

WELL-CHARACTERISTICS MAP

WELL CHARACTERISTICS
The map is the same scale as the geohydrologic map and covers the same area. It is intended to help the prospective owner or driller of a well to estimate probable depths and performance to be expected within the sections shown. If the proposed location is near the edge of a particular square-mile section and if data from adjacent sections reflect similar geologic conditions, the adjacent data can be used to refine judgment of the expected results.
The map is based on about 2,300 water-well drillers' reports submitted to the Oregon State Engineer from 1955 through 1970. Reports of wells abandoned after drilling and reports containing ambiguous data were not used.
Most wells in the Grants Pass area are 6-inch-diameter domestic wells (see diagram of typical well installation) and are air-lift or bailer tested for productive capacity. Thus, most data reflect comparable well conditions.

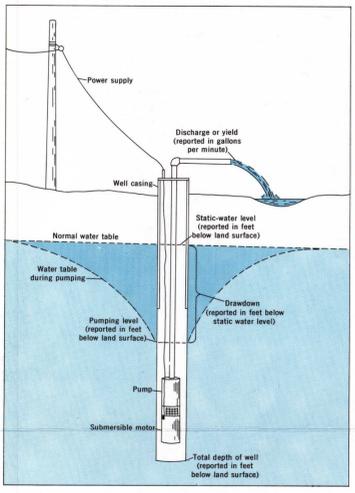
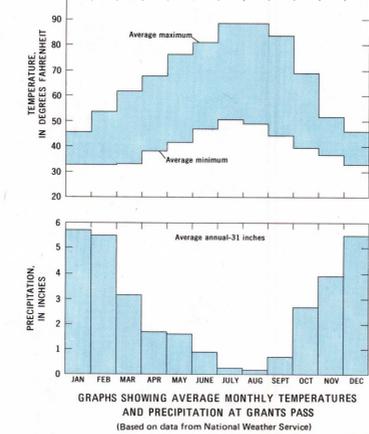


DIAGRAM OF TYPICAL WELL INSTALLATION

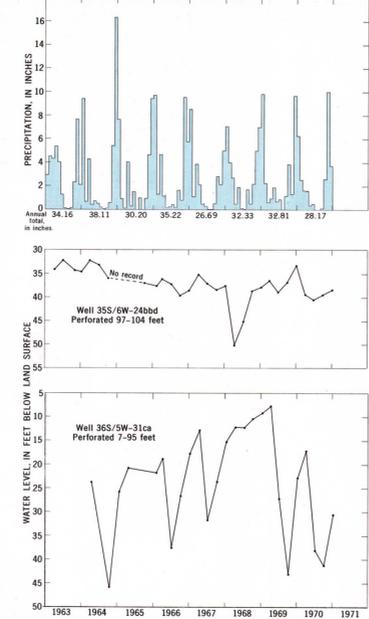
Locations of wells commonly have been reported by the drillers on the basis of township, range, and section. Locations within a section are known or were determined for some wells; locations of others are known only as precisely as the section.
The median is the value for which half the reported values are larger and half are smaller. The usefulness of the median can be shown with an example, as in sec. 18, T. 37 S., R. 5 W. Median depth to water was 14 feet, and none of the water levels was less than 1 foot or more than 55 feet below land surface. Similarly, the median well depth was 109 feet, and none was less than 23 or more than 210 feet. The median discharge rate reported from tests (not permanent production) was 10 gpm (gallons per minute). This value does not take into account the amount of drawdown below static water level that was necessary to produce a given rate of discharge.
In areas underlain by poorly permeable materials, some wells are "overtested"—that is, the reported rate of withdrawal may have been attained only with substantial or complete drawdown of the water level, which would indicate that the well could not produce this discharge on a sustained basis.

EXPLANATION
Section number
Median of discharge rates reported for bailer tests, in gallons per minute
Depth to water, range in feet (F indicates level above land surface)
Median of depths to water, in feet
Total depths of wells, range in feet
Median of total depths of wells, in feet
Median not shown where fewer than five values reported from section.
Significant number of unsuccessful wells, due to insufficient water as reported by drillers. Values reported for failures not included in compilation.
See Geohydrologic Map for explanation of geologic symbols.

WATER USE AND AVAILABILITY
Most of the wells in the area provide water for use by households or small commercial establishments. This type of use is not ordinarily continuous; there are peak demands during the day when water is used for several purposes simultaneously, and slack periods when none is used. In addition to these fluctuations, water use varies seasonally. Use during the warm, dry months of July and August is likely to be at least several times the use during the cold, wet months of December and January. (See graphs of temperature and precipitation.) Thus a well that is adequate during winter might prove insufficient during summer. A well capable of yielding 5 to 10 gpm usually is sufficient for a single household; smaller yields may suffice where an adequate storage tank or reservoir is used.



GRAPHS SHOWING AVERAGE MONTHLY TEMPERATURES AND PRECIPITATION AT GRANTS PASS (Based on data from National Weather Service)



GRAPHS SHOWING MONTHLY PRECIPITATION AT GRANTS PASS AND WATER-LEVEL FLUCTUATIONS IN TWO WELLS IN GRANTS PASS AREA (Precipitation data from National Weather Service)

Near Grants Pass, quantities of water obtainable from wells are generally adequate for household use, but potential for irrigation or other large uses is limited in most places. In some areas the average expected yield from wells is 3 gpm or less, whereas in other areas the average yield is at least 20 gpm. The ground water is generally of acceptable chemical quality, although most is moderately to very hard, and some contains excessive amounts of iron.

CHEMICAL ANALYSES OF WATER
[Analyses by U.S. Geological Survey]

Well number	Owner or user	Principal geologic source	Depth interval of water-bearing zone (feet)	Date of collection	Silica (SiO ₂) (mg/l)	Iron (Fe) (μg/l)	Calcium (Ca) (mg/l)	Magnesium (Mg) (mg/l)	Sodium (Na) (mg/l)	Potassium (K) (mg/l)	Bicarbonate (HCO ₃) (mg/l)	Carbonate (CO ₃) (mg/l)	Sulfate (SO ₄) (mg/l)	Chloride (Cl) (mg/l)	Fluoride (F) (mg/l)	Nitrate (NO ₃) (mg/l)	Boron (B) (μg/l)	Dissolved solids (mg/l)	Hardness, as CaCO ₃ (mg/l)	Specific conductance (micro-mhos)	pH	Temperature (°C)	Temperature (°F)	Arsenic (As) (μg/l)
35S/6W-9dbd	BLM seed orchard	KJi	54-73	3/19/70	44	4,500	12	5.4	7.2	4.3	88	0	0.2	0.5	0.1	0.2	.....	121	52	144	6.9	13	55	.....
24bd	I-5 rest area	KJi	97-104	3/19/70	56	100	13	34	5.8	2.6	229	0	0	1.0	0.1	0.4	.....	226	172	335	7.4	.....	.....	.....
36S/5W-5cca	Oregon Highway Dept.	Qa	70-73	9/15/70	50	.....	19	40	3.1	1.0	268	0	0.5	0	0	0.5	120	246	212	397	8.2	.....	0	
15baa	P. P. & L. substation	Tv	55-62	2/17/70	38	3	45	15	24	6.8	200	0	6.0	4.6	0.2	2.4	.....	281	174	468	7.6	16.5	62	.....
21acb	G. A. Alger	Qa	62-75	9/16/70	38	.....	31	14	12	18	182	2	1.2	0	0	0.3	50	188	135	297	8.3	15.0	59	.....
29dad	P. V. Jerome	KJi	276	9/16/70	60	.....	6.5	1.3	60	2.7	165	0	.....	5	.....	.....	.....	217	22	291	8.2	18	64	.....
33bhc	Florenz Breitmayer	Tv	125-283	4/22/53	35	200	694	9.2	1,540	.....	.....	0	441	0	4.2	2,300	6,730	1,770	9,970	7.1	.....	54	.....
36S/6W-32bbb	O. P. Knight	Qa	60-80	1/10/53	43	318,000	13	9.8	7.1	4	108	0	6.6	3.0	1	8	40	131	73	180	6.6	12	.....	.....
37S/5W-5aab	P. D. Bashor	KJi	34-43	9/16/70	60	.....	33	13	12	.....	163	0	.....	5	.....	.....	2223	136	315	8.0	.....	.....	.....
8bda	Don Trevett	Tv	283	9/17/70	50	.....	21	9.0	10	.....	119	0	.....	2.5	.....	.....	2157	90	214	8.0	16	61	.....
8bbd	J. A. Byford	KJi	65	9/16/70	50	.....	39	14	12	.....	193	0	.....	5	.....	.....	2215	155	322	8.2	16.5	62	.....
18aad	Floyd Briggs	Tv	90-210	9/16/70	30	.....	5.2	0	109	3	42	16	45	105	5	0	4,300	331	13	554	8.9	.....	0	
37S/6W-14abb	W. M. Montgomery	KJi	57	1/9/53	60	3,100	38	22	4.8	3	226	0	9.8	2.0	0.3	0.1	60	249	185	355	6.9	.....	.....
16adc	Josephine County park	Tv	62-69	9/17/70	22	.....	18	6.5	5.5	7	91	0	6.8	3.0	1	1	30	108	72	170	8.1	14.5	58	0
.....	Grants Pass municipal supply	.....	.....	9/70	36	180	9.5	4.3	6.3	1.9	50	0	3.8	1.8	0.1	.....	.....	77	41	.....	7.2	.....	0	

¹Calculated values with bicarbonate recomputed as carbonate, except as noted.
²Residue on evaporation at 180°C.
³Includes dissolved and suspended iron.
⁴Rogue River water prior to treatment; analysis by Charlton Laboratories, Portland, Ore.
NOTE: Concentrations are reported in milligrams per liter (mg/l) and micrograms per liter (μg/l), which represent the weight of the dissolved constituent per unit volume of water. One thousand micrograms per liter equals 1 milligram per liter. For analyses reported above, milligrams per liter are numerically equivalent to parts per million.

AVAILABILITY OF GROUND WATER IN THE GRANTS PASS AREA, JOSEPHINE COUNTY, OREGON

By
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