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 $175 must accompany this form for permits with priority dates after July 8, 1987.

A fee of $175 must accompany this form for any Transfer final orders including a water right with a priority date of July 9, 1987, or later.
Example – A transfer involves 5 rights and one of the rights has a priority date of July 9, 1987, or later, the fee is required.

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.oregon.gov/owrd/pages/wr/cwre_info.aspx

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.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

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.oregon.gov/owrd/pages/mgmt_reimbursement_authority.aspx

SECTION 1
GENERAL INFORMATION

1. File Information

APPLICATION # (G, R, S OR T)	PERMIT # (IF APPLICABLE)	PERMIT AMENDMENT # (IF APPLICABLE)
G-14951	G-16447	NA

RECEIVED BY OWRD
JUN 05 2017
SALEM, OR

2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME	PHONE NO.	ADDITIONAL CONTACT NO.
Quail Run Golf Course Inc. Attn: Trevor Gray	**(541) 536-1303 ext. 4**	

ADDRESS			
16725 Northridge Drive			
CITY	STATE	ZIP	E-MAIL
La Pine	**OR**	**97739**	**trevor@golfquailrun.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. ***Each*** *permit or transfer holder of record must sign this form.*

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

PERMIT OR TRANSFER HOLDER OF RECORD		
Quail Run Golf Course Inc. Attn: Trevor Gray		
ADDRESS		
16725 Northridge Drive		
CITY	STATE	ZIP
La Pine	**OR**	**97739**

ADDITIONAL PERMIT OR TRANSFER HOLDER OF RECORD		
NA		
ADDRESS		
CITY	STATE	ZIP

4. Date of Site Inspection: **April 4, 2017**

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

NAME	DATE	ASSOCIATION WITH THE PROJECT
Trevor Gray	**April 4, 2017**	**Golf Course Superintendent**

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)):

OWNER OF RECORD		
NA		
ADDRESS		
CITY	STATE	ZIP

Add additional tables for owners of record as needed

SECTION 2
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		PHONE NO.	ADDITIONAL CONTACT NO.
Steven R. Bruce		**(503) 319-8926**	
ADDRESS **1626 Victorian Way**			
CITY **Eugene**	STATE **OR**	ZIP **97401**	E-MAIL **steve@skookumwater.com**

Permit or Transfer Holder's of Record Signature or Acknowledgement

Each *permit or transfer holder of record must sign this form in the space provided below.*

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	TITLE	DATE
Trevor Gray	**Trevor Gray**	**Golf Course Superintendent**	6-1-17

RECEIVED BY OWRD

JUN 05 2017

SALEM, OR

SECTION 3

CLAIM DESCRIPTION

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)
Upper Well	DESC 56798	L-75456

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
Upper Well	Little Deschutes River Basin	Deschutes River

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	ACTUAL RATE OR VOLUME USED (CFS, GPM, OR AF)
Well	Irrigation	Turf and Landscaping	Typically April 15 to end of October	1.03 cfs
Total Quantity of Water Used				1.03 cfs

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:

Groundwater is diverted from the Upper Well using a 15-hp submersible pump with a 4-inch discharge. After passing through a flowmeter located about 5 feet south of the well, the water is forwarded northward via a 4-inch-diameter pipeline to an approximately 2.4 acre-foot reservoir that functions as a bulge in the system.

There is a pump station on the south side of the bulge that contains two centrifugal pumps with 60-hp VFD motors and a jockey pump. The centrifugal pumps are located on top of an approximately 5-feet diameter by at least 25-feet-deep wet well that connects to the bulge. These pumps forward water to the irrigation system for the golf course. No information is available for the jockey pump, which is used to maintain the system pressure.

The irrigation system has 19 zones operated by satellite controllers. The system computer, located at the maintenance facility, allows system adjustments and tracks the water usage.

Reminder: The map associated with this claim must identify the location of the point(s) of diversion, Donation Land Claims (DLC), Government Lots (GLot), and Quarter-Quarters (QQ).

5. Variations:

Was the use developed differently from what was authorized by the permit permit amendment final order, or extension final order? If yes, describe below. **YES**

(e.g. *"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."*)

A total of 26.8 acres were developed out of the 33.0 acres authorized by the permit.

The Upper Well is located approximately 115 feet southeast of the permitted location.

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
Upper Well	**0.412 cfs (approx. 185 gpm)**	**1.03 cfs (approx. 462 gpm)**	**NA – system winterized and off**	**Irrigation**	**33.0**	**26.8**

The right should be limited to 0.335 cfs and 26.8 acres.

SECTION 4

SYSTEM DESCRIPTION

Are there multiple PODs or POAs? **NO**

If *"YES"* you will need to copy and complete Sections 4B through 4G for each POD/POA.

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

A. Place of Use

1. Is the right for municipal use? **NO**

If "YES" the table below may be deleted.

TWP	RNG	MER	SEC	QQ	GLOT	DLC	USE	IF IRRIGATION, # PRIMARY ACRES	IF IRRIGATION, # SUPPLEMENTAL ACRES
21 S	10 E	WM	14	SW NE	--	--	Irrigation	0.2	--
21 S	10 E	WM	14	NE NW	--	--	Irrigation	14.8	
21 S	10 E	WM	14	SE NW	--	--	Irrigation	11.8	--
Total Acres Irrigated								26.8	--

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

B. 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**

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
Upper Well					
Preferred Pump	**8FP450D200-1**	**NA – in well**	**Submersible**	**Unknown**	**4 inch**
Pump Station					
Flotronics	**11CLC**	**13344-1**	**Centrifugal**	**Unknown**	**6 inch (inferred)**
Flotronics	**11CLC**	**13324-1**	**Centrifugal**	**Unknown**	**6 inch (inferred)**

3. Motor Information

MANUFACTURER	HORSEPOWER
Upper Well	
Franklin Electric	**15**
Pump Station	
Newman	**60**
Newman	**60**

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)
Upper Well				
15	**0 (open discharge to bulge)**	**97.3 feet calculated**	**5 feet**	**1.03 cfs (approx. 462 gpm)**
Pump Station				
60	**80 (reported)**	**5 feet**	**5 feet**	**1.82 (approx. 817 gpm)**
60	**80 (reported)**	**5 feet**	**5 feet**	**1.82 (approx. 817 gpm)**

5. Provide pump calculations:

Submersible Pump

Q Pump = $\frac{\text{(horsepower)(pump efficiency)}}{\text{(total head in feet)}} = \frac{(15)(7.04)}{55.3+42+5} = \frac{105.6}{102.3} = 1.03$ cfs

Where:

hp = 15

efficiency = 7.04 ft^4/sec/Hp

total head = 55.3 feet + 42 feet + 5 feet from pump to place of use = 102.3 ft

The well's specific capacity is 8.14 gpm/ft of drawdown based on the DESC 56798 Water Supply Well Report, therefore the theoretical pumping water level at 450 gpm would be 55.3 feet + 42 feet (the static water level reported on DESC 56798) + 5 feet of lift to the place of use = 102.3 feet.

Centrifugal Pumps at Pump Station

The two pumps are the same model and horsepower

Q Pump = $\frac{\text{(horsepower)(pump efficiency)}}{\text{(total head in feet)}} = \frac{(60)(6.61)}{10+5+203.2} = \frac{396.6}{218.2} = 1.82$ cfs/pump x 2 pumps = 3.64 cfs

Where:

hp = 60

efficiency = 6.61 ft^4/sec/Hp

total head = 10 feet from pump to surface + 5 feet to place of use + 203.2 feet (equivalent to 80 psi based on Claim of Beneficial Use form) = 218.2 feet

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)
NA – System was still winterized and turned off	NA	NA	NA

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

7. Is the distribution system piped? YES

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

8. Mainline Information

Mainline Size	Length	Type of Pipe	Buried or Above Ground
6 inch	11,400 ft (approx.)	PVC	Buried

9. Lateral or Handline Information

Lateral or Handline Size	Length	Type of Pipe	Buried or Above Ground
2 inch	21,300 ft (approx.)	PVC	Buried
1 ¼ inch	1,200 ft (approx.)	PVC	Buried

10. Sprinkler Information

Size	Operating PSI	Sprinkler Output (GPM)	Total Number of Sprinklers	Maximum Number Used	Total Sprinkler Output (CFS)
9/32 in.	80	20.7 (from CBU form)	423	32	1.48
3/16 in.	80	13.2 (see Exhibit A)	423	32	0.94
1/8 in.	80	4 (estimated since off chart)	423	32	0.29

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)
NA				

12. Additional notes or comments related to the system:

The forwarding pumps can theoretically deliver 3.64 cfs (approximately 1,634 gpm) to the 96 sprinklers used in a zone, which can distribute 2.71 cfs (approximately 1,216 gpm).

The pump in the Upper Well is the limiting factor in the irrigation system because it theoretically can produce 1.03 cfs (approximately 462 gpm).

C. Groundwater Source Information (Well and Sump)

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

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:

There is a ¾-inch access port on the west side of the top of casing.

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
16 & 10 in	1,250 ft	1,280 ft	4/3/2005	NA	Martin Howatt Properties, LLC	Robert Buckner

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.

See DESC 56798

5. Is the appropriation from a dug well (sump)? NO

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

D. Storage

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

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

If "YES" is it a: Storage Tank NO

Bulge in System / Reservoir YES

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

3. Bulge in System / Reservoir:

Reservoir Name or Number (correspond to map)	Approximate Dam Height	Approximate Capacity (in acre feet)
Pond	0 (excavated in ground)	2.4

E. 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? NO

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

F. 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? NO

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

G. Reservoir

1. Does the claim involve a reservoir modified through a transfer? NO

Reminder: Complete this section 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.

SECTION 5

CONDITIONS

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 was to be completed. 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	3/3/2009		
BEGIN CONSTRUCTION (A)	NA	NA	NA
COMPLETE CONSTRUCTION (B)	10/1/2013	Fall 2008	Installed well by April 2005, graded site and bulge, and installed mainlines, laterals and sprinkler system.
COMPLETE APPLICATION OF WATER (C)	10/1/2013	Fall 2008	Irrigated to establish turf on all playable surfaces.

* 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)? **NO**

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

4. Initial Water Level Measurements:

a. Was the water user required to submit an initial static water level measurement? **NO**

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

5. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements? **NO**

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

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**

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

b. Has the pump test been previously submitted to the Department? **NO**

c. Is the pump test attached to this claim? A test will be done in the near future **NO**

d. Has the pump test been approved by the Department? **NO**

e. Has a pump test exemption been approved by the Department? **NO**

**** Claims will not be reviewed until a pump test or exemption has been approved by the Department**

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**

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. The meter was not working at the time of the site inspection, but was reported to restart after the battery was replaced several days later.**

c. Meter Information

POD/POA NAME OR #	MANUFACTURER	SERIAL #	CONDITION (WORKING OR NOT)	CURRENT METER READING	DATE INSTALLED
Upper Well	**Blue & White Industries**	**Model F-1000-RT (no serial no.)**	**Not working at time of inspection apparently due to a dead battery. Battery was replaced in early May 2017.**	**NA**	**2006**

If a meter has been installed, items 7d through 7f relating to this section may be deleted.

8. Recording and reporting conditions

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

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

b. Have the reports been submitted? **YES**

METHOD OF SUBMITTING REPORT (PAPER OR ELECTRONIC)	WATER USER REPORTING ID
Electronic	**27719**

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? **NO**

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

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? **NO**

If "NO", items 10b and 10c relating to this section may be deleted.

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**

b. Was submittal of a ground water monitoring plan required? **NO**

c. Was the water user required to restore the riparian area if it was disturbed? **NO**

d. Was a fishway required? **NO**

e. Was submittal of a letter from an engineer required prior to storage of water? **NO**

f. Was submittal of a water management and conservation plan required? **NO**

g. Other conditions? **YES**

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

a. The well was required to be continuously cased and sealed to a minimum depth of 800 feet below ground surface. The Water Supply Well Report for DESC 56798 indicates the well is continuously cased and sealed to a depth of 1250 feet.

h. The permit indicates 50.4 acre-feet of mitigation credits were secured for the 33.0 acres described in the permit. Can the mitigation obligation in the water right be reduced to 41.0 acre-feet to match the 26.8 acres of irrigation actually developed?

SECTION 6

ATTACHMENTS

Provide a list of any additional documents you are attaching to this report:

ATTACHMENT NAME	DESCRIPTION
Figure 1	**Claim of Beneficial Use Map**
Exhibit A	**Rainbird Full Circle Impact Sprinklers Chart**

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.

The map was tied using a Garmin Oregon 750t GPS.

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

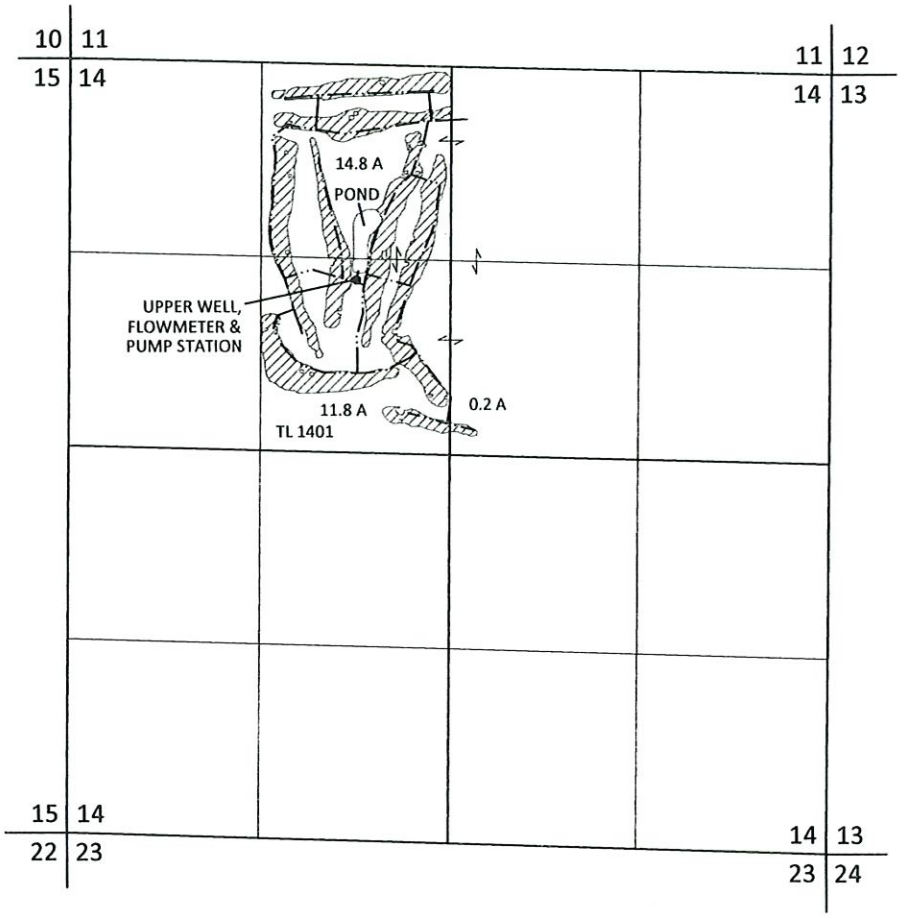
☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)

☒ 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

Section 14, T21S, R10E, W.M.,
Deschutes County, Oregon

Application G-14951
Permit G-16447
CLAIM OF BENEFICIAL USE MAP
Quail Run Golf Course



WELL LOCATION: 1520 FT S AND 1950 FT E
FROM NW CORNER OF SECTION 14, T21S, R10E, W.M.

Certified Water Right Examiner
439 WRE
Steven R. Bruce
June 13, 1997
Expires 12/31/2017
STATE OF OREGON

EXPLANATION

PLACE OF USE - 26.8 ACRES
PRIORITY: 3/22/1999

WELL

6" PIPELINE (APPROX.)

SCALE
660 0 660 1320
1 INCH = 1320 FEET

Site inspection conducted
April 4, 2017

May 23, 2017

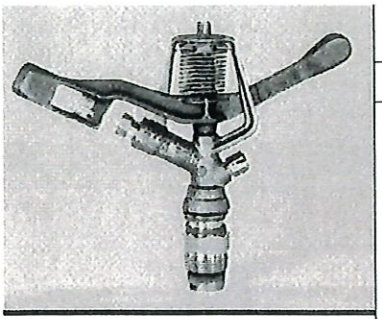
This map is not intended to provide legal dimensions or locations of property ownership lines

SKOOKUM
WATER ASSOCIATES INC

1626 VICTORIAN WAY
EUGENE, OR 97401
(503) 319-8926

Figure 1

RAIN BIRD



14070H

3/4" 19mm Full Circle, Brass Impact Sprinkler

Bearing: 3/4" Male NPT, Brass
Trajectory Angle: 27°
Operating Range: 25-80 psi 1.7-5.5 bars
Flow Rate: 4.2-23 GPM 0.97-5.34 m³/h
Radius: 44-71 ft. 13.57-22.10 meters
Range: One 1/4" Female NPT Nozzle Port
Spreader: One 1/8" Female NPT Spreader Nozzle Port

Features

- Heavy duty brass construction
- Extra large body and barrel
- Stainless steel springs and fulcrum pin
- Chemically resistant washers
- Dual nozzle ports
- Two-year warranty

Benefits

- Extra large body accommodates wide range of flow rates and nozzles
- Long nozzle barrel increases distance of throw
- Corrosion and grit resistant
- Built to last

U.S. STANDARD DATA

PERFORMANCE DATA — 14070H

STRAIGHT BORE NOZZLE (SBN-3) WITH SPREADER (LAN-1-20*) (Stream Height: 10 ft.)

PSI @ Nozzle	NOZZLE SIZE US STANDARD													
	3/16" x 1/8-20˚		13/64" x 1/8-20˚		7/32" x 1/8-20˚		15/64" x 1/8-20˚		1/4" x 1/8-20˚		17/64" x 1/8-20˚		9/32" x 1/8-20˚	
	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM
25	44	7.40	45	8.30	46	9.20	46	10.30	47	11.40	47	12.50	48	13.80
30	47	8.10	48	9.10	49	10.10	50	11.20	51	12.40	51	13.70	52	15.10
35	49	8.70	50	9.80	51	10.90	52	12.10	52	13.40	53	14.80	54	16.30
40	50	9.30	51	10.50	52	11.70	53	13.00	54	14.40	55	15.80	56	17.40
45	51	9.90	52	11.10	54	12.40	55	13.80	56	15.20	57	16.80	58	18.50
50	52	10.40	53	11.70	55	13.10	56	14.50	57	16.10	58	17.70	59	19.50
55	53	10.90	54	12.30	56	13.70	57	15.20	59	16.90	59	18.60	61	20.40
60	53	11.40	55	12.80	57	14.30	58	15.90	60	17.60	61	19.40	62	21.30
65	54	11.90	56	13.30	58	14.90	59	16.50	61	18.30	62	20.20	63	22.20
70	55	12.40	57	13.80	59	15.40	60	17.20	62	19.00	63	21.00	65	23.00
75	55	12.80	58	14.30	60	16.00	61	17.80	63	19.70	-	-	-	-
80	56	13.20	58	14.80	61	16.50	62	18.40	64	20.30	-	-	-	-

* Nozzles must be purchased separately. See Chart below.

STRAIGHT BORE NOZZLE (SBN-3V) WITH PLUG* (Stream Height: 10 ft.)

PSI @ Nozzle	NOZZLE SIZE US STANDARD															
	5/32"		11/64"		3/16"		13/64"		7/32"		15/64"		1/4"		17/64"		9/32"	
	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM
25	-	-	-	-	44	5.10	45	6.00	46	7.00	46	8.00	47	9.10	48	10.30	48	11.50
30	-	-	-	-	47	5.60	48	6.60	49	7.60	50	8.80	51	10.00	51	11.20	52	12.60
35	46	4.20	47	5.10	49	6.10	50	7.10	51	8.20	52	9.50	52	10.80	53	12.10	54	13.60
40	46	4.50	48	5.40	50	6.50	51	7.60	52	8.80	53	10.10	54	11.50	55	13.00	56	14.60
45	47	4.80	49	5.80	51	6.90	52	8.10	54	9.30	55	10.70	56	12.20	57	13.80	58	15.40
50	48	5.00	50	6.10	52	7.20	53	8.50	55	9.80	56	11.30	57	12.90	58	14.50	59	16.30
55	48	5.30	50	6.40	53	7.60	54	8.90	56	10.30	54	11.80	59	13.50	59	15.20	61	17.10
60	49	5.50	51	6.70	53	7.90	55	9.30	57	10.80	58	12.40	60	14.10	61	15.90	62	17.80
65	49	5.70	52	6.90	54	8.30	56	9.70	58	11.20	59	12.90	61	14.70	62	16.50	63	18.50
70	50	5.90	52	7.20	55	8.60	57	10.00	59	11.60	60	13.40	62	15.20	63	17.20	65	19.20
75	50	6.20	53	7.40	55	8.90	58	10.40	60	12.10	61	13.80	63	15.70	-	-	-	-
80	50	6.40	53	7.70	56	9.10	58	10.70	61	12.40	62	14.30	64	16.30	-	-	-	-

STRAIGHT BORE NOZZLE WITH VANE (SBN-3V) WITH SPREADER (LAN-1)* (Stream Height: 10 ft.)

PSI @ Nozzle	NOZZLE SIZE US STANDARD													
	3/16" x 1/8-20˚		13/64" x 1/8-20˚		7/32" x 1/8-20˚		15/64" x 1/8-20˚		1/4" x 1/8-20˚		17/64" x 1/8-20˚		9/32" x 1/8-20˚	
	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM	Rad.	GPM
25	47	7.40	49	8.30	51	9.20	51	9.80	51	10.80	51	11.90	51	13.10
30	50	8.10	51	9.10	54	10.10	54	10.60	55	11.80	55	13.00	55	14.30
35	51	8.70	53	9.80	55	10.90	56	11.50	57	12.70	57	14.10	57	15.50
40	52	9.30	54	10.50	56	11.70	57	12.40	59	13.70	59	15.00	60	16.50
45	53	9.90	55	11.10	57	12.40	59	13.10	60	14.40	61	16.00	62	17.60
50	53	10.40	56	11.70	58	13.10	60	13.80	62	15.30	63	16.80	64	18.50
55	54	10.90	56	12.30	59	13.70	61	14.40	63	16.10	65	17.70	66	19.40
60	55	11.40	57	12.80	60	14.30	62	15.10	64	16.70	67	18.40	68	20.20
65	55	11.90	58	13.30	61	14.90	63	15.70	65	17.40	68	19.20	69	21.10
70	56	12.40	58	13.80	62	15.40	64	16.30	66	18.10	69	20.00	71	21.90
75	56	12.80	59	14.30	62	16.00	65	16.90	67	18.70	-	-	-	-
80	57	13.20	60	14.80	63	16.50	66	17.50	69	19.30	-	-	-	-

Part Numbers and Ordering Information

Sprinkler Only	
U.S. Standard	
Sprinkler without Nozzle without Plug	**A12800**

Nozzle Only			XX = Nozzle Size									
		U.S. Standard	1/8"	5/32"	11/64"	3/16"	13/64"	7/32"	15/64"	1/4"	17/64"	9/32"
Brass Straight Bore Nozzle	SBN-3	105842-XX	–	10	11	**12**	13	14	15	16	17	18
Brass Straight Bore Nozzle with Vane	SBN-3V	106131-XX	–	10	11	**12**	13	14	15	16	17	18
Brass 20˚ Low Angle Spreader Nozzle	LAN-1-20	100226-XX	**08**	–	–	–	–	–	–	–	–	–
Brass Plug		100255	Bold nozzle size numbers denote the most common nozzle choices									

SKOOKUM
WATER ASSOCIATES INC

CLAIM OF BENEFICIAL USE

APPLICATION G-14951
PERMIT G-16447

Quail Run Golf Course Inc.
16725 Northridge Drive
La Pine, OR 97739

May 26, 2017

Project 10107.001

Skookum Water Associates Inc.
1626 Victorian Way Eugene, OR 97401
(503) 319-8926

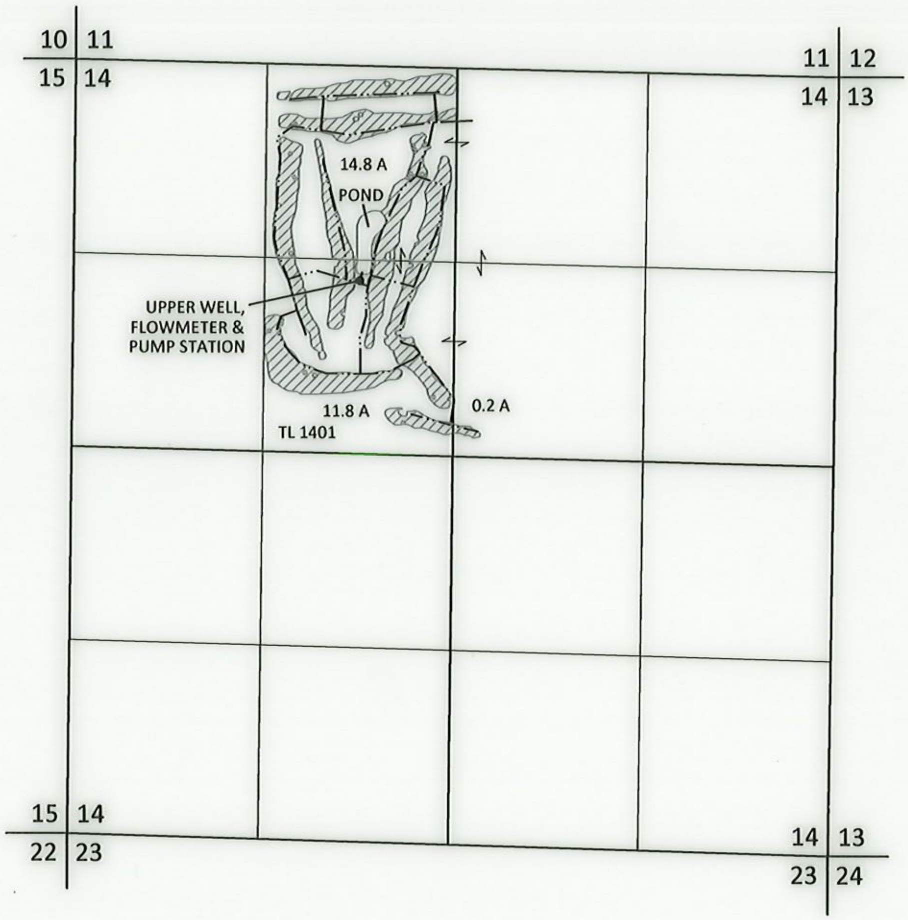
RECEIVED BY OWRD

JUN 05 2017

SALEM, OR

Section 14, T21S, R10E, W.M., Deschutes County, Oregon

Application G-14951
Permit G-16447
CLAIM OF BENEFICIAL USE MAP
Quail Run Golf Course



WELL LOCATION: 1520 FT S AND 1950 FT E
FROM NW CORNER OF SECTION 14, T21S, R10E, W.M.

Certified Water Right Examiner
439 WRE
Steven R. Bruce
STEVEN R. BRUCE
JUNE 13, 1997
Expires 12/31/2017
STATE OF OREGON

EXPLANATION

PLACE OF USE - 26.8 ACRES
PRIORITY: 3/22/1999

WELL

6" PIPELINE (APPROX.)

SCALE

660 0 660 1320

1 INCH = 1320 FEET

Site inspection conducted
April 4, 2017

May 23, 2017

This map is not intended to provide legal dimensions or locations of property ownership lines

SKOOKUM
WATER ASSOCIATES INC
1626 VICTORIAN WAY
EUGENE, OR 97401
(503) 319-8926

Figure 1