan Dziurzynski	
	Tetherow Golf Course LLC co/Chris Van Der Velde	

SECTION 8 SIGNATURES

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



CWRE NAME Keith Dagostino		PHONE NO. 541.322.8807	ADDITIONAL CONTACT NO.
ADDRESS 185 SW Shevlin Hixon Drive, Suite 101			
CITY Bend	STATE OR	ZIP 97702	E-MAIL kdagostino@dp2llc.com

Permit or Transfer Holder's of Record Signature or Acknowledgement

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	DATE
	Highlands at Broken Top Community Association co/Bogdan Dziurzynski	9/23/14
	Tetherow Golf Course LLC co/Chris Van Der Velde	9/19/14

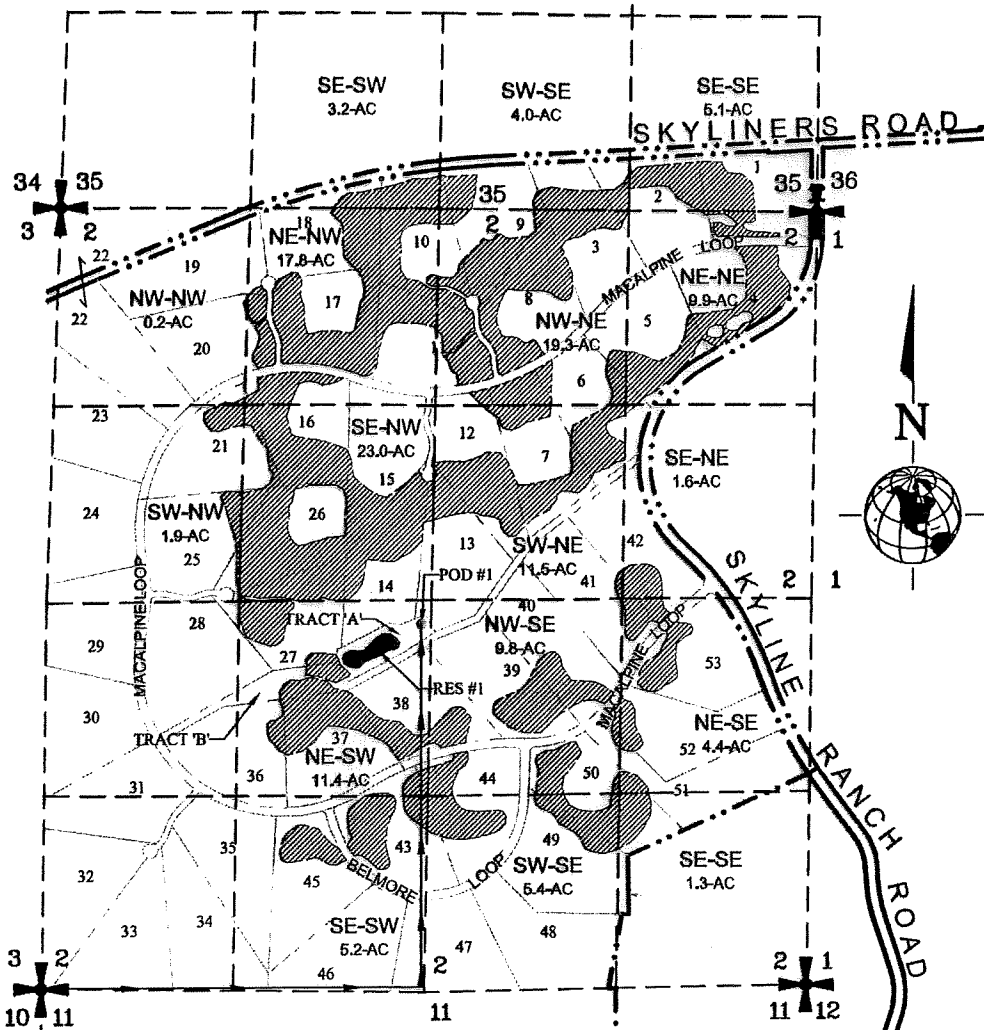
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HIGHLANDS AT BROKEN TOP

LOT #	TAXLOT
1	17-11-35-D0-00100
2	17-11-35-D0-00200
3	18-11-02-A0-00100
4	18-11-02-A0-01200
5	18-11-02-A0-01100
6	18-11-02-A0-01000
7	18-11-02-A0-00900
8	18-11-02-A0-00200
9	18-11-02-A0-00300
10	18-11-02-A0-00400
11	18-11-02-A0-00500
12	18-11-02-A0-00800
13	18-11-02-A0-00700
14	18-11-02-B0-00900
15	18-11-02-B0-00800
16	18-11-02-B0-00700
17	18-11-02-B0-00100
18	18-11-02-B0-00200
19	18-11-02-B0-00300
20	18-11-02-B0-00400
21	18-11-02-B0-00600
22	18-11-02-B0-01500
23	18-11-02-B0-01400
24	18-11-02-B0-01300
25	18-11-02-B0-01100
26	18-11-02-B0-01000
27	18-11-02-C0-00200
28	18-11-02-C0-00300
29	18-11-02-C0-00800
30	18-11-02-C0-00900
31	18-11-02-C0-01000
32	18-11-02-C0-01100
33	18-11-02-C0-01200
34	18-11-02-C0-01300
35	18-11-02-C0-01400
36	18-11-02-C0-00600
37	18-11-02-C0-00500
38	18-11-02-C0-01900
39	18-11-02-D0-00400
40	18-11-02-D0-00200
41	18-11-02-D0-00100
42	18-11-02-A0-01400
43	18-11-02-C0-01800
44	18-11-02-D0-00600
45	18-11-02-C0-01500
46	18-11-02-C0-01600
47	18-11-02-D0-00700
48	18-11-02-D0-00800
49	18-11-02-D0-00900
50	18-11-02-D0-01000
51	18-11-02-D0-01100
52	18-11-02-D0-01200
53	18-11-02-D0-01300
TRACT 'A'	18-11-02-C0-00100
TRACT 'B'	18-11-02-C0-00400

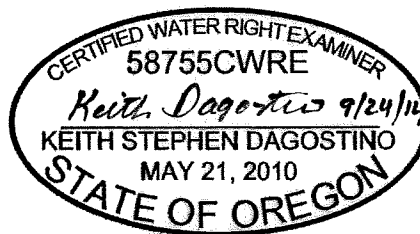


LEGEND

- RIGHT OF WAY LINE
- - - SECTION LINE
- - - TAXLOT - PROPERTY LINE
- AREA OF BENEFICIAL USE

NOTE:

POD #1 (WELL TAG # L23814, SHOWN ON THIS MAP) IS LOCATED 2,630' EAST AND 2,500' NORTH OF THE SOUTHWEST CORNER OF SECTION 2. THE METER FOR POD #1 IS LOCATED AT THE WELL SITE (WITHIN APPROX. 20')



RENEWALS: DEC. 31, 2015

SCALE



(FEET)

1 INCH = 1,320 FT

DISCLAIMER:
THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS OR LOCATIONS OF PROPERTY OWNERSHIP LINES

SHEET:

1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 11/14/14
PLOT DATE: 11/14/14

SCALE:

1"=1320'

CLAIM OF BENEFICIAL USE MAP FOR ASSIGNMENT OF PERMIT G-12494 (APPLICATION #: 12971)

Township 17 and 18 South, Range 11 East

BEND/DESCHUTES

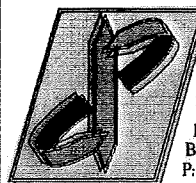
OREGON

PROJECT:

HBT001

DRAWING FILE NAME:

HBT001_AERIAL



D'Agostino Parker, LLC

CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR, SUITE 101
BEND, OR 97702
P: (541) 322-8807

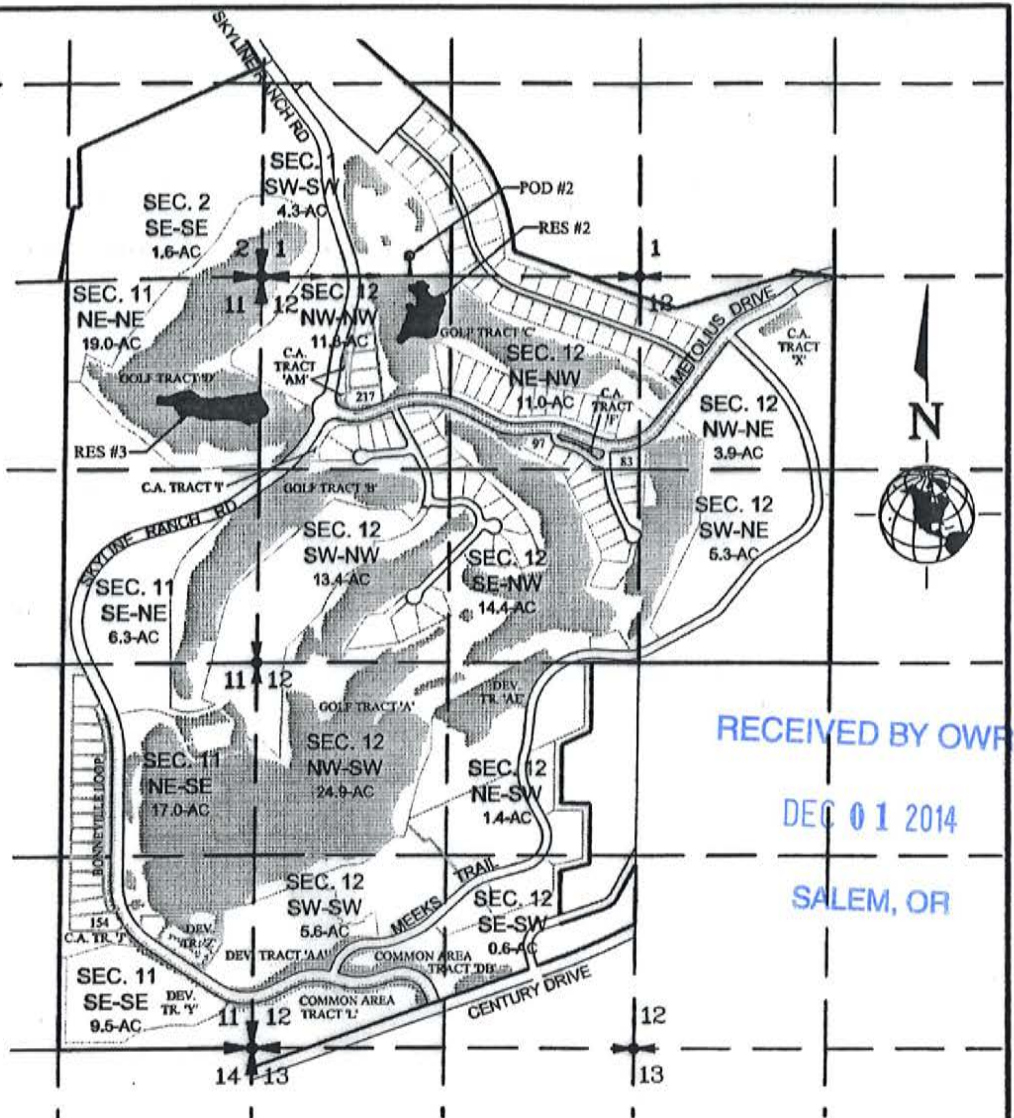
TETHEROW GOLF COURSE

LEGAL LOT	TAXLOT
GOLF TRACT 'A'	18-11-11-00-00500
	18-11-12-00-01700
GOLF TRACT 'B'	18-11-11-00-00400
	18-11-12-00-01500
GOLF TRACT 'C'	18-11-01-C0-17000
	18-11-12-00-01300
GOLF TRACT 'D'	18-11-11-00-00100
DEV. TRACT 'AA'	18-11-11-DD-00100
	18-11-12-00-02100
DEV. TRACT 'Y'	18-11-11-DD-00300
DEV. TRACT 'Z'	18-11-11-DD-00200
C.A. TRACT 'A'	18-11-12-CA-02100
C.A. TRACT 'AM'	18-11-12-BB-01500
C.A. TRACT 'DB'	18-11-12-00-02300
C.A. TRACT 'F'	18-11-12-BA-03800
C.A. TRACT 'I'	18-11-12-BB-00200
C.A. TRACT 'J'	18-11-11-DD-00500
C.A. TRACT 'L'	18-11-12-00-02200
	18-11-11-DD-00400
C.A. TRACT 'X'	18-11-12-00-00900
LOT 83	18-11-12-BA-03900
LOT 97	18-11-12-BA-03400
LOT 154	18-11-11-DD-01000
LOT 217	18-11-12-BB-01600

LEGEND

DEV.	DEVELOPMENT
TR.	TRACT
C.A.	COMMON AREA
POD	POINT OF DIVERSION
RES.	RESERVOIR
AC	ACRES
	RIGHT OF WAY LINE
	SECTION LINE
	TAXLOT - PROPERTY LINE
	AREA OF BENEFICIAL USE

TOTAL AREA OF
BENEFICIAL USE = 150 ACRES



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NOTE:

POD #2 (WELL TAG #L23815, SHOWN ON THIS MAP) IS LOCATED 1,030' EAST AND 135' NORTH OF THE SOUTHWEST CORNER OF SECTION 1. THE METER FOR POD #2 IS LOCATED AT THE WELL SITE (WITHIN APPROX. 10')



RENEWES: DEC. 31, 2015

SCALE



(FEET)
1 INCH = 1,320 FT

DISCLAIMER:
THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS OR LOCATIONS OF PROPERTY OWNERSHIP LINES

CLAIM OF BENEFICIAL USE MAP FOR ASSIGNMENT OF PERMIT G-12494 (APPLICATION #: 12971)

BEND/DESCHUTES

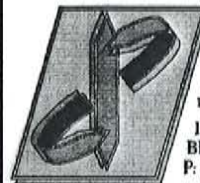
OREGON

PROJECT:

TGC001

DRAWING FILE NAME:

TGC001-WTR_RIGHTS-032911



D'Agostino Parker, LLC

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LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR SUITE 101
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P: (541) 322-6807

SHEET:

1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 11/14/14
PLOT DATE: 11/14/14

SCALE:

1"=1320'

SECTION 9
REFERENCE INFORMATION FOR CWRE USE
(Please DO NOT submit these pages.)

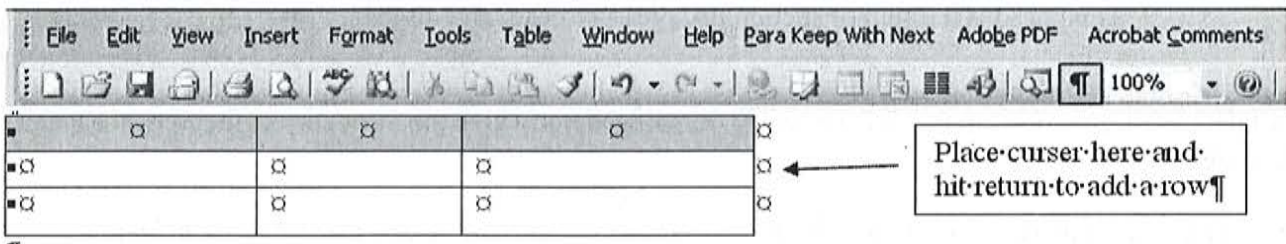
Additional information is available at: http://www.wrd.state.or.us/OWRD/WR/cwre_info.shtml

MS Word Hints

To add rows to a table, click outside the table on the far right and hit enter.

Place cursor here and
hit return to add a row

If you are having difficulty placing the cursor outside the table, click on the Show/Hide (Paragraph) icon ¶. This is found on the Standard toolbar (View => Toolbars => Standard) of some versions of Word.



To resolve page numbering issues, go to print preview. Page through the entire document (while in print preview), then print from print preview.

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Common Calculations

The Department typically uses the following calculations to determine system capacities; many of which are available to download from the Department's Web Site:

Pumps:

$$Q \text{ Pump} = \frac{(\text{horsepower})(\text{pump efficiency})}{(\text{total head in feet})} = Q \text{ in cfs}$$

Efficiency factors:

NOTE: Pump efficiency factor for centrifugal pump (75%) = 6.61
Pump efficiency factor for turbine pump (80%) = 7.04

Centrifugal Pump, 75% eff. $\frac{(550 \text{ ft lb/sec/Hp})(.75)}{(62.4 \text{ lb/cu ft})} = 6.61 \text{ ft}^4/\text{sec/Hp}$

Turbine & Submersible Pumps, 80% eff. $\frac{(550 \text{ ft lb/sec/Hp})(.80)}{(62.4 \text{ lb/cu ft})} = 7.04 \text{ ft}^4/\text{sec/Hp}$

Total head is the sum of suction lift, pressure head, and discharge lift.

If the operating pressure is not measured, varying the assumed operational pressure in the above formulas until the calculated outputs are equal, or nearly so, will generally give the most correct theoretical capacity of the system.

Efficiencies have been assumed to be 75% for centrifugal pump installations and 80% for turbine or submersible pumps. See the list below of converted psi's to feet of head. These figures account for minor friction losses. If the system involves unusually long pipelines friction losses should be accounted for by using standard charts and formulas.

Refer to the conversion table below to compute PSI to head for pump pressure in feet.

$$[(\text{psi}/.433)(1.1) = \text{head (in feet/psi)} = 2.54 \text{ feet head/psi}]$$

PSI	HEAD	PSI	HEAD
25	63.5	55	139.7
30	76.2	60	152.4
35	88.9	65	165.1
40	101.6	70	177.8
45	114.3	75	190.5
50	127.0	80	203.2

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Ditches/Canals:

Manning's Formula:

$$v = \frac{1.486}{n} r^{2/3} s^{1/2}$$

v = mean velocity of flow in feet per second

r = hydraulic radius in feet

s = slope of the energy gradient

n = coefficient of roughness

Type of Conduit and Description Pipe	Coefficient of Roughness	
	Minimum	Maximum
Cast Iron, Coated	0.01	0.014
Cast Iron, Uncoated	0.011	0.015
Wrought Iron, Galvanized	0.013	0.017
Wrought Iron, Black	0.012	0.015
Steel, Riveted and Spiral	0.013	0.017
Corrugated	0.021	0.0255
Wood Stave	0.01	0.014
Neat Cement Surface	0.01	0.013
Concrete	0.01	0.017
Vitrified Sewer Pipe	0.01	0.017
Clay, Common Drainage Tile	0.011	0.017
Lined Channels		
Metal, Smooth Semicircular	0.011	0.015
Metal, Corrugated	0.0228	0.0244
Wood, Planed	0.01	0.015
Wood, Unplaned	0.011	0.015
Neat Cement-Lined	0.01	0.013
Concrete	0.012	0.018
Cement Rubble	0.017	0.03
Vegetated, Small Channels, Shallow Depths		
Bermuda Grass; Long - 13", Green	0.042	
Bermuda Grass; Long - 13", Dormant	0.035	
Bermuda Grass; Short - 3", Green	0.034	
Bermuda Grass; Short - 3", Dormant	0.034	
Unlined Channels		
Earth; Straight and Uniform	0.017	0.025
Dredged	0.025	0.033
Winding and Sluggish	0.0225	0.03
Stoney Bed, Weeds on Bank	0.025	0.04
Earth Bottom, Rubble Sides	0.028	0.035
Rock Cuts; Smooth and Uniform	0.025	0.035
Rock Cuts; Jagged and Irregular	0.035	0.045

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Gravity flow pipe systems

Hazen-William's Formula:

$$v = 1.31(c)(r^{0.63})(s^{0.54})$$

v = mean velocity of flow in feet per second

c = coefficient of roughness

r = hydraulic radius in feet

s = slope of energy gradient

Material	Coefficient of Roughness
Asbestos Cement	140
Brass	135
Brick sewer	100
Cast-Iron - new unlined (CIP)	130
Cast-Iron 10 years old	110
Cast-Iron 20 years old	95
Cast-Iron 30 years old	82
Cast-Iron 40 years old	74
Concrete	130
Copper	135
Ductile Iron Pipe (DIP)	140
Galvanized iron	120
Glass	140
Lead	135
Plastic	145
PVC, CPVC	150
Smooth Pipes	140
Steel new unlined	145
Steel	130
Steel riveted	110
Tin	130
Wood Stave	120

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SPRINKLER CAPACITIES BY NOZZLE SIZE IN GALLONS PER MINUTE

This chart is comprised of information gathered from a number of sources and may differ slightly from the manufacturer's specifications.

$$Q \text{ Sprinklers} = (\text{number of heads})(\text{rate in gallons per minute}) = Q \text{ in cfs}$$

(448.8 gpm per cfs)

		P.S.I. ("*" designates computed capacity)																	
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
NOZZLE SIZE	3/32				1.1	1.3	1.4	1.5	1.6	1.7	1.8								
	7/64				1.5	1.7	1.9	2	2.2										
	1/8				1.9	2.2	2.4	2.7	2.9	3	3.2								
	9/64				2.3	2.6	2.9	3.1	3.4	3.7	4								
	5/32				3	3.4	3.8	4.1	4.4	4.7	5								
	11/64	1.9	2.7	3.3	3.7	4.2	4.6	5	5.4	5.7	6	6.3	6.6						
	3/16	2.2	3.2	3.9	4.3	5	5.5	6	6.4	6.8	7.2	7.5	7.8						
	13/64	2.9	3.6	4.5	5.1	5.9	6.5	7.1	7.6	8.1	8.5	8.9	9.2						
	7/32		4.1	5.1	5.8	6.8	7.6	8.3	8.9	9.4	9.9	10.3	10.6						
	15/64							8.8		10		11.2		12.4					
	1/4		5.2	6.4	7.4	8.9	9.8	10.6	11.4	12.1	12.8	13.4	13.9	14.8*	15.3*	15.9*	16.4*	16.9*	17.4*
	17/64								12.5		14		15.6		17.1				
	9/32					11.2	12.3	13.3	14.3	15.2	16	16.8	17.5	18.1	18.9	19.7	20.7*	21.4*	22*
	19/64								16.6		18.3		19.9		21.4				
	5/16					13.1	15.2	16.5	17.7	18.9	20	21	22	23	23.9	24.8	25.7	26.4*	27.1*
	21/64										20.8		22.7		24.6		26.4		
	11/32					16.5	18	19.7	21.1	22.5	23.8	25	26.2	27.4	28.5	29.6	30.6	31.9*	32.8*
	23/64										24.5		26.8		29.1		31.4		
	3/8					19	21	22.8	24.4	26	27.5	29.1	30.6	32	33.2	34.5	35.7	38*	39*
	13/32								29*	30.9*	32.7*	34.5*	36.2*	37.4*	38.9*	40.4*	41.9*	43.3*	44.7*
	7/16								33.5*	35.6*	37.7*	39.7*	41.7*	43.6*	45.3*	46.9*	48.4*	50.1*	51.6*
	1/2								42.5*	45.2*	47.7*	50.2*	52.5*	54.7*	56.8*	58.6*	60.6*	63.6*	66.7*

NOTE: Use the maximum number heads operating at any one time.

Rate per head in gpm comes from either manufacturer's specifications using orifice size and operating pressure or from OWRD chart.

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APPENDIX A

Highlands at Broken Top and Tetherow Golf

Owners of Record 9/24/2014

Highlands at Broken Top

Lot #	Taxlot	Owner of Record
1	17-11-35-D0-00100	Weston Investment Co LLC
2	17-11-35-D0-00200	Kyriakos, James Dean and Michelle
3	18-11-02-A0-00100	RKL LLC
4	18-11-02-A0-01200	Davidson Family Trust
5	18-11-02-A0-01100	FC Fund LLC
6	18-11-02-A0-01000	Hardin, Timothy M and Caren M
7	18-11-02-A0-00900	ARGO Capital Group LTD
8	18-11-02-A0-00200	Zehnder, Werner and Susan
9	18-11-02-A0-00300	Bien, Rodney W and Kathryn W
10	18-11-02-A0-00400	Bledsoe, Drew and Maura
11	18-11-02-A0-00500	Thomas E Strange Rev Trust ETAL
12	18-11-02-A0-00800	Ryan, Michael G and Moore, Kathleen R
13	18-11-02-A0-00700	Wright, Kenton D
14	18-11-02-B0-00900	Sandgren Living Trust
15	18-11-02-B0-00800	Steelhammer, Geoffrey G and Brandy R
16	18-11-02-B0-00700	Durkin, David A and Mardi L
17	18-11-02-B0-00100	Johnson, Kenneth Jeffrey ETAL
18	18-11-02-B0-00200	Charno, John and Sandra
19	18-11-02-B0-00300	Wickham, Douglas John ETAL
20	18-11-02-B0-00400	Bryand, Andy D and Nancy K
21	18-11-02-B0-00600	Dostal, Kevin Jay and Tamara
22	18-11-02-B0-01500	Breyman Properties LLC
23	18-11-02-B0-01400	Dryden, Jeff and Dryden, Mike
24	18-11-02-B0-01300	Allen, James P and Brenda Scarlett
25	18-11-02-B0-01100	Brooks and Sheri Hilton Joint Trust
26	18-11-02-B0-01000	NTC & Co LLP FBO Patrick L Radecki IRA
27	18-11-02-C0-00200	Lea A Dziurzynski Rev Trust ET AL
28	18-11-02-C0-00300	Azur, Bryan and Angela
29	18-11-02-C0-00800	Van Velzen, Femke
30	18-11-02-C0-00900	Warta Family Trust
31	18-11-02-C0-01000	Equinox Holdings LTD
32	18-11-02-C0-01100	Valentine Revocable Trust
33	18-11-02-C0-01200	Douglas F Berry MD Profit ET AL Trust
34	18-11-02-C0-01300	Farver Benjamin and Meaghan
35	18-11-02-C0-01400	M Louis Pengue JR Rev Trust ETAL
36	18-11-02-C0-00600	Jones, Tracy A and Tammy J
37	18-11-02-C0-00500	Denson Investments LLC
38	18-11-02-C0-01900	Lovejoy, Winfield Scott III and Kristy Marie
39	18-11-02-D0-00400	Zidek Family QSST Trust FBO Brian P Zidek

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40	18-11-02-D0-00200	Fox, Matthew Chandler and Margherita
41	18-11-02-D0-00100	Worthington, Roger G
42	18-11-02-A0-01400	Moore, Gary L and Kelly C
43	18-11-02-C0-01800	Egeland, Daniel E
44	18-11-02-D0-00600	Fourneir, Bruce R and Joanne E
45	18-11-02-C0-01500	Butterworth Family Rev Trust
46	18-11-02-C0-01600	Laakmann Living Trust
47	18-11-02-D0-00700	Laakmann Living Trust
48	18-11-02-D0-00800	Todd Allen Craig
49	18-11-02-D0-00900	Potter Michael J and Tressi L
50	18-11-02-D0-01000	Linda G Storch Revocable Trust
51	18-11-02-D0-01100	Lilly, Albert Jackson III and Soma I
52	18-11-02-D0-01200	Tucker Family Revocable Trust
53	18-11-02-D0-01300	2004 Herold Family Trust
Tract 'A'	18-11-02-C0-00100	Cascade Highlands LLC
Tract 'B'	18-11-02-C0-00400	Highlands At Broken Top Comm Assoc Inc

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Tetherow Golf

Lot #	Taxlot	Owner of Record
Golf Tract 'A'	18-11-11-00-00500	Tetherow Golf Course LLC
	18-11-12-00-01700	Tetherow Golf Course LLC
Golf Tract 'B'	18-11-11-00-00400	Tetherow Golf Course LLC
	18-11-12-00-01500	Tetherow Golf Course LLC
Golf Tract 'C'	18-11-01-C0-17000	Tetherow Golf Course LLC
	18-11-12-00-01300	Tetherow Golf Course LLC
Golf Tract 'D'	18-11-11-00-00100	Tetherow Golf Course LLC
Dev. Tract 'AA'	18-11-11-DD-00100	Weston Investment Co LLC
	18-11-12-00-02100	Weston Investment Co LLC
Dev. Tract 'Y'	18-11-11-DD-00300	VRE Tract Y LLC
Dev. Tract 'Z'	18-11-11-DD-00200	Tetherow Golf Course LLC
C.A. Tract 'A'	18-11-12-CA-02100	Weston Investment Co LLC
C.A. Tract 'AM'	18-11-12-BB-01500	SFI Cascade Highlands LLC
C.A. Tract 'DB'	18-11-12-00-02300	Arrowood Tetherow LLC
C.A. Tract 'F'	18-11-12-BA-03800	SFI Cascade Highlands LLC
C.A. Tract 'I'	18-11-12-BB-00200	SFI Cascade Highlands LLC
C.A. Tract 'J'	18-11-11-DD-00500	SFI Cascade Highlands LLC
C.A. Tract 'L'	18-11-12-00-02200	Arrowood Tetherow LLC
	18-11-11-DD-00400	Arrowood Tetherow LLC
C.A. Tract 'X'	18-11-12-00-00900	Tetherow Glen 58 LLC
Lot 83	18-11-12-BA-03900	Yelas Developments INC
Lot 97	18-11-12-BA-03400	Harris, John and Alma Ruth
Lot 154	18-11-11-DD-01000	SFI Cascade Highlands LLC
Lot 217	18-11-12-BB-01600	Alexander, Scott and Tricia

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SALEM, OR

STATE OF OREGON
WATER SUPPLY WELL REPORT

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form

DESC 51899

Page 51899

WELL ID #

112814723814

(START CARD) # 102029

(1) OWNER: Well Number: CH2

Name Cascade Highlands Ltd. Partnership

Address P.O. Box 80054

City Portland State OR Zip 97208

(2) TYPE OF WORK:

☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 507 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
17.5"	0	507	Cement	0	285	236 Sacks

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
12"	+1	378	.250	☒	☐	☒	☐
12"	378	504	.375	☒	☐	☒	☐

Liner: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

☒ Perforations Method Factory
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
378	504	3/16"	3024	12"	Pipe	☒	☐

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
1000	20' +/-		1hr.

Temperature of Water 54 Depth Artesian Flow found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use?

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Deschutes Latitude Longitude
Township 18S N or S. Range 11E E or W. of WM.
Section 2 1/4 1/4
Tax Lot 100 R1 Lot Block Subdivision BrokenTop
Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:

301 ft. below land surface. Date 8/14/98
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 308

From	To	Estimated Flow Rate	SWL
308	497	3000+	

(12) WELL LOG:

Ground elevation

Material	From	To	SWL
Brown Sandy Top Soil	0	3	
Boulders	3	18	
Brown & Pink Pumice	18	29	
Lt. Blue Gray Basalt	29	33	
Cement Grout 4 yds. from 6'-33'	33	33	
Lt. Blue Gray Basalt	33	54	
Brown Volcanics	54	64	
Gray Basalt	64	114	
Brown & Red Cinders	114	126	
Gray & Black Basalt & Cinders	126	140	
Lt. Gray Ash (Firm)	140	156	
Hard Gray Basalt	156	210	
Lt. Gray Ash	210	219	
Hard Gray Basalt	219	233	
Brown Ash & Basalt	233	246	
Gray Basalt with Ash	246	296	
Lt. Gray Volcanic Tuft	296	308	
Brown Conglomerate WB	308	420	301
Broken Basalt WB	420	433	301
Red Cinder Rock WB	433	450	301
Brown & Red Conglomerate WB	450	475	301
Brown & Gray Basalt WB	475	497	301
Hard Gray Basalt	497	507	301

Date started 7/20/98

Completed 8/14/98

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Robert Buckner WWC Number 1385
Date 9/6/98
Western Water Development Corporation

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER

WATER RESOURCES DEPT
SALEM, OREGON

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SALEM, OR

DESC 55459

DESC 55459

DESC

Received Date: 07-14-2003

Well ID Tag # L 23814

Start Card # 156243

STATE OF OREGON

Water Supply Well Report

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

(1) Owner

Well Number: 2

Name:

CASCADE HIGHLANDS LTD

Street: 61999 BROKENTOP DR

City: BEND

State: OR Zip Code: 97702

(2) Type of Work

- ☐ New
 ☐ Alter (Recondition)
 ☒ Alter (Repair)
 ☐ Deepening
 ☐ Abandonment

(3) Drill Method

- ☒ Rotary Air
 ☐ Rotary Mud
 ☒ Cable
 ☐ Auger

Other:

(4) Proposed Use

- ☐ Domestic
 ☐ Community
 ☐ Industrial
 ☒ Irrigation
 ☐ Injection
 ☐ Livestock
 ☐ Thermal
 Other:

(5) Bore Hole Construction

- ☐ Special Standards: Depth of completed well: 532.00 ft.
 ☐ Explosives Used: Amount: Type:

Hole			Seal		
Diameter	From	To	Mtrl	From	To
10.00	505.00	532.00			

How was seal placed?

Other: DID NOT DISTURB

Back fill placed from:

Material:

Filter pack from:

Size:

(6) Casing / Liner

Csng/ Liner	Diameter	From	To	Gauge	Mtrl	Weld	Thrd	Shoe at	Shoe used
C	10.00	2.00	505.00	.250	S	X		505	In

(7) Perforation / Screens

Perforations:

Mtrl	From	To	Width	Height	#Slots	Dia.	t/pSize	Csng/ Lnr	Method
------	------	----	-------	--------	--------	------	---------	--------------	--------

Screens:

Mtrl	From	To	S Size	#Slots	Dia.	t/pSize	Type	Gauge
------	------	----	--------	--------	------	---------	------	-------

(8) Well Tests (Minimum testing time is one hour)

Type	Yield	Units	Drawdown	Stem at	Duration
A	1000.00	G		530.00	1.00

Temperature of Water: 47 F

Was water analysis done? ☐

Depth of artesian flow:

by whom?

Did any strata contain water unsuitable for use? ☐

Too Little

Salty

☐ Muddy ☐ Odor ☐ Colored other:

Depth of strata:

(9) Location of Hole by legal description

County: DESC

Latitude: 44°2'23"

Longitude: 121°22'43"

Township: 10-00 S 18S

Range: 11.00 E

Section: 2 NESW

Lot:

Block:

Tax Lot: 100

Subdivision: BROKENTOP

Street Address of Well (or nearest address):

NA

NOT YET ASSIGNED

MAP, with location identified, must be attached.

(10) Static Water Level

Feet below land surface: 347.0

Date: 06 / 30 / 2003

Artesian Pressure:

Date:

(11) Water Bearing Zones

Depth at which water was first found: 505.00 ft.

From	To	est Flow	swl
505.00	532.00	1000.00	347

(12) Well Log

Ground Elevation:

3797 ft.

Material	From	To	swl
BEGINNING SWL 347	0.00	0.00	
FRAC BASALT/LAVA GRAY RED	505.00	532.00	347
RAN 10" CASING	0.00	0.00	
TO SHUT OFF SAND	0.00	0.00	
TAG NUMBER ON WELL DOES NOT	0.00	0.00	
MATCH TAG NUMBER ON	0.00	0.00	
DESC51899 WELL LOG	0.00	0.00	

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SALEM, OREGON

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SALEM, OR

Date Started: 06 / 18 / 2003

Date Completed: 06 / 30 / 2003

(unbonded) Water Well Constructor Certification:

I certify that the work I perform on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

Signed by: THOMAS R PECK

WWC #: 758

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed by: JACK ABBAS

WWC #: 1720

ABBAS WELL DRILLING CO

Phone: 541-548-2787

SEP 16 1998

~~WATER RESOURCES DEPT~~
~~SALMON DIVISION OF~~

SALEM, OREGON

City Portland State OR Zip 97280☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other _____

☐ Domestic	☐ Community	☐ Industrial	☒ Irrigation
☐ Thermal	☐ Injection	☐ Livestock	☐ Other _____

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 522 ft.
Explosives used ☐ Yes ☒ No Type _____ Amount _____

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	12"	+1	362	.250	☒	☐	☒	☐
	12"	362	522	.375	☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐

Final location of shoe(s)

☒ Perforations Method Factory
☐ Screens Type _____

[illegible]☒ Pump ☐ Sailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
1000	22		24 hr.

1000	22		

Temperature of Water 54 Depth Artesian Flow found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☒ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: 268

LOCATION OF WELL by legal description:

County Deschutes Latitude _____ Longitude _____
Township 18S N or S. Range 11E E or W. of WM.
Section 12 NW % NW %
Tax Lot 10R Lot _____ Block _____ Subdivision Broken T
Street Address of Well (or nearest address) _____

301 ft. below land surface. Date _____
 Artesian pressure _____ lb. per square inch. Date _____

Depth at which water was first found _____

From	To	Estimated Flow Rate	SWI
266	269	25+	286
302	542	3000	302

Ground elevation

Material	From	To	SW
Brown Sandy Soil	0	6	
Brown Sand & Ash	6	9	
Brown Ash Tuft	9	19	
Gray Ash Tuft	19	25	
Gray Basalt	25	110	
Red Volcanic Conglomerate	110	132	
Brown Ash & Basalt	132	180	
Hard Gray Basalt	180	191	
Brown Ash & Basalt	191	195	
Red Cinder Conglomerate	195	226	
Black Cinder Rock	226	248	
Brown Ash & Basalt	248	266	
Broken Gray Basalt WB	266	269	266
Broken Gray Basalt	269	305	266
20 cyds Cement Grout 93' to 302	306	306	266
Medium Brown Ash WB	306	324	266
Red Volcanic Conglomerate WB	324	332	266
Hard Gray Broken Basalt WB	332	389	266
Brown & Red Volcanics WB	389	402	266
Hard Gray Volcanics WB	402	426	266
Lost Circulation	426	430	266
Red & Brown Cinders WB	430	443	266
Hard Gray Broken Basalt WB	443	469	266
Soft Brown Volcanics WB	469	510	266
Continued on next page			

Date started **6/29/98**Completed 7/24/98

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Corrected (please attach rules) _____
 Signed Robert Buckner WWC Number 1385
 Date 9-6-98
 Western Water Development Corporation

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SECOND COPY - CONSTRUCTOR

THIRD COPY - CUSTOMER

IRD COPY - CUSTOMER
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SALEM, OR

Instructions for completing this report are on the last page of this form

(START CARD) # 102027

SALEM OF

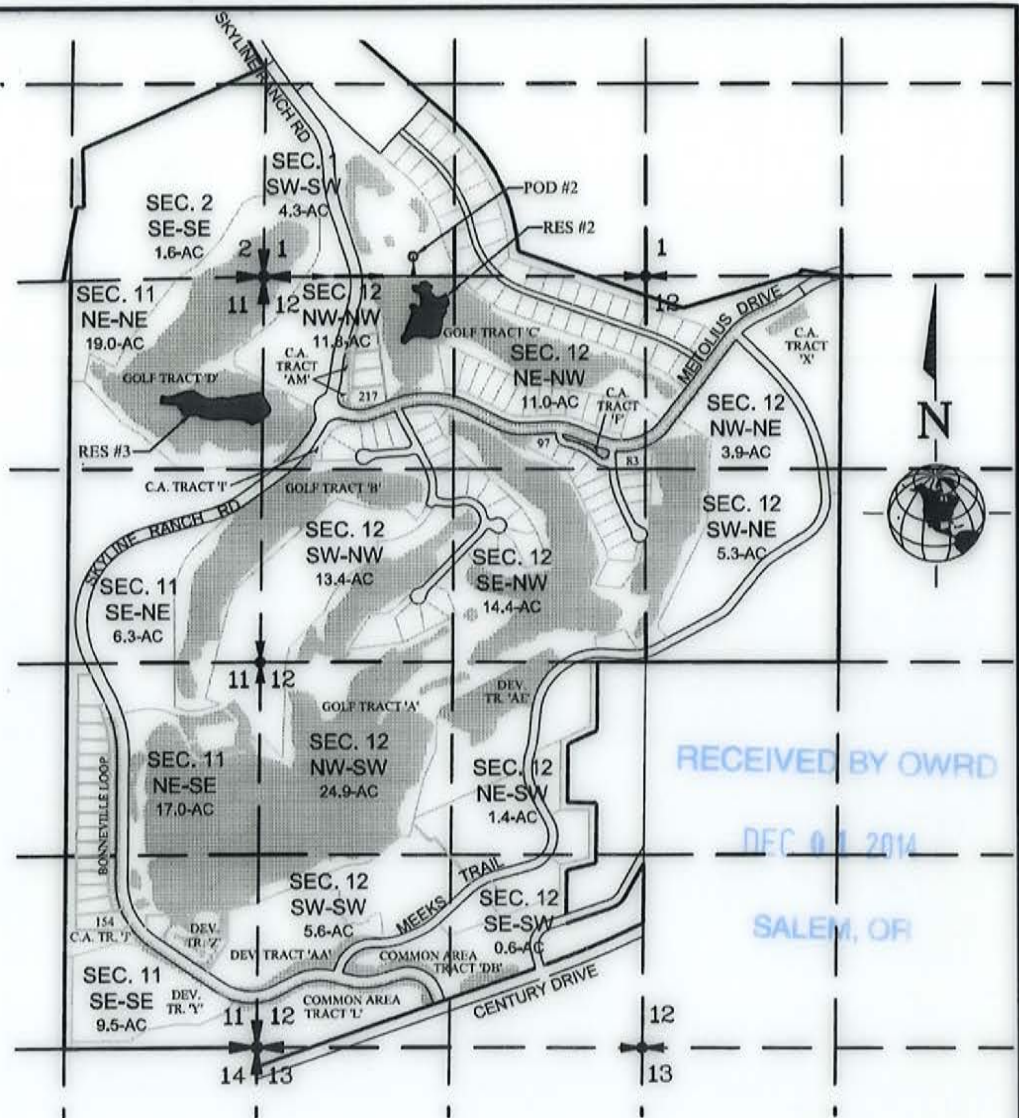
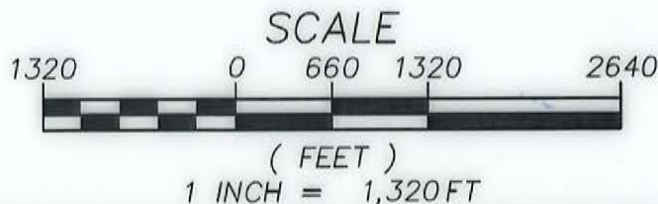
TETHEROW GOLF COURSE

LEGAL LOT	TAXLOT
GOLF TRACT 'A'	18-11-11-00-00500
	18-11-12-00-01700
GOLF TRACT 'B'	18-11-11-00-00400
	18-11-12-00-01500
GOLF TRACT 'C'	18-11-01-C0-17000
	18-11-12-00-01300
GOLF TRACT 'D'	18-11-11-00-00100
DEV. TRACT 'AA'	18-11-11-DD-00100
	18-11-12-00-02100
DEV. TRACT 'Y'	18-11-11-DD-00300
DEV. TRACT 'Z'	18-11-11-DD-00200
C.A. TRACT 'A'	18-11-12-CA-02100
C.A. TRACT 'AM'	18-11-12-BB-01500
C.A. TRACT 'DB'	18-11-12-00-02300
C.A. TRACT 'F'	18-11-12-BA-03800
C.A. TRACT 'I'	18-11-12-BB-00200
C.A. TRACT 'J'	18-11-11-DD-00500
C.A. TRACT 'L'	18-11-12-00-02200
	18-11-11-DD-00400
C.A. TRACT 'X'	18-11-12-00-00900
LOT 83	18-11-12-BA-03900
LOT 97	18-11-12-BA-03400
LOT 154	18-11-11-DD-01000
LOT 217	18-11-12-BB-01600

LEGEND

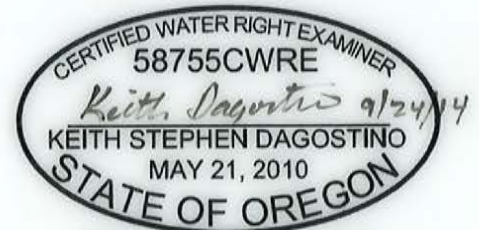
DEV.	DEVELOPMENT
TR.	TRACT
C.A.	COMMON AREA
POD	POINT OF DIVERSION
RES.	RESERVOIR
AC	ACRES
	RIGHT OF WAY LINE
	SECTION LINE
	TAXLOT - PROPERTY LINE
	AREA OF BENEFICIAL USE

TOTAL AREA OF
BENEFICIAL USE = 150 ACRES



NOTE:

POD #2 (WELL TAG #L23815, SHOWN ON THIS MAP) IS LOCATED 1,030' EAST AND 135' NORTH OF THE SOUTHWEST CORNER OF SECTION 1. THE METER FOR POD #2 IS LOCATED AT THE WELL SITE (WITHIN APPROX. 10')



RENEWS: DEC. 31, 2015

DISCLAIMER:

THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS OR LOCATIONS OF PROPERTY OWNERSHIP LINES

SHEET:
1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 11/14/14
PLOT DATE: 11/14/14

SCALE:
1"=1320'

CLAIM OF BENEFICIAL USE MAP FOR ASSIGNMENT OF PERMIT G-12494 (APPLICATION #: 12971)

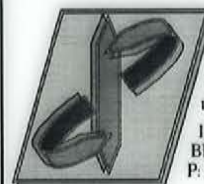
Township 17 and 18 South, Range 11 East

BEND/DESCHUTES

OREGON

PROJECT:
TGC001

DRAWING FILE NAME:
TGC001-WTR_RIGHTS-032911



D'Agostino Parker, LLC

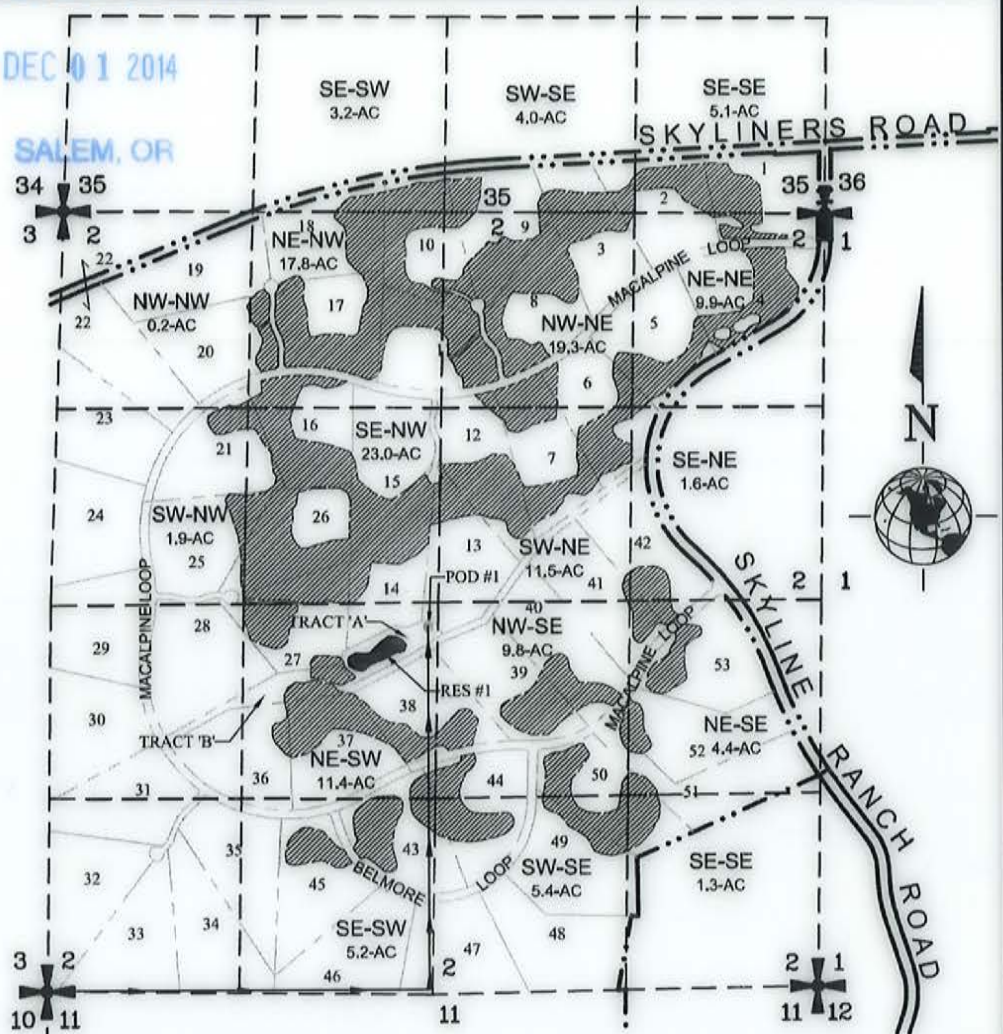
CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR SUITE 101
BEND, OR 97702
P: (541) 322-8807

HIGHLANDS AT BROKEN TOP

LOT #	TAXLOT
1	17-11-35-D0-00100
2	17-11-35-D0-00200
3	18-11-02-A0-00100
4	18-11-02-A0-01200
5	18-11-02-A0-01100
6	18-11-02-A0-01000
7	18-11-02-A0-00900
8	18-11-02-A0-00200
9	18-11-02-A0-00300
10	18-11-02-A0-00400
11	18-11-02-A0-00500
12	18-11-02-A0-00800
13	18-11-02-A0-00700
14	18-11-02-B0-00900
15	18-11-02-B0-00800
16	18-11-02-B0-00700
17	18-11-02-B0-00100
18	18-11-02-B0-00200
19	18-11-02-B0-00300
20	18-11-02-B0-00400
21	18-11-02-B0-00600
22	18-11-02-B0-01500
23	18-11-02-B0-01400
24	18-11-02-B0-01300
25	18-11-02-B0-01100
26	18-11-02-B0-01000
27	18-11-02-C0-00200
28	18-11-02-C0-00300
29	18-11-02-C0-00800
30	18-11-02-C0-00900
31	18-11-02-C0-01000
32	18-11-02-C0-01100
33	18-11-02-C0-01200
34	18-11-02-C0-01300
35	18-11-02-C0-01400
36	18-11-02-C0-00600
37	18-11-02-C0-00500
38	18-11-02-C0-01900
39	18-11-02-D0-00400
40	18-11-02-D0-00200
41	18-11-02-D0-00100
42	18-11-02-A0-01400
43	18-11-02-C0-01800
44	18-11-02-D0-00600
45	18-11-02-C0-01500
46	18-11-02-C0-01600
47	18-11-02-D0-00700
48	18-11-02-D0-00800
49	18-11-02-D0-00900
50	18-11-02-D0-01000
51	18-11-02-D0-01100
52	18-11-02-D0-01200
53	18-11-02-D0-01300
TRACT 'A'	18-11-02-C0-00100
TRACT 'B'	18-11-02-C0-00400

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LEGEND

- RIGHT OF WAY LINE
- - - SECTION LINE
- - - TAXLOT - PROPERTY LINE
- AREA OF BENEFICIAL USE

NOTE:

POD #1 (WELL TAG # L23814, SHOWN ON THIS MAP) IS LOCATED 2,630' EAST AND 2,500' NORTH OF THE SOUTHWEST CORNER OF SECTION 2. THE METER FOR POD #1 IS LOCATED AT THE WELL SITE (WITHIN APPROX. 20')



RENEWES: DEC. 31, 2015

SCALE



(FEET)

1 INCH = 1,320 FT

DISCLAIMER:

THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS OR LOCATIONS OF PROPERTY OWNERSHIP LINES

SHEET:

1 of 1

DESIGNED: KSD
 DRAWN BY: CAB
 APP'D BY: KSD
 CHECK'D BY: KSD
 LAST EDIT: 11/14/14
 PLOT DATE: 11/14/14

SCALE:

1"=1320'

CLAIM OF BENEFICIAL USE MAP
 FOR
 ASSIGNMENT OF PERMIT G-12494
 (APPLICATION #: 12971)

Township 17 and 18 South, Range 11 East

BEND/DESCHUTES

OREGON

PROJECT:

HBT001

DRAWING FILE NAME:

HBT001_AERIAL



D'Agostino Parker, LLC

CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT185 SHEVLIN HIXON DR, SUITE 101
BEND, OR 97702
P: (541) 322-8807

Superseded 12/1/2014

**CLAIM OF
BENEFICIAL USE
for Permits claiming more
than 0.1 cfs and All Transfers**



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**A fee of \$150 must accompany this form to be accepted for permits
with a priority date of July 9, 1987, or later. (ORS 536.050(1))**

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:
http://www.wrd.state.or.us/OWRD/WR/cwre_info.shtml#.

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

If you have questions regarding the completion of this form, please call 503-986-0900 and ask for the Certificate Section.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see http://www.wrd.state.or.us/OWRD/mgmt_reimbursement_authority.shtml.

**SECTION 1
GENERAL INFORMATION**

1. File Information

APPLICATION # (G, R, S or T)	PERMIT # (IF APPLICABLE)	PERMIT AMENDMENT # (IF APPLICABLE)
G-12971	G-12494	T-9625

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2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME Highlands at Broken Top Community Association co/Stephen Herr		PHONE NO. 541 318-3430	ADDITIONAL CONTACT NO.
ADDRESS 855 SW Yates Drive Suite 102			
CITY Bend	STATE OR	ZIP 97702	E-MAIL gmbtca@brokentop.org

APPLICANT/BUSINESS NAME Tetherow Golf Course LLC co/Chris Condon		PHONE NO. 541 388-2626	ADDITIONAL CONTACT NO.
ADDRESS 61240 Skyline Ranch Road			
CITY Bend	STATE OR	ZIP 97701	E-MAIL ccondon@tetherow.com

If the current property owner is not the permit or transfer holder of record, it is recommended that an assignment be filed with the Department. **The COBU must be signed by the permit or transfer holder of record.**

3. Is the Property Owner the permit or transfer holder of record?

YES NO

If "YES" the remainder of this item may be deleted.

Permit or transfer holder of record (this may, or may not, be the current property owner)

PERMIT OR TRANSFER HOLDER OF RECORD Highlands at Broken Top Community Association co/Stephen Herr			RECEIVED BY OWRD
ADDRESS 855 SW Yates Drive Suite 102			SEP 30 2014
CITY Bend	STATE OR	ZIP 97702	SALEM, OR

Are there additional permit or transfer holders of record?

YES NO

If "NO" the following box may be deleted.

ADDITIONAL PERMIT OR TRANSFER HOLDER OF RECORD Tetherow Golf Course LLC		
ADDRESS 61240 Skyline Ranch Road		
CITY Bend	STATE OR	ZIP 97701

4. Date of Site Inspection: **9-23-14**

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
Stephen Herr	9-23-14	Manager, Highlands at Broken Top CA
Ron Kidder, Botanical Dev.	01-10-11	Landscape/irrigation designer-contractor
Chris Condon	9-22-14	Manager, Tetherow Golf Course LLC irrigation system

6. County: **Deschutes**

7. If any property described in the place of use of the permit or transfer final order is excluded from this report, identify the owner of record for that property (ORS 537.230(4)):

****Mark "NA" if there are no owners of property not included in this claim**

OWNER OF RECORD		
NA		
ADDRESS		
CITY	STATE	ZIP

Are there additional Owners of Record?

YES NO

Additional Owners of Record are listed in Appendix A included with this form, per e-mail dated Sept. 4, 2013 by Gerry Clark, Water Rights Services Division, OWRD.

SECTION 2 SYSTEM DESCRIPTION

A. Points of Diversion/Appropriation

1. Point of diversion/appropriation name or number:

POINT OF DIVERSION/APPROPRIATION (POD/POA) NAME OR NUMBER (CORRESPOND TO MAP)	WELL LOG ID # FOR ALL WORK PERFORMED ON THE WELL (IF APPLICABLE)	WELL TAG # (IF APPLICABLE)
POD 1 (HBT)	DESC 51899, DESC 55459	L 23814
POD 2 (TGC)	DESC 51900	L 23815

Attach each well log available for the well (include the log for the original well and any subsequent alterations, reconstructions, or deepenings)

2. Point of diversion/appropriation source and, if from surface water, the tributary:

POD/POA NAME OR NUMBER	SOURCE	TRIBUTARY
POD 1	Deschutes Basin	N/A
POD 2	Deschutes Basin	N/A

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3. Developed use(s), period of use, and rate for each use:

POD/POA NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	RATE OR VOLUME FOR USE (CFS, GPM, OR AF)
POD 1	Irrigation	No crop - grasses	Irrigation season Typically from April to October	Varies 1.78 CFS max
POD 2	Irrigation	No crop - grasses	Irrigation season Typically from April to October	Varies 1.78 CFS max
Total Quantity of Water Used				Varies 3.6 CFS max

4. Provide a general narrative description of the distribution works. This description must trace the water system from **each** point of diversion or appropriation to the place of use:

Irrigation water is accessed via well #L23814 as noted above. The well is equipped with a vertical turbine pump. Piping from the well pump conveys water to the storage lake (Reservoir #1 on the map). A supply pipe from the storage lake conveys water to the irrigation pump station which pressurizes and supplies water to the irrigation distribution piping and irrigation sprinkler heads distributed across the irrigated lands. The well pump and the irrigation pump station are housed within the same building adjacent to the storage lake.

Irrigation water is also accessed via well #L23815 as noted above. The well is equipped with a vertical turbine pump. Piping from the well pump conveys water to the storage lake s (Reservoir #2 and Reservoir #3 on the map). A supply pipe from the storage lake conveys water to the irrigation pump station which pressurizes and supplies water to the irrigation distribution piping and irrigation sprinkler heads distributed across the irrigated lands. The well pump and the irrigation pump station are both near Reservoir #2.

SECTION 2

SYSTEM DESCRIPTION (B through H)

Are there multiple PODs or POAs?

YES NO

If "YES" you will need to copy and complete Sections 2B through 2H for each POD/POA.

POD/POA Name or Number this section describes (only needed if there is more than one):

POD 1, POD 2

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B. Place of Use

1. Is the right for municipal use?

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YES **NO***If "YES" the table below may be deleted.*

TWP	RNG	MER	SEC	Q-Q	GLot	DLC	USE	IF IRRIGATION, # PRIMARY ACRES	IF IRRIGATION, # SUPPLEMENTAL ACRES
17S	11E	WM	35	SE-SW			IRR	3.2	
17S	11E	WM	35	SW-SE			IRR	4.0	
17S	11E	WM	35	SE-SE			IRR	5.1	
18S	11E	WM	2	NW-NW			IRR	0.2	
18S	11E	WM	2	NE-NW			IRR	17.8	
18S	11E	WM	2	SW-NW			IRR	1.9	
18S	11E	WM	2	SE-NW			IRR	23.0	
18S	11E	WM	2	NW-NE			IRR	19.3	
18S	11E	WM	2	NE-NE			IRR	9.9	
18S	11E	WM	2	SW-NE			IRR	11.5	
18S	11E	WM	2	SE-NE			IRR	1.6	
18S	11E	WM	2	NE-SW			IRR	11.4	
18S	11E	WM	2	SE-SW			IRR	5.2	
18S	11E	WM	2	NW-SE			IRR	9.8	
18S	11E	WM	2	NE-SE			IRR	4.4	
18S	11E	WM	2	SW-SE			IRR	5.4	
18S	11E	WM	2	SE-SE			IRR	1.3	
								135.0	SUB TOTAL
18S	11E	WM	2	SE-SE			IRR	1.6	
18S	11E	WM	1	SW-SW			IRR	4.3	
18S	11E	WM	11	NE-NE			IRR	19.0	
18S	11E	WM	11	SE-NE			IRR	6.3	
18S	11E	WM	11	NE-SE			IRR	17.0	
18S	11E	WM	11	SE-SE			IRR	9.5	
18S	11E	WM	12	NW-NW			IRR	11.8	
18S	11E	WM	12	NE-NW			IRR	11.0	
18S	11E	WM	12	NW-NE			IRR	3.9	
18S	11E	WM	12	SW-NW			IRR	13.4	
18S	11E	WM	12	SE-NW			IRR	14.4	
18S	11E	WM	12	SW-NE			IRR	5.3	
18S	11E	WM	12	NW-SW			IRR	24.9	
18S	11E	WM	12	NE-SW			IRR	1.4	
18S	11E	WM	12	SW-SW			IRR	5.6	
18S	11E	WM	12	SE-SW			IRR	0.6	
								150.0	SUB TOTAL
Total Acres Irrigated								285.0	TOTAL

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (Gov Lot), Quarter-Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, Gov Lot, and QQ.

C. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion/appropriation to the place of use.

1. Is a pump used?

YES NO

If "NO" items 2 through item 6 may be deleted.

2. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Robbco	9THE	23355	Vertical turbine (HBT well)	9-IN	8-IN
Cornell	3YH-CC	154918944	Centrifugal end suction (HBT booster)	8-IN	8-IN
N/A	N/A	N/A	Vertical turbine (TGC well)	8-IN	8-IN
Flowserv	10EMM-9	0610NSH00672-4	Centrifugal end suction (TGC booster)	8-IN	8-IN

3. Motor Information

MANUFACTURER	HORSEPOWER
US Motors (HBT well)	150 hp
Cornell (HBT booster)	125 hp
Emerson (TGC well)	100 hp
Emerson (TGC booster)	75 hp

4. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *IF A WELL, THE WATER LEVEL DURING PUMPING	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
150		349 feet	15 feet	1.87
125	145 Psi discharge	0	Varies- 85 feet max	1.87
100		301 feet	7 feet	1.80
75				1.34

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5. Provide pump calculations:

Well Pump- theoretical capacity calculation (HBT):

$$Q = 550(e)(hp) / (j) (TDH)$$

$$e = .70$$

$$hp = 150$$

$$j = 62.4$$

$$TDH = 349' + 15' + 26' (\text{minor losses}) = 390'$$

$$Q = 550(.70)(150) / 62.4(390) = 2.37 \text{ cfs}$$
 (Note well pump discharge is controlled to 1.87 cfs maximum by pc controller and variable speed motor drive).

Irrigation Pump Station pump theoretical calculation (HBT):

$$e = .75$$

$$hp = 125$$

$$TDH = 335' (\text{station discharge pressure set} = 145 \text{ psi})$$

$$Q = 550(.75)125 / 62.4(335) = 2.46 \text{ cfs}$$
 (Note irrigation pump discharge is controlled to 1.87 cfs maximum by pc controller and variable speed motor drive).

Well Pump- theoretical capacity calculation (TGC):

$$Q = 550(e)(hp) / (j) (TDH)$$

$$e = .70$$

$$hp = 100$$

$$j = 62.4$$

$$TDH = 301' + 15' + 26' (\text{minor losses}) = 342'$$

$$Q = 550(.70)(100) / 62.4(342) = 1.80 \text{ cfs}$$

Irrigation Pump Station pump theoretical calculation (TGC):

$$e = .75$$

$$hp = 75$$

$$TDH = 370' (\text{station discharge pressure set} = 145 \text{ psi})$$

$$Q = 550(.75)75 / 62.4(370) = 1.34 \text{ cfs}$$

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6. Measured Pump Capacity (using meter if meter was present and system was operating)

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
852,842	852,854	15 min.	1.78 (POD #1 – HBT)
668,724	668,736	15 min.	1.78 (POD #2 – TGC)

Reminder: For pump calculations use the reference information at the end of this document.

7. Is the distribution system piped?

SEP 30 2014

YES NO

If "NO" items 8 through item 11 may be deleted.

8. Mainline Information

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MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
12 inch diameter	4500 feet	pvc	buried
10 inch diameter	800 feet	pvc	buried
8 inch diameter	3250+10,000 =13,250 feet	pvc	buried
6 inch diameter	18,800+22,960 41,760=feet	pvc	buried
4 inch diameter	400 feet	pvc	buried

9. Lateral or Handline Information

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
2 inch diameter (HBT)	68,000 feet (est)	pvc	buried
2 inch diameter (TGC)	130,000 feet (est)	pvc	buried

10. Sprinkler Information

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)
Rainbird Eagle 900 Series	60-100 psi	20-60	590 (approx.)	N/A	1.8 CFS for any combination of zones at any one time
Rainbird (model varies)	60-100 psi	7-40	2800 (approx.)	N/A	1.8 CFS for any combination of zones at any one time

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Pivot Information

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)
N/A				

12. Additional notes or comments related to the system:

As noted earlier, the Irrigation pumping system is a package system including a pc controller and variable motor drive, which allows for strict discharge control and maximum flow rates, as well as accommodating a wide variety of sprinkler and flow demands/needs.

SEP 30 2014

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☒ YES ☐ NO**D. Groundwater Source Information (Well and Sump)**

1. Is the appropriation from ground water (well or sump)?

If "NO", items 2 through 8 relating to this section may be deleted.

2. Describe the access port (type and location) or other means to measure the water level in the well:

1-1/2" Schedule 40 PVC dedicated access conduit located at well-head.

3. If well logs are not available, provide as much of the following information as possible:

CASING DIAMETER	CASING DEPTH	TOTAL DEPTH	COMPLETION DATE OF ORIGINAL WELL	COMPLETION DATES OF ALTERATIONS	WHO THE WELL WAS DRILLED FOR	WELL DRILLED BY
10" (HBT)	505	532	8/14/1998	6/30/2003	Cascade Highlands LTD Partnership	Jack Abbas-Abbass Well Drilling Co.
12" (TGC)	522	522	7/24/1998	N/A	Cascade Highlands LTD Partnership	Western Water Development Corporation

4. In addition to the information requested in item "3" above, provide any other information which may help the Department locate any well logs associated with this appropriation.

DESC 51899 (original well HBT), DESC 55459 (alteration HBT), DESC 51900 (TGC)

5. Is the appropriation from a dug well (sump)?

☐ YES ☒ NO*If "NO", items 6 through 8 relating to this section may be deleted.***E. Storage**

1. Does the distribution system include in-system storage (i.e. storage tank, bulge in system / reservoir)

☒ YES ☐ NO*If "NO", item 2 and 3 relating to this section may be deleted.**If "YES" is it a:* Storage Tank

Bulge in System / Reservoir

☐ YES ☒ NO
☒ YES ☐ NO*Complete appropriate table(s) below, unused table may be deleted.*

2. Storage Tank:

MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.)	CAPACITY (IN GALLONS)	ABOVE GROUND OR BURIED
N/A		

3. Bulge in System / Reservoir:

RESERVOIR NAME OR NUMBER (CORRESPOND TO MAP)	APPROXIMATE DAM HEIGHT	APPROXIMATE CAPACITY (IN ACRE FEET)
RES #1 (HBT)	9-FEET	9.0-ACRE FEET
RES #2 (TGC-1)	9-FEET	9.0 ACRE FEET
RES #3 (TGC-2)	8-FEET	8.0 ACRE FEET

F. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES ☒ NO

If "NO", items 2 through 4 relating to this section may be deleted.

G. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

YES ☒ NO

If "NO", items 2 through 4 relating to this section may be deleted.

H. Reservoir

1. Does the claim involve a reservoir modified through a transfer?

YES ☒ NO

Reminder: This section should only be completed if the reservoir right has been modified through the transfer process. If the claim is for a permitted reservoir use the Claim of Beneficial Use form for reservoirs.

If "NO", items 2 through 9 relating to this section may be deleted.

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SECTION 3**CONDITIONS**

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Please pay special attention to this section. All conditions contained in the permit, permit amendment, transfer final order, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits, transfer final orders, and any extension final orders contain any or all of the following dates; the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use is to be completed by. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit, extension or transfer final order:

	DATE FROM PERMIT OR TRANSFER	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	June 19, 1996		
BEGIN CONSTRUCTION (A)	June 19, 1997	July 20, 1998 (well desc 51899)	Geotechnical engineering and well design for the well was complete in the time limit.
COMPLETE CONSTRUCTION (B)	October 1, 2013	October 1, 2013	Construction of wells, pumps, storage, and irrigation systems to put the water to beneficial use has been completed.
COMPLETE APPLICATION OF WATER (C)	October 1, 2013	October 1, 2013	

* MUST BE WITHIN PERIOD BETWEEN PERMIT, TRANSFER FINAL ORDER, OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

2. Is there an extension final order(s)?**YES** NO

If "NO", you may delete item 3 in this section.

3. If for a transfer extension order, provide the following information:

VOLUME	PAGE	DATE EXTENDED TO

4. Initial Water Level Measurements:**a. Was the water user required to submit an initial static water level measurement?****YES** NO

If "NO", items 4b through 4d relating to this section may be deleted.

b. What month was the initial measurement to be taken in?

March

c. Was the measurement submitted to the Department?**YES** NO

d. If the initial measurement was not submitted, provide that measurement now, if available:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT
Previously Submitted			

5. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements?

☒ YES ☐ NO

If "NO", items 5b through 5e relating to this section may be deleted.

b. Provide the month in which the static water level measurement was to be made:

March

c. Were the static water level measurements taken in the month required?

☒ YES ☐ NO

d. If "YES", were those measurements submitted to the Department?

☒ YES ☐ NO

e. If the annual measurements were not submitted, provide the measurements now:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT
Previously Submitted			

6. Pump Test (Required for most ground water permits prior to issuance of a certificate)

a. Did the permit require the submittal of a pump test?

☒ YES ☐ NO

If "NO", items 6b through 6d relating to this section may be deleted.

b. Has the pump test been previously submitted to the Department?

☒ YES ☐ NO

c. Is the pump test attached to this claim?

☒ YES ☐ NO

d. Has the pump test been approved by the Department?

☒ YES ☐ NO

7. Measurement Conditions:

a. Does the permit, permit amendment, transfer final order, or any extension final order require the installation of a meter or approved measuring device?

☒ YES ☐ NO

If "NO", items 7b through 7f relating to this section may be deleted.

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion or appropriation.

b. Has a meter been installed?

☒ YES ☐ NO

c. Meter Information

POD/POA NAME OR #	MANUFACTURER	SERIAL #	CONDITION (WORKING OR NOT)	CURRENT METER READING	DATE INSTALLED
POD#1	Water Specialties	20033059-8	Working	852,854	August 2003
POD #2	Sensus	67419456	Working	668,736	July 2006

d. If a meter has not been installed, has a suitable measuring device been installed and approved by the Department?

☒ N/A ☐ YES ☐ NO

8. Recording and reporting conditions

a. Is the water user required to report the water use to the Department?

YES NO

If "NO", item 8b relating to this section may be deleted.

b. Have the reports been submitted?

YES NO

METHOD OF SUBMITTING REPORT (PAPER OR ELECTRONIC)	WATER USER REPORTING ID
Paper	Dan Cardot, Oregon Premier Properties

If the reports have not been submitted, attach a copy of the reports if available.

9. Fish Screening

a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion?

YES NO

10. By-pass Devices

a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion?

YES NO

11. Other conditions required by permit, permit amendment final order, extension final order, or transfer final order

a. Were there special well construction standards?

YES NO

b. Was submittal of a ground water monitoring plan required?

YES NO

c. Was the water user required to restore the riparian area if it was disturbed?

YES NO

d. Was a fishway required?

YES NO

e. Was submittal of a letter from an engineer required prior to storage of water?

YES NO

f. Was submittal of a water management and conservation plan required?

YES NO

g. Other conditions?

YES NO

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

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SECTION 4 VARIATIONS

Include a description of variations from the permit, permit amendment final order, extension final order, or transfer final order. (i.e. *"The permit allowed three points of diversion. The water user only developed one of the points."* or *"The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres."*)

--

SECTION 5 ATTACHMENTS

If you are attaching any documents to this report, provide a list:

ATTACHMENT NAME	DESCRIPTION
Well Report DESC 51899	Original well log- POD #1
Well Report DESC 55459	Well modification report- POD #1
Well Report DESC 51900	Original well log – POD #2

SECTION 6 CLAIM SUMMARY

POD / POA NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
POD #1	1.875 cfs	2.37 cfs	1.78 cfs	irrigation	150	135
POD #2	1.875 cfs	1.8 cfs	1.78 cfs	irrigation	150	150

SECTION 7 CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

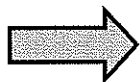
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Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

**Aerial OrthoPhotography with survey ground control and 1.0-foot pixel resolution obtained in September 2010 was used to prepare the claim of beneficial use map. Source of orthographic aerial photograph is 3Di West (GeoTerra Mapping Group). Survey Ground Control set by D'Agostino Parker LLC, Keith Dagostino PLS 2885.
Photograph/flight date: September 2, 2010.
3Di West Job #10-106.**



Map Checklist

Please be sure that the map you submit includes ALL the items listed below.
(Reminder: Incomplete maps and/or claims may be returned.)

- ☒ Map on polyester film.
- ☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- ☒ Township, Range, Section, Donation Land Claims, and Government Lots
- ☒ If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- ☒ Locations of fish screens, fish by-pass devices, meters and measuring devices in relationship to point of diversion or appropriation.
- ☒ Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
- ☒ Point(s) of diversion or appropriation (illustrated and coordinates)
- ☒ Tax lot boundaries and numbers
- n/a** Source illustrated if surface water
- ☒ Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- ☒ Application and permit number or transfer number
- ☒ North arrow
- ☒ Legend
- ☒ CWRE stamp and signature

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SECTION 8 SIGNATURES

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



CWRE NAME Keith Dagostino	PHONE NO. 541.322.8807	ADDITIONAL CONTACT NO.
ADDRESS 185 SW Shevlin Hixon Drive, Suite 101		
CITY Bend	STATE OR	ZIP 97702
E-MAIL kdagostino@dp2llc.com		

Permit or Transfer Holder's of Record Signature or Acknowledgement

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	DATE
	Highlands at Broken Top Community Association co/Bogdan Dziurzynski	9/23/14
	Tetherow Golf Course LLC co/Chris Van Der Velde	9/19/14

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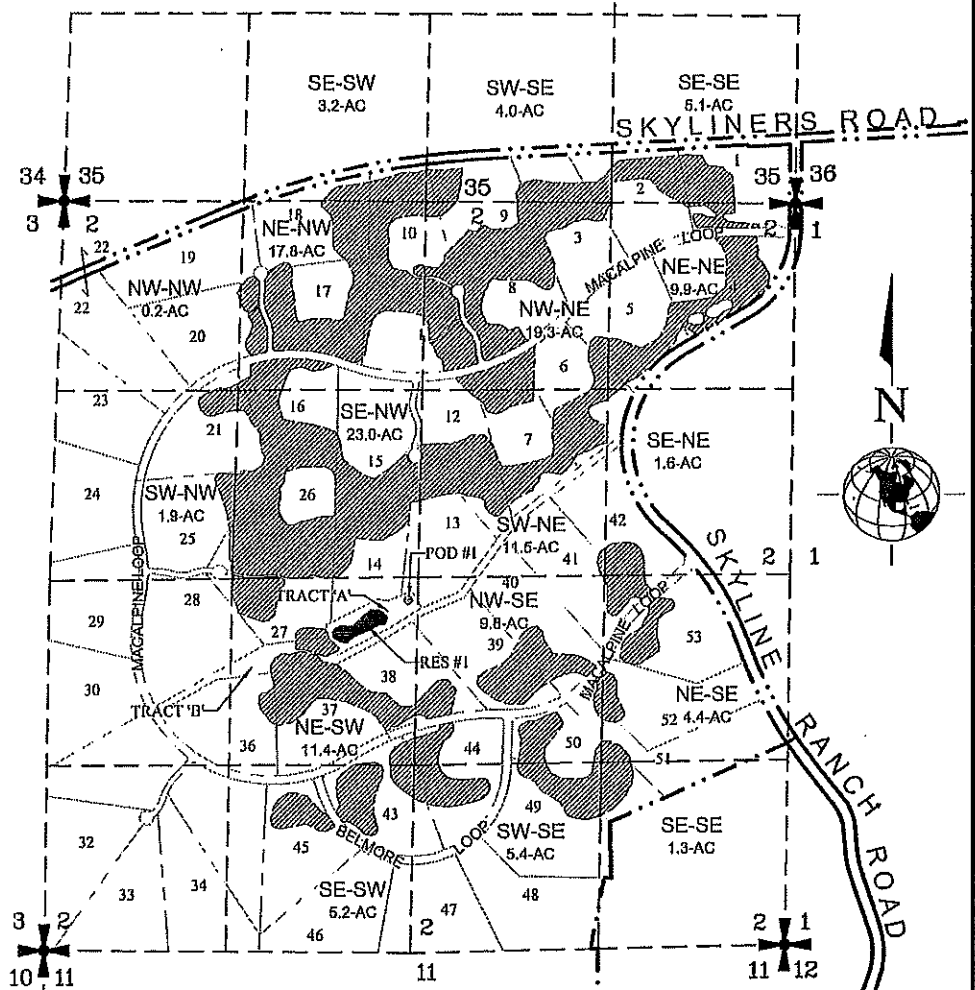
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HIGHLANDS AT BROKEN TOP

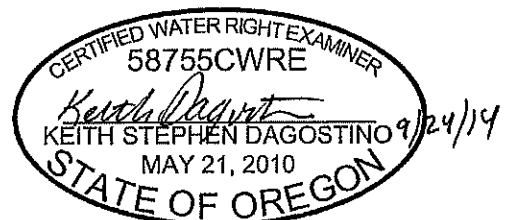
LOT # TAXLOT

1	17-11-35-D0-00100
2	17-11-35-D0-00200
3	18-11-02-A0-00100
4	18-11-02-A0-01200
5	18-11-02-A0-01100
6	18-11-02-A0-01000
7	18-11-02-A0-00900
8	18-11-02-A0-00200
9	18-11-02-A0-00300
10	18-11-02-A0-00400
11	18-11-02-A0-00500
12	18-11-02-A0-00800
13	18-11-02-A0-00700
14	18-11-02-B0-00900
15	18-11-02-B0-00800
16	18-11-02-B0-00700
17	18-11-02-B0-00100
18	18-11-02-B0-00200
19	18-11-02-B0-00300
20	18-11-02-B0-00400
21	18-11-02-B0-00600
22	18-11-02-B0-01500
23	18-11-02-B0-01400
24	18-11-02-B0-01300
25	18-11-02-B0-01100
26	18-11-02-B0-01000
27	18-11-02-C0-00200
28	18-11-02-C0-00300
29	18-11-02-C0-00800
30	18-11-02-C0-00900
31	18-11-02-C0-01000
32	18-11-02-C0-01100
33	18-11-02-C0-01200
34	18-11-02-C0-01300
35	18-11-02-C0-01400
36	18-11-02-C0-00600
37	18-11-02-C0-00500
38	18-11-02-C0-01900
39	18-11-02-D0-00400
40	18-11-02-D0-00200
41	18-11-02-D0-00100
42	18-11-02-A0-01400
43	18-11-02-C0-01800
44	18-11-02-D0-00600
45	18-11-02-C0-01500
46	18-11-02-C0-01600
47	18-11-02-D0-00700
48	18-11-02-D0-00800
49	18-11-02-D0-00900
50	18-11-02-D0-01000
51	18-11-02-D0-01100
52	18-11-02-D0-01200
53	18-11-02-D0-01300
TRACT 'A'	18-11-02-C0-00100
TRACT 'B'	18-11-02-C0-00400



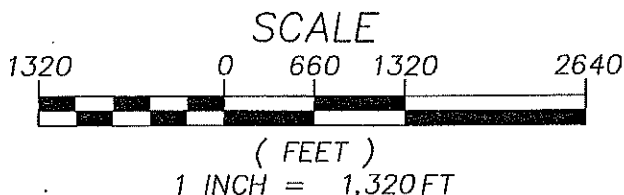
LEGEND

- RIGHT OF WAY LINE
- SECTION LINE
- TAXLOT - PROPERTY LINE
- AREA OF BENEFICIAL USE



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DISCLAIMER:
THIS MAP IS NOT INTENDED TO PROVIDE LEGAL DIMENSIONS
OR LOCATIONS OF PROPERTY OWNERSHIP LINES

SHEET:

1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 9/9/14
PLOT DATE: 9/9/14

SCALE:

1"=1320'

CLAIM OF BENEFICIAL USE MAP FOR

ASSIGNMENT OF PERMIT G-12494
(APPLICATION #: 12971)

Township 17 and 18 South, Range 11 East

BEND/DESCHUTES

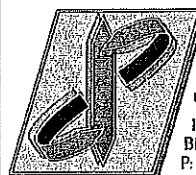
OREGON

PROJECT:

HBT001

DRAWING FILE NAME:

HBT001_AERIAL



D'Agostino Parker, LLC

CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR, SUITE 101
BEND, OR 97702
P: (541) 322-8807

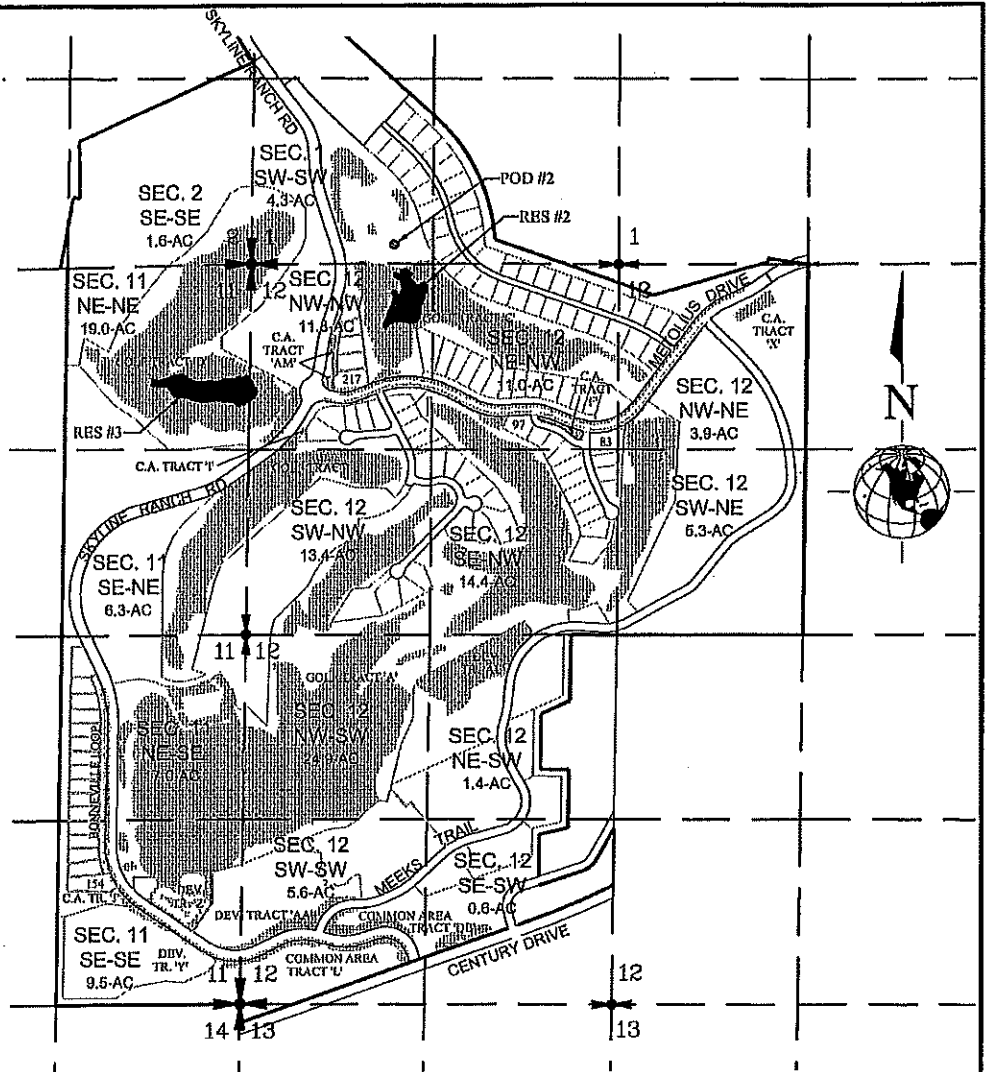
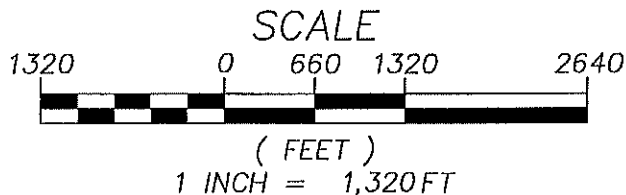
TETHEROW GOLF COURSE

LEGAL LOT	TAXLOT
GOLF TRACT 'A'	18-11-11-00-00500
	18-11-12-00-01700
GOLF TRACT 'B'	18-11-11-00-00400
	18-11-12-00-01500
GOLF TRACT 'C'	18-11-01-C0-17000
	18-11-12-00-01300
GOLF TRACT 'D'	18-11-11-00-00100
DEV. TRACT 'AA'	18-11-11-DD-00100
	18-11-12-00-02100
DEV. TRACT 'Y'	18-11-11-DD-00300
DEV. TRACT 'Z'	18-11-11-DD-00200
C.A. TRACT 'A'	18-11-12-CA-02100
C.A. TRACT 'AM'	18-11-12-BB-01500
C.A. TRACT 'DB'	18-11-12-00-02300
C.A. TRACT 'F'	18-11-12-BA-03800
C.A. TRACT 'I'	18-11-12-BB-00200
C.A. TRACT 'J'	18-11-11-DD-00500
C.A. TRACT 'L'	18-11-12-00-02200
	18-11-11-DD-00400
C.A. TRACT 'X'	18-11-12-00-00900
LOT 83	18-11-12-BA-03900
LOT 97	18-11-12-BA-03400
LOT 154	18-11-11-DD-01000
LOT 217	18-11-12-BB-01600

LEGEND

DEV.	DEVELOPMENT
TR.	TRACT
C.A.	COMMON AREA
POD	POINT OF DIVERSION
RES.	RESERVOIR
AC	ACRES
---	RIGHT OF WAY LINE
---	SECTION LINE
---	TAXLOT - PROPERTY LINE
	AREA OF BENEFICIAL USE

TOTAL AREA OF
BENEFICIAL USE = 150 ACRES



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RENEWES: DEC. 31, 2015

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OR LOCATIONS OF PROPERTY OWNERSHIP LINES

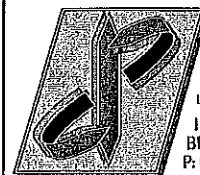
SHEET:
1 of 1

DESIGNED: KSD
DRAWN BY: CAB
APP'D BY: KSD
CHECK'D BY: KSD
LAST EDIT: 9/9/14
PLOT DATE: 9/9/14

SCALE:
1"=1320'

CLAIM OF BENEFICIAL USE MAP FOR ASSIGNMENT OF PERMIT G-12494 (APPLICATION #: 12971)

Township 17 and 18 South, Range 11 East
BEND/DESCHUTES OREGON
PROJECT: TGC001
DRAWING FILE NAME: TGC001-WTR_RIGHTS-032911



D'Agostino Parker, LLC

CIVIL ENGINEERING / PLANNING /
LAND SURVEYING / CONSTRUCTION MANAGEMENT
185 SHEVLIN HIXON DR. SUITE 101
BEND, OR 97702
P: (541) 322-8807

APPENDIX A
 Highlands at Broken Top and Tetherow Golf
 Owners of Record 9/24/2014

Highlands at Broken Top

Lot #	Taxlot	Owner of Record
1	17-11-35-D0-00100	Weston Investment Co LLC
2	17-11-35-D0-00200	Kyriakos, James Dean and Michelle
3	18-11-02-A0-00100	RKL LLC
4	18-11-02-A0-01200	Davidson Family Trust
5	18-11-02-A0-01100	FC Fund LLC
6	18-11-02-A0-01000	Hardin, Timothy M and Caren M
7	18-11-02-A0-00900	ARGO Capital Group LTD
8	18-11-02-A0-00200	Zehnder, Werner and Susan
9	18-11-02-A0-00300	Bien, Rodney W and Kathryn W
10	18-11-02-A0-00400	Bledsoe, Drew and Maura
11	18-11-02-A0-00500	Thomas E Strange Rev Trust ETAL
12	18-11-02-A0-00800	Ryan, Michael G and Moore, Kathleen R
13	18-11-02-A0-00700	Wright, Kenton D
14	18-11-02-B0-00900	Sandgren Living Trust
15	18-11-02-B0-00800	Steelhammer, Geoffrey G and Brandy R
16	18-11-02-B0-00700	Durkin, David A and Mardi L
17	18-11-02-B0-00100	Johnson, Kenneth Jeffrey ETAL
18	18-11-02-B0-00200	Charno, John and Sandra
19	18-11-02-B0-00300	Wickham, Douglas John ETAL
20	18-11-02-B0-00400	Bryand, Andy D and Nancy K
21	18-11-02-B0-00600	Dostal, Kevin Jay and Tamara
22	18-11-02-B0-01500	Breyman Properties LLC
23	18-11-02-B0-01400	Dryden, Jeff and Dryden, Mike
24	18-11-02-B0-01300	Allen, James P and Brenda Scarlett
25	18-11-02-B0-01100	Brooks and Sheri Hilton Joint Trust
26	18-11-02-B0-01000	NTC & Co LLP FBO Patrick L Radecki IRA
27	18-11-02-C0-00200	Lea A Dziurzynski Rev Trust ET AL
28	18-11-02-C0-00300	Azur, Bryan and Angela
29	18-11-02-C0-00800	Van Velzen, Femke
30	18-11-02-C0-00900	Warta Family Trust
31	18-11-02-C0-01000	Equinox Holdings LTD
32	18-11-02-C0-01100	Valentine Revocable Trust
33	18-11-02-C0-01200	Douglas F Berry MD Profit ET AL Trust
34	18-11-02-C0-01300	Farver Benjamin and Meaghan
35	18-11-02-C0-01400	M Louis Pengue JR Rev Trust ETAL
36	18-11-02-C0-00600	Jones, Tracy A and Tammy J
37	18-11-02-C0-00500	Denson Investments LLC
38	18-11-02-C0-01900	Lovejoy, Winfield Scott III and Kristy Marie
39	18-11-02-D0-00400	Zidek Family QSST Trust FBO Brian P Zidek

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40	18-11-02-D0-00200	Fox, Matthew Chandler and Margherita
41	18-11-02-D0-00100	Worthington, Roger G
42	18-11-02-A0-01400	Moore, Gary L and Kelly C
43	18-11-02-C0-01800	Egeland, Daniel E
44	18-11-02-D0-00600	Fourneir, Bruce R and Joanne E
45	18-11-02-C0-01500	Butterworth Family Rev Trust
46	18-11-02-C0-01600	Laakmann Living Trust
47	18-11-02-D0-00700	Laakmann Living Trust
48	18-11-02-D0-00800	Todd Allen Craig
49	18-11-02-D0-00900	Potter Michael J and Tressi L
50	18-11-02-D0-01000	Linda G Storch Revocable Trust
51	18-11-02-D0-01100	Lilly, Albert Jackson III and Soma I
52	18-11-02-D0-01200	Tucker Family Revocable Trust
53	18-11-02-D0-01300	2004 Herold Family Trust
Tract 'A'	18-11-02-C0-00100	Cascade Highlands LLC
Tract 'B'	18-11-02-C0-00400	Highlands At Broken Top Comm Assoc Inc

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Tetherow Golf

Lot #	Taxlot	Owner of Record
Golf Tract 'A'	18-11-11-00-00500	Tetherow Golf Course LLC
	18-11-12-00-01700	Tetherow Golf Course LLC
Golf Tract 'B'	18-11-11-00-00400	Tetherow Golf Course LLC
	18-11-12-00-01500	Tetherow Golf Course LLC
Golf Tract 'C'	18-11-01-C0-17000	Tetherow Golf Course LLC
	18-11-12-00-01300	Tetherow Golf Course LLC
Golf Tract 'D'	18-11-11-00-00100	Tetherow Golf Course LLC
Dev. Tract 'AA'	18-11-11-DD-00100	Weston Investment Co LLC
	18-11-12-00-02100	Weston Investment Co LLC
Dev. Tract 'Y'	18-11-11-DD-00300	VRE Tract Y LLC
Dev. Tract 'Z'	18-11-11-DD-00200	Tetherow Golf Course LLC
C.A. Tract 'A'	18-11-12-CA-02100	Weston Investment Co LLC
C.A. Tract 'AM'	18-11-12-BB-01500	SFI Cascade Highlands LLC
C.A. Tract 'DB'	18-11-12-00-02300	Arrowood Tetherow LLC
C.A. Tract 'F'	18-11-12-BA-03800	SFI Cascade Highlands LLC
C.A. Tract 'I'	18-11-12-BB-00200	SFI Cascade Highlands LLC
C.A. Tract 'J'	18-11-11-DD-00500	SFI Cascade Highlands LLC
C.A. Tract 'L'	18-11-12-00-02200	Arrowood Tetherow LLC
	18-11-11-DD-00400	Arrowood Tetherow LLC
C.A. Tract 'X'	18-11-12-00-00900	Tetherow Glen 58 LLC
Lot 83	18-11-12-BA-03900	Yelas Developments INC
Lot 97	18-11-12-BA-03400	Harris, John and Alma Ruth
Lot 154	18-11-11-DD-01000	SFI Cascade Highlands LLC
Lot 217	18-11-12-BB-01600	Alexander, Scott and Tricia

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STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form

DESC 51899

WELL ID # 112814723814
(START CARD) # 102029

(1) OWNER:

Well Number: CH2

Name Cascade Highlands Ltd. Partnership
Address P.O. Box 80054
City Portland State OR Zip 97208

(2) TYPE OF WORK:

☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 507 ft.
Explosives used ☐ Yes ☒ No Type _____ Amount _____

HOLE				SEAL				Amount	
Diameter	From	To	Material	From	To	Material	From	To	sacks or pounds
17.5"	0	507	Cement	0	285				236 Sacks

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	12"	+1	378	.250	☒	☐	☒	☐
	12"	378	504	.375	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

		Method		Material					
		Type		Tele/pipe		Casing		Liner	
From	To	Slot size	Number	Diameter	size				
378	504	3/16"	3024	12"	Pipe	☒	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
1000	20'+/-		1hr.

Temperature of Water 54 Depth Artesian Flow found _____

Was a water analysis done? ☐ Yes By whom _____

Did any strata contain water not suitable for intended use? ☐ Yes ☐ No

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata: _____

(9) LOCATION OF WELL by legal description:

County Deschutes Latitude _____ Longitude _____
Township 18S N or S, Range 11E E or W, of WM.
Section 2 _____
Tax Lot 100 R1 Lot _____ Block _____ Subdivision BroknTop
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:

301 ft. below land surface. Date 8/14/98

Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 308

From	To	Estimated Flow Rate	SWL
308	497	3000+	

(12) WELL LOG:

Ground elevation _____

Material	From	To	SWL
Brown Sandy Top Soil	0	3	
Boulders	3	18	
Brown & Pink Pumice	18	29	
Lt. Blue Gray Basalt	29	33	
Cement Grout 4 yds. from 6'-33'	33	33	
Lt. Blue Gray Basalt	33	54	
Brown Volcanics	54	64	
Gray Basalt	64	114	
Brown & Red Cinders	114	126	
Gray & Black Basalt & Cinders	126	140	
Lt. Gray Ash (Firm)	140	156	
Hard Gray Basalt	156	210	
Lt. Gray Ash	210	219	
Hard Gray Basalt	219	233	
Brown Ash & Basalt	233	246	
Gray Basalt with Ash	246	296	
Lt. Gray Volcanic Tuft	296	308	
Brown Conglomerate WB	308	420	301
Broken Basalt WB	420	433	301
Red Cinder Rock WB	433	450	301
Brown & Red Conglomerate WB	450	475	301
Brown & Gray Basalt WB	475	497	301
Hard Gray Basalt	497	507	301

Date started 7/20/98 Completed 8/14/98

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Robert Buckner WWC Number 1385
Date 9/6/98
Western Water Development Corporation

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER

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SEP 30 2014

SALEM, OR

DESC
51900

WELL ID #

(START CARD) # **102027**

~~Page 2~~

Well Number:

Address

City _____ State _____ Zip _____

☐ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

☐ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

Special Construction approval ☐ Yes ☐ No Depth of Completed Well _____ ft.
Explosives used ☐ Yes ☐ No Type _____ Amount _____

HOLE		SEAL		Amount
Diameter	From To	Material	From To	sacks or pounds

[illegible]

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s)

☐ Perforations	Method	_____
☐ Screens	Type	_____ Material

From	To	Slot size	Number	Diameter	Tel./pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

☐ Pump ☐ Bailer ☐ Air ☐ Flowing
Artesian

Yield gal/min	Drawdown	Drill stem at	Time
---------------	----------	---------------	------

Temperature of Water	Depth Artesian Flow found
50	10
55	15
60	20
65	25
70	30
75	35
80	40
85	45
90	50
95	55
100	60
105	65
110	70
115	75
120	80
125	85
130	90
135	95
140	100
145	105
150	110
155	115
160	120
165	125
170	130
175	135
180	140
185	145
190	150
195	155
200	160
205	165
210	170
215	175
220	180
225	185
230	190
235	195
240	200
245	205
250	210
255	215
260	220
265	225
270	230
275	235
280	240
285	245
290	250
295	255
300	260
305	265
310	270
315	275
320	280
325	285
330	290
335	295
340	300
345	305
350	310
355	315
360	320
365	325
370	330
375	335
380	340
385	345
390	350
395	355
400	360
405	365
410	370
415	375
420	380
425	385
430	390
435	395
440	400
445	405
450	410
455	415
460	420
465	425
470	430
475	435
480	440
485	445
490	450
495	455
500	460
505	465
510	470
515	475
520	480
525	485
530	490
535	495
540	500
545	505
550	510
555	515
560	520
565	525
570	530
575	535
580	540
585	545
590	550
595	555
600	560
605	565
610	570
615	575
620	580
625	585
630	590
635	595
640	600
645	605
650	610
655	615
660	620
665	625
670	630
675	635
680	640
685	645
690	650
695	655
700	660
705	665
710	670
715	675
720	680
725	685
730	690
735	695
740	700
745	705
750	710
755	715
760	720
765	725
770	730
775	735
780	740
785	745
790	750
795	755
800	760
805	765
810	770
815	775
820	780
825	785
830	790
835	795
840	800
845	805
850	810
855	815
860	820
8	

Was a water analysis done? ☐ Yes By whom _____

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

County _____ Latitude _____ Longitude _____
Township 18S N or S. Range 11E E or W. of WM.
Section 12 $\frac{1}{4}$ $\frac{1}{4}$
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

_____ ft. below land surface. Date _____

Artesian pressure _____ lb. per square inch. Date _____

Depth at which water was first found

From	To	Estimated Flow Rate	SWL

Ground elevation

[illegible]

Date started _____ **Completed** _____

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Robert Buck WWC Number 1385
Date 9-6-98
Western Water Development Corporation

DESC 55459

DESC 55459

Received Date: 07-14-2003

STATE OF OREGON

Water Supply Well Report

(as required by ORS 537.765)

Well ID Tag # L 23814

Start Card # 156243

Instructions for completing this report are on the last page of this form.

(1) Owner Well Number: 2
 Name:
 CASCADE HIGHLANDS LTD
 Street: 61999 BROKENTOP DR
 City: BEND State: OR Zip Code: 97702

(2) Type of Work
☐ New ☐ Alter (Recondition) ☒ Alter (Repair)
☐ Deepening ☐ Abandonment

(3) Drill Method
☒ Rotary Air ☐ Rotary Mud ☒ Cable ☐ Auger
 Other:

(4) Proposed Use
☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation ☐ Injection
☐ Livestock ☐ Thermal Other:

(5) Bore Hole Construction
☐ Special Standards: Depth of completed well: 532.00 ft.
☐ Explosives Used: Amount: Type:

Hole			Seal			
Diameter	From	To	Mtrl	From	To	Sacks/lbs
10.00	505.00	532.00				

How was seal placed? Other: DID NOT DISTURB
 Back fill placed from: Material:
 Filter pack from: Size:

(6) Casing / Liner

Casing/ Liner	Diameter	From	To	Gauge	Mtrl	Weld	Thrd	Shoe at	Shoe used
C	10.00	2.00	505.00	.250	S	X		505	In

(7) Perforation / Screens

Perforations: Casing/
 Mtrl From To Width Height #Slots Dia. t/pSize Lnr Method

Screens:
 Mtrl From To S Size #Slots Dia. t/pSize Type Gauge

(8) Well Tests (Minimum testing time is one hour)

Type	Yield	Units	Drawdown	Stem at	Duration
A	1000.00	G		530.00	1.00

Temperature of Water: 47 F

Was water analysis done? ☐ Depth of artesian flow:
 by whom?

Did any strata contain water unsuitable for use? ☐ Too Little ☐ Salty
☐ Muddy ☐ Odor ☐ Colored other:

Depth of strata:

(9) Location of Hole by legal description

County: DESC Latitude: 44°2'23" Longitude: 121°22'43"
 Township: 1000 S 185 Range: 11.00 E
 Section: 2 NESW Lot: Block:
 Tax Lot: 100 Subdivision: BROKENTOP
 Street Address of Well (or nearest address):
 NA NOT YET ASSIGNED
 MAP, with location identified, must be attached.

(10) Static Water Level

Feet below land surface: 347.0 Date: 06 / 30 / 2003
 Artesian Pressure: Date:

(11) Water Bearing Zones

Depth at which water was first found: 505.00 ft.

From	To	est Flow	swl
505.00	532.00	1000.00	347

(12) Well Log Ground Elevation: 3797 ft.

Material	From	To	swl
BEGINNING SWL 347	0.00	0.00	
FRAC BASALT/LAVA GRAY RED	505.00	532.00	347
RAN 10" CASING	0.00	0.00	
TO SHUT OFF SAND	0.00	0.00	
TAG NUMBER ON WELL DOES NOT	0.00	0.00	
MATCH TAG NUMBER ON	0.00	0.00	
DESC51899 WELL LOG	0.00	0.00	

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AUG 1 8 2003

WATER RESOURCES DEPT.
SALEM, OREGON

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SEP 30 2014

SALEM, OR

Date Started: 06 / 18 / 2003

Date Completed: 06 / 30 / 2003

(unbonded) Water Well Constructor Certification:

I certify that the work I perform on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.
 Signed by: THOMAS R PECK WWC #: 758

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
 Signed by: JACK ABBAS WWC #: 1720

ABBAS WELL DRILLING CO

Phone: 541-548-2787

