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**Attachment 1**

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**Completed Response to Notice of Mitigation Obligation**

**RESPONSE TO NOTICE OF MITIGATION OBLIGATION  
MUNICIPAL OR QUASI-MUNICIPAL INCREMENTAL DEVELOPMENT PLAN**

Municipal or Quasi-Municipal ground water permit applicants may satisfy a mitigation obligation by incrementally obtaining and providing mitigation to coincide with the incremental development of the permit, provided mitigation is provided prior to each stage of development of the permit, in accordance with the standards under OAR 690-505-0610(2)-(5). A mitigation obligation may be satisfied by obtaining mitigation credits, providing for implementation of a mitigation project, or both (OAR 690-505-0610(2)). Please read and complete this acknowledgment of mitigation obligation and return it to the Department at the address above.

Applicant(s): ~~CITY OF BEND~~ *Roots Water System, Inc*

Application number: G-13809

Proposed Use: QUASI-MUNICIPAL

Period of Use requested: YEAR-ROUND

Rate requested: 4.16 CUBIC FEET PER SECOND

Mitigation Obligation: ~~1206.1~~ <sup>594</sup> ACRE-FEET

Zone of Impact: GENERAL

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Please read and initial the following statements:

We intend to provide incremental mitigation.

We understand that mitigation must be provided prior to each stage of development of the permit and that the mitigation must meet the requirements of OAR 690-505-0610(2)-(5).

We understand that the first increment of mitigation must be obtained, submitted to the Department and legally protected instream prior to a permit being issued.

We understand that after receiving the water right permit, I (we) may not increase water use without providing the corresponding required mitigation.

We understand that we will be required to submit a new or update Water Management and Conservation Plan under OAR Chapter 690, Division 86 within 2 years of the Department issuing a permit.

We understand that may we modify the incremental development plan and related mitigation obligation only with prior written Departmental approval.

Please estimate the time schedule for development of the water right permit and the proposed source of mitigation that may be obtained and used prior to each stage of development (this proposed development schedule must describe 100% of the requested volume).

For the first increment of permit development we will need approximately \_\_\_\_\_ acre-feet of the \_\_\_\_\_ acre-feet requested in the application. The first increment of mitigation will be required by \_\_\_\_\_ (date).

*\* See incremental mitigation plan*  
(over)

The proposed source of mitigation water for this increment of use will be (please check):

Purchase mitigation credits and / or  A mitigation project resulting in credits

Please describe the type of project (e.g., transfer, etc.) and any associated water-right certificate, if known:

*For all increments Roats will use either temporary or permanent mitigation credits*

By \_\_\_\_\_ (approximate year), for the second increment of permit development, I (we) will need approximately \_\_\_\_\_ additional acre-feet of the \_\_\_\_\_ total volume requested in the application.

The proposed mitigation source for this increment of use will be: (please check)

Purchase mitigation credits and / or  A mitigation project resulting in credits

*\* See incremental mitigation plan.*

Please describe the type of project (e.g., transfer, etc.) and any associated water-right certificate, if known:

*Same as above*

Please complete a section for each subsequent stage of Incremental Development beyond the first two using the additional page below.

Applicant *[Signature]* or Applicant's Agent *[Signature]*

Date *2/6/2018*

Mail to: Attn: Oregon Water Resources Department  
725 Summer St NE Suite A  
Salem OR 97301-1266

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Attachment 2

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Completed Quasi-Municipal Incremental Development Plan

**Roats Water System, Inc.**

**Application G-13809; Quasi-Municipal Incremental Development Plan**

Table 1 below describes the timelines and increments for Roats Water System, Inc. (Roats) Incremental Development Plan. Roats intends to satisfy its mitigation obligation through a combination of permanent mitigation credits and temporary mitigation credits from a qualified bank. Roats understands it has a General Zone of Impact obligation.

This proposed Incremental Development Plan assumes that Roats' permit will be issued in 2018. To the extent this date varies, Roats would request to modify the dates accordingly. In addition, to the extent that projected water demand is greater or lesser than outlined in Table 1, Roats will provide the Department proposed updates to its Incremental Development Plan.

<b>Table 1. Roats Proposed Timelines and for Increments Incremental Development Plan (Application G-13809)</b>			
<b>Increment</b>	<b>Year</b>	<b>Estimated Annual Volume Appropriated (acre-feet) per Increment</b>	<b>OWRD's estimated consumptive use (mitigation obligation)</b>
1	2018	50	20
2	2019-2020	400	160
3	2021-2022	400	160
4	2022-2023	635	254
<b>Total</b>		<b>1,485</b>	<b>594</b>

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Attachment 3  
Completed Form M



# 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: Roats Water System, Inc.

Name and size of area to be served: Roats Water Service Area - Approximately 3.5 square miles.  
(in square miles)

Present population of service area: 3,705 in 2016 prior to acquisition of Juniper System  
(Contact county planning staff, if needed.)

Projected population in 20 years: 9,312 - based upon 2015 PSU projected AAGR for Bend UGB through 2038.  
(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:
<u>See Attachment A</u>	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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#### Water Use

Average **yearly** demand: 1022.1 AFY Year: 2016

Per-capita daily consumption (in gallons): 253.1  
(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 9/30 **Total peak season demand:** 585.4 Acre-feet

**Peak season per-capita daily consumption:** 422.0  
(Divide total peak season demand by population and the number of days during the peak.)

Annual amount of water:

Produced: 333.0 MG  
(diverted or pumped)

Delivered: 342.3 MG

\*Beginning in 2015, the meter at the Parrell vault, where Roats' share of water production from Well 10 is measured began to malfunction, causing total production to be underestimated. Roats has worked to fix the meter and is considering replacing it. During the five years prior to the meter malfunction (2010 through 2014), Roats' non-revenue water ranged from 5.2 to 27.1 MG (1.7 to 8.8 percent).

Is your system fully metered?  Yes  No

Describe your rate structure: Base charge based on meter size, plus usage charge based on volume of water used  
(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):

Roats Water System recently acquired the majority of the former Juniper Utility Company water system. The acquisition of the system added an estimated 560 residential connections to the service population, an increase of nearly 40 percent. Although Roats is able to utilize additional water from Well 10 (under Certificate 87656) through a management agreement with Avion Water, that is not a long-term solution, as the management agreement does not anticipate Roats utilizing the majority of Well 10 capacity for extended periods of time. Water will be utilized under application G-13809 almost immediately.

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

(e.g. until the year 2040) Until the year 2023

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

Water is pumped from six groundwater wells for which Roats holds water rights. As described above, Well 10 is jointly operated under an agreement with Avion Water and the full capacity of the well is not reliably available to Roats during the peak demand season. With the increase in Roats' water service population, the existing wells lack the physical capacity to supply Roats' full demand. Roats' acquisition of Hole Ten wells 1 & 2 will add the needed water right capacity once Roats obtains a permit for the wells. Therefore, the maximum authorized rate of Roats' water rights is the sole constraint on the use of existing infrastructure to meet new demands.

### D. Percentage of water use by type:

Residential: 77.4%

Commercial: 22.6%

Public Authority: \_\_\_\_\_

Agricultural: \_\_\_\_\_

Unaccounted for use: \_\_\_\_\_

Industrial: \_\_\_\_\_

Other (specify use): \_\_\_\_\_

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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.)*

Because much of the physical infrastructure to serve Roats' water service area has already been developed, the cost to implement the proposed request is minimal. Water conservation measures may reduce Roats' peak water demands, but cannot eliminate the need for a new water right entirely. As described in Roats' approved 2007 WMCP, the overwhelming majority of residences in the water service area have new, efficient plumbing.

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

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

As described in Roats' approved 2007 WMCP, the overwhelming majority of residences in the water service area have new, efficient plumbing. Similarly, Roats' distribution system is comprised of relatively new infrastructure. From From 2002 through 2014, prior to the Parrell Vault meter issues, unaccounted-for water totaled 6 percent, and never exceeded 10 percent in any year. Opportunities for conservation are limited to reduction of outdoor water use. Roats estimated that conservation efforts targeting outdoor water use could reduce demand by up to 5 percent for the Woodside Ranch water service area, but these measures would not have the same impact on the Homeplace water service area, where lots tend to be smaller.



**Roats Water System, Inc. - Water Rights Table**

Application	Permit	Certificate	Priority Date	Use	Source	Authorized Rate (cfs)	Well-specific Rate (cfs)	Maximum Rate Utilized to Date (cfs)	Actively Used?
G-13072	G-12526	87656	8/10/1992	Quasi-Municipal	Well 3	3.0	0.25	3.0	N
					Well 4		0.85		Y
					Well 9		0.95		Y
					Well 10		0.95		Y
G-1961	G-1890	87657	3/23/1961	Group Domestic	Well 3	0.5	N/A	0.5	N
					Well 4				Y
				Supplemental Irrigation	Well 9	0.16		0.16	Y
					Well 10			0.16	Y
G-3328	G-3128	87658	12/22/1965	Group Domestic	Well 3	0.5	N/A	0.5	N
					Well 4				Y
				Supplemental Irrigation	Well 9	0.06		0.06	Y
					Well 10			0.06	Y
G-11983	G-11323	87659	11/6/1989	Quasi-Municipal	Well 5	1.1	N/A	1.1	Y
					Well 6				N
					Well 7				Y
					Well 8				Y
G-13809			9/1/1994	Quasi-Municipal	Hole Ten Well 1 & 2	4.16			

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