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SALEM, OREGON

Permit No. G- **G 4435**

APPLICATION FOR A PERMIT

To appropriate the Ground Waters of the State of Oregon

I, *City of Bend* **HAROLD M. PUDDY, CITY MANAGER** *For the City of Bend 11-7-15-68*  
(Name of applicant)

of **CITY OF BEND**, county of **DESCHUTES**  
(Postoffice Address)

state of **OREGON**, do hereby make application for a permit to appropriate the following described ground waters of the state of Oregon, **SUBJECT TO EXISTING RIGHTS:**

If the applicant is a corporation, give date and place of incorporation

*Jan. 4, 1905 Bend, Ore.*

1. Give name of nearest stream to which the well, tunnel or other source of water development is situated **DESCHUTES RIVER**  
(Name of stream)

tributary of **COLUMBIA RIVER**

2. The amount of water which the applicant intends to apply to beneficial use is **7.75** cubic feet per second or **3478** gallons per minute. (See Attached Sheet)

3. The use to which the water is to be applied is **MUNICIPAL WATER SUPPLY FOR THE CITY OF BEND**

4. The well or other source is located **1.902** ft. **S. 5° 08'** and **1.749** ft. **S. 20° 29'** from the **N.W. CORNER SEC. 27 T. 18 S., R 11 E, W.M.**  
(N. or S.) (E. or W.)  
(Section or subdivision)

**WELL #2** is **1.749** ft. **S. 20° 29'** E. of N.W. CORNER SEC. 27 T. 18 S., R 11 E, W.M.  
(If preferable, give distance and bearing to section corner)

Additional wells planned **W. 1/2, N.W. 1/4, Sec. 27 & NE 1/4 Sec. 28, T. 18 S., R 11 E, W.M.** (See attached sheet)  
(If there is more than one well, each must be described. Use separate sheet if necessary)

being within the **of Sec. 27 & 28, Twp. 18 S., R. 11 E., W. M., in the county of Deschutes**

5. The **Pipe Line** to be **6.8** miles  
(Canal or pipe line)  
in length, terminating in the **SW 1/4, SW 1/4** of Sec. **31**, Twp. **17 S., R. R. 12 E., W. M.,** the proposed location being shown throughout on the accompanying map.  
(Smallest legal subdivision)

6. The name of the well or other works is **Lava Island Well Field**

DESCRIPTION OF WORKS

7. If the flow to be utilized is artesian, the works to be used for the control and conservation of the supply when not in use must be described.

**Not Applicable**

8. The development will consist of **8** wells having a diameter of **12** inches and an estimated depth of **285** feet. It is estimated that **275** feet of the well will require **12** inch **Steel** casing. Depth to water table is estimated **260** feet.  
(Kind) (Feet)

*T-8783/Amund A POU/APOA*

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Item #2 Continued

Water to be appropriated from each well follows:

Well #	<u>c.f.g.</u>	<u>g.p.m.</u>
#1	0.935	420
#2	0.980	440
#3	0.980	440
#4	0.970	435
#5	0.970	435
#6	0.970	435
#7	0.970	435
#8	<u>0.975</u>	<u>438</u>
TOTALS	7.75	3,478

## #4. Location of existing wells follows:

Well #1 is 1,902 ft. S.  $5^{\circ} 08'$  E. of N.W. CORNER SEC. 27 T. 18 S., R. 11 E.W.M.,  
or in the S.W. $\frac{1}{4}$  of the N.W. $\frac{1}{4}$  of SEC. 27, T. 18 S., R. 11 E.W.M.

Well #2 is 1,749 ft. S.  $20^{\circ} 29'$  E. of N.W. CORNER SEC. 27 T. 18 S., R. 11 E.W.M.,  
or in the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of SEC. 27, T. 18 S., R. 11 E.W.M.

## Location of Proposed wells follows:

Well #3 is 2,010 ft S.  $18^{\circ} 30'$  E. of N.W. Corner Sec. 27, T. 18 S., R. 11 E.W.M.,  
or in the S.W. $\frac{1}{4}$  of the N.W. $\frac{1}{4}$  of Sec. 27, T. 18 S., R. 11 E.W.M.

Well #4 is 1,155 ft S.  $15^{\circ} 10'$  E. of N.W. Corner Sec. 27, T. 18 S., R. 11 E.W.M.,  
or in the N.W. $\frac{1}{4}$  of the N.W. $\frac{1}{4}$  of Sec. 27, T. 18 S., R. 11 E.W.M.

Well #5 is 1,420 ft. S.  $8^{\circ} 00'$  W. of N.W. Corner Sec. 27, T. 18 S., R. 11 E.W.M.,  
or in the S.E. $\frac{1}{4}$  of the N.E. $\frac{1}{4}$  of Sec. 28, T. 18 S., R. 11 E.W.M.

Well #6 is 675 ft S.  $13^{\circ} 35'$  E. of N.W. Corner Sec. 27, T. 18 S., R. 11 E.W.M.,  
or in the N.W. $\frac{1}{4}$  of the N.W. $\frac{1}{4}$  of Sec. 27, T. 18 S., R. 11 E.W.M.

Well #7 is 435 ft S.  $13^{\circ} 15'$  W. of N.W. Corner Sec. 27, T. 18 S., R. 11 E.W.M.,  
or in the N.E. $\frac{1}{4}$  of the N.E. $\frac{1}{4}$  of Sec. 28, T. 18 S., R. 11 E.W.M.

Well #8 is 990 ft S.  $27^{\circ} 40'$  W. of N.W. Corner Sec. 27, T. 18 S., R. 11 E.W.M.,  
or in the N.E. $\frac{1}{4}$  of the N.E. $\frac{1}{4}$  of Sec. 28, T. 18 S., R. 11 E.W.M.

CANAL SYSTEM OR PIPE LINE—

9. (a) Give dimensions at each point of canal where materially changed in size, stating miles from headgate. At headgate: width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(b) At ..... miles from headgate: width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(c) Length of pipe, ..36,000..... ft.; size at intake .....16..... in.; in size at ..... ft. from intake ..... in.; size at place of use .....16..... in.; difference in elevation between intake and place of use, .....100..... ft. Is grade uniform? .....No..... Estimated capacity, .....7.75..... sec. ft.

10. If pumps are to be used, give size and type  $\pm$  500 g.p.m. line shaft turbine depending on well tests.

Give horsepower and type of motor or engine to be used  $\pm$  60 H.P. electric motor depending on well tests.

11. If the location of the well, tunnel, or other development work is less than one-fourth mile from a natural stream or stream channel, give the distance to the nearest point on each of such channels and the difference in elevation between the stream bed and the ground surface at the source of development

Well field area comes within 150 feet of the Deschutes River.

Ground water source is estimated to be 130 feet below stream bed.

12. Location of area to be irrigated, or place of use ..... City of Bend

Township N. or S.	Range E. or W. of Willamette Meridian	Section	Forty-acre Tract	Number Acres To Be Irrigated
Existing City Limits of Bend is described on attached map.				
T. 18, S., R. 12 E., W.M.		Section 3	- NW $\frac{1}{4}$ NW $\frac{1}{4}$	
		Section 4	- N $\frac{1}{2}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ except SE $\frac{1}{4}$ NE $\frac{1}{4}$	
		Section 5	- SE $\frac{1}{4}$ except SE $\frac{1}{4}$ SE $\frac{1}{4}$	
T. 17 S., R. 12 E., W.M.		Section 27	- SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$ , S. $\frac{1}{2}$ N.W. $\frac{1}{4}$ N.W. $\frac{1}{4}$ , W. $\frac{1}{2}$ S.W. $\frac{1}{4}$ S.W. $\frac{1}{4}$	
		Section 28	- S $\frac{1}{2}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$	
		Section 28 Cont.	W. $\frac{1}{2}$ S.E. $\frac{1}{4}$ S.E. $\frac{1}{4}$ , S. $\frac{1}{2}$ S.W. $\frac{1}{4}$ , N.W. $\frac{1}{4}$ S.W. $\frac{1}{4}$	
		Section 29	- SE $\frac{1}{4}$ NE $\frac{1}{4}$ , S. $\frac{1}{2}$ SW $\frac{1}{4}$ , E. $\frac{1}{2}$ S.E. $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$ , E. $\frac{1}{2}$ N.W. $\frac{1}{4}$ SE $\frac{1}{4}$	
		Section 30	- S. $\frac{1}{2}$ SW $\frac{1}{4}$ , S. $\frac{1}{2}$ SE $\frac{1}{4}$	
		Section 31	- NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , E. $\frac{1}{2}$ NW $\frac{1}{4}$ , N. $\frac{1}{2}$ N.E. $\frac{1}{4}$ S.W. $\frac{1}{4}$	
		Section 32	- All	
		Section 33	- All, except E. $\frac{1}{2}$ NE $\frac{1}{4}$ and except NE $\frac{1}{4}$ SE $\frac{1}{4}$	
T. 17 S., R. 11 E., W.M.		Section 25	- SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ except SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$	

(If more space required, attach separate sheet)

Character of soil ..... Sandy

Kind of crops raised ..... Lawn irrigation

SEARCHED

MUNICIPAL SUPPLY—

13. To supply the city of Bend in Deschutes county, having a present population of 13,200 and an estimated population of 19,000 in 1990.

ANSWER QUESTIONS 14, 15, 16, 17 AND 18 IN ALL CASES

- 14. Estimated cost of proposed works, \$ 970,440.00
15. Construction work will begin on or before 1970
16. Construction work will be completed on or before 1975
17. The water will be completely applied to the proposed use on or before 1976
18. If the ground water supply is supplemental to an existing water supply, identify any application for permit, permit, certificate or adjudicated right to appropriate water, made or held by the applicant 17.13 cfs water rights held from Tumalo Irrigation District

Handwritten signature of Harold M. Puddy, City Manager

Remarks: The Lava Island Well Field may include eight (8) wells within the following described area for which a permit is requested: W/2, NE/4, Section 27 and the NE/4 Section 28, T. 18 S., R. 11 E, W.M.

Well No.1 was drilled for the City of Bend by R.J.Strasser commencing December 1, 1967. A 16 inch steel casing is installed to 196 feet with grout seal from surface to 39 feet. A 12 inch steel casing is installed inside the 16 inch casing from surface to 310 feet with perforated slots below 228 feet. Static water level is 168 feet. A 48 hour pumping test indicated a capacity of 420 gpm with 60 feet of drawdown.

Well No.2 has an 8-inch steel casing installed to 140 feet with an open hole to 310 feet. Static water level is 138 feet. This well may be reamed for installation of larger casing before test pumping. Additional work dependent on availability of funds.

STATE OF OREGON, County of Marion, ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for Corrections and Completion

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before January 27th, 1969.

WITNESS my hand this 27th day of November, 1968.

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CHRIS L. WHEELER STATE ENGINEER By Larry W. Jebousek ASSISTANT

STATE OF OREGON, }  
County of Marion, } ss.

PERMIT

This is to certify that I have examined the foregoing application and do hereby grant the same, SUBJECT TO EXISTING RIGHTS and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 7.75 cubic feet per second measured at the point of diversion from the well or source of appropriation, or its equivalent in case of rotation with other water users, from eight wells being 0.935 cfs from well No. 1, 0.98 cfs from well No. 2, 0.98 cfs from well No. 3, 0.97 cfs from well No. 4, 0.97 cfs from well No. 5, 0.97 cfs from well No. 6, 0.97 cfs from well No. 7 and 0.975 cfs from well No. 8

The use to which this water is to be applied is municipal

If for irrigation, this appropriation shall be limited to \_\_\_\_\_ of one cubic foot per second or its equivalent for each acre irrigated and shall be further limited to a diversion of not to exceed \_\_\_\_\_ acre feet per acre for each acre irrigated during the irrigation season of each year;

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The well shall be cased as necessary in accordance with good practice and if the flow is artesian the works shall include proper capping and control valve to prevent the waste of ground water.

The works constructed shall include an air line and pressure gauge or an access port for measuring line, adequate to determine water level elevation in the well at all times.

The permittee shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of ground water withdrawn.

The priority date of this permit is November 8, 1968

Actual construction work shall begin on or before July 17, 1970 and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1970

Complete application of the water to the proposed use shall be made on or before October 1, 1971

WITNESS my hand this 17th day of July, 1969

*Chris L. Wheeler*  
STATE ENGINEER  
Extended to October 1, 1992

Application No. G-4677  
Permit No. G-4435

PERMIT  
TO APPROPRIATE THE GROUND  
WATERS OF THE STATE  
OF OREGON

This instrument was first received in the office of the State Engineer at Salem, Oregon, on the 8th day of November, 1968, at 1:00 o'clock P. M.

Returned to applicant:

Approved: July 17, 1969

Recorded in book No. \_\_\_\_\_ of \_\_\_\_\_  
Ground Water Permits on page G 4435

CHRIS L. WHEELER  
STATE ENGINEER  
Drainage Basin No. 5 page 46

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