

Attachment B
Form M – Municipal and Quasi-municipal Water
Supplies
Application for a Permit to Use Groundwater

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WATER RESOURCES DEPT
SALEM, OREGON



Oregon Water Resources Department

FORM M

FOR MUNICIPAL AND QUASI MUNICIPAL WATER SUPPLIES

Unless otherwise noted, water use information should be in acre-feet per year (AFY).
1 acre-foot is equal to 325,851 gallons.

Background Information

Name of water supplier: City of Prineville

Name and size of area to be served: 14.5 mi² (encompassed by Prineville Urban Growth Boundary)
(in square miles)

Present population of service area: 9,990 (Year 2006)
(Contact county planning staff, if needed.)

Projected population in 20 years: 23,727 (2006 City of Prineville Water System Master Plan Update)
(Cite source and year. For example: "20,595 Based upon 1995 Portland State University projections.")

List present water rights and permits held:

Date of Issuance:	Natural Source of Water:	Amount Permitted:	Utilization:
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Refer to attached table

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Water Use

Average yearly demand: 1394 AFY Year: 2006

Per-capita daily consumption (in gallons): 124 gallons per person per day
(Divide average annual water sales by population to arrive at consumption, then divide by 365 to get daily values.)

Peak season (by month/day): 6/1 to 10/1 Total peak season demand: 699 Acre-feet

Peak season per-capita daily consumption: 187 gallons per person per day
(Divide total peak season demand by population and the number of days during the peak.)

Annual amount of water:

produced: 606,607,861 gallons
(diverted or pumped)

delivered: 454,140,750 gallons

Is your system fully metered? Yes No *(Bulk water purchases, flushing hydrants, fires, and construction are not yet fully metered)*

Describe your rate structure: flat rate (based on meter size) plus consumption
(e.g. flat rate, increasing or decreasing block rate or combination of different systems)

Request for Water

A. Discuss the reason(s) for your request for additional water

(e.g. loss of current supply, peak demand, growth, or other): The water is needed to accomodate the growth projected to occur over the next 20 years. The City's current water production capacity just meets the current peak day demand of 4 MGD. The peak day demand is projected to increase to 8 MGD in the next 20 years. In addition, there is concern about the sustainability of the valley floor alluvial aquifer currently used by the City. This application is designed to provide a water right for water supply from another aquifer source.

B. How long is the amount of water requested in this application expected to meet future needs?

(e.g. until the year 2040) Estimated to meet needs through 2025

C. Briefly discuss operation of water system and the most constraining component of the system:

The City currently uses 9 wells to supply the City's water needs. All but one of these wells are completed and produce water from the alluvial aquifer located in the valley underlying the City. There are concerns about the long-term sustainability of this aquifer for meeting anticipated future water needs. The City is exploring alternative sources of water supply, including this application for a water right in the Deschutes Formation within the General Zone of Impact.

D. Percentage of water use by type:

Residential: 66%

Commercial: 15%

Public Authority: 11%

Agricultural: 0%

Unaccounted for use: 0%

Industrial: 5.5%

Other (specify use): School: 2.5%

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E. List cost to implement proposed request.

Compare cost and benefits with other water supply, or combination of supply options. This should include water efficiency measures such as replacing current showerheads with low-flow types. (Attach documentation, as available.)

Anticipated costs for construction of the wells and pipelines for conveying the water are estimated to be on the order of 6 million dollars. Other potential options for supplying water, such as utilization of surface water (requiring construction of a water treatment plant) and/or purchase from other water providers (requiring extensive pipeline construction) are anticipated to have a similar magnitude of cost.

F. How and by how much will your proposed water use efficiency programs increase efficiency?

(Express as a percentage of per-capita consumption.)

The City is currently developing a Water Management and Conservation Plan. The adopted program will include policies and procedures for implementing conservation and efficient use of water appropriated under the City's water rights.

Table 1 - Present Water Rights Held by City of Prineville

Well	Application	Permit	Certificate	Date of Issuance	Natural Source of Water	Amount Permitted	Current Capacity (gpm)	Use
4th St. Shallow	U-396	U-370	22867	10/11/1950	Groundwater (alluvium)	449	135	Municipal
4th St. Deep	U-402	U-372	22868	12/8/1950	Groundwater (alluvium)	494	300	Municipal
Stadium	G-12344	G-11993		12/14/1990	Groundwater (alluvium)	425	240	Municipal
Stearns #2 & Barney	G-6313	G-9154	T-9762	10/5/1973	Groundwater (alluvium)	700	700	Municipal
Yancey	U-241	U-215	22839	6/17/1947	Groundwater (alluvium)	359	210	Municipal
Lamonta	G-605	G-506	29097	4/5/1957	Groundwater (alluvium)	494	210	Municipal
Ochoco Heights	U-147	U-140	75223	5/20/1942	Groundwater (alluvium)	539	315	Municipal
Airport Wells 1 & 2	G-15974	G-16146		3/31/2003	Groundwater (basalt)	770	770*	Municipal
Stearns #1	G-3139	G-2919	57438	6/17/1965	Groundwater (alluvium)	112	0	Group domestic
Northridge Well A	G-13280	G-13280		2/5/1993	Groundwater (alluvium)	67	0	Group domestic
10th St.	U-140	U-133	15539	5/16/1941	Groundwater (alluvium)	45	0	Municipal
Total						4454	2880	

Notes:

Total rate of water use based on production data through 2006.

*Current capacity assumed on anticipated production from Airport Well 2 that is currently under construction

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