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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE, Chairman  
BOB STUMP  
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ANDY TOBIN

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AZ CORP COMMISSION  
DOCKET CONTROL

IN THE MATTER OF THE APPLICATION OF  
EPCOR WATER ARIZONA, INC., AN ARIZONA  
CORPORATION, FOR A DETERMINATION OF  
THE CURRENT FAIR VALUE OF ITS UTILITY  
PLANT AND PROPERTY AND FOR INCREASES  
IN ITS RATES AND CHARGES FOR UTILITY  
SERVICE BY ITS MOHAVE WATER DISTRICT,  
PARADISE VALLEY WATER DISTRICT, SUN  
CITY WATER DISTRICT, TUBAC WATER  
DISTRICT, AND MOHAVE WASTEWATER  
DISTRICT.

DOCKET NO. WS-01303A-14-0010

**DECISION NO. 75268**

**NOTICE OF COMPLIANCE  
FILING**

1 In compliance with Decision No. 75268, issued on September 8, 2015, EPCOR Water  
2 Arizona Inc. ("Company") hereby files attached hydraulic study and its recommendation related  
3 to the need for additional storage for its Tubac Water District.

4 Respectfully submitted on March 7, 2016.

*Sandy Murrey*

Sandy Murrey  
EPCOR Water Arizona Inc.  
2355 W. Pinnacle Peak Road, Suite 300  
Phoenix, AZ 85027

Arizona Corporation Commission

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1 Original and 13 copies **filed**  
2 on March 7, 2016, with:  
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4 Docket Control  
5 Arizona Corporation Commission  
6 1200 West Washington Street  
7 Phoenix, Arizona 85007  
8

9 Copies of the foregoing **emailed**  
10 on March 7, 2016 to:

11  
12 Brian K. Bozzo  
13 Compliance and Enforcement Manager  
14 Utilities Division  
15 1200 West Washington Street  
16 Phoenix, AZ 85007

# Tubac Storage Analysis

Review of required storage for the Tubac Water system (PWS No. 04-12-001)

Prepared by Claudia Christo, P. E.

Dated: March 4, 2016



EXPIRES 9/30/18

### Background Summary

In Docket No. W-01303A-08-0227 , Arizona Corporation Commission (“ACC”) staff member Dorothy Hains concluded that, “Tubac has adequate production and storage capacity to service its existing customers”.<sup>1</sup> Since 2008 (the test year in that case), there have been 22 customers added to the Tubac system, a 4% increase in customer base.

In Docket No. WS-01303A-14-0010, ACC staff member Michael Thompson recommended that “the district install a minimum of 100,000 gallons of storage capacity.”<sup>2</sup>

Most recently, in the ACC’s Decision No. 75268, issued September 8, 2015 (Docket No. WS-01303A-14-0010) states that EPCOR Water USA should “conduct a hydraulic study to determine whether additional storage needs in Tubac are imminent and, if they are, to ensure that the additional storage tank is sized correctly.”<sup>3</sup>

EPCOR water has completed a system evaluation and hydraulic analysis of key system components.

### Existing System Description

The Tubac water system (PWS No. 04-12-001) is a small water system serving 605 customers with approximately 23 miles of distribution piping ranging in size from 4-inch to 12-inch. The system consists of three (3) active wells, one (1) offline well, one (1) Arsenic Removal Facility (“ARF”), one (1) booster station, one (1) 50,000 gallon tank, and five (5) hydrotanks. The system consists of three (3) interconnected pressure zones.

### Required Storage

Water system storage requirements can be found in the Arizona Administrative Code, Title 18, Chapter 5, dated December 31, 2008.

#### *R18-5-503. Storage Requirements*

- A. The minimum storage capacity for a CWS or a noncommunity water system that serves a residential population or a school shall be equal to the average daily demand during the peak month of the year. Storage capacity may be based on existing consumption and phased as the water system expands.*
  
- B. The minimum storage capacity for a multiple-well system for a CWS or a noncommunity water system that serves a residential population or a school may be reduced by the amount of the total daily production capacity minus the production from the largest producing well.*

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<sup>1</sup> Direct Testimony of Dorothy M. Hains filed January 12, 2009, page 12.

<sup>2</sup> Engineering Report on Tubac Water District included in Direct Testimony of Michael Thompson filed January 23, 2015, page 8.

<sup>3</sup> Decision No. 75268 at pages 67-68.

The calculation for storage requirements in Tubac has been completed in accordance with A.A.C. R18-5-503 reproduced above.

- A. Tubac peak month: Per review of daily Well production records, June was the peak month in 2014 and 2015.

**Average Daily Demand during peak month**

June 2015	273,940 gpd
June 2014	307,075 gpd

- B. Total Daily Production Capacity of Tubac Wells

**Daily Production Capacity**

<u>Site</u>	<u>Pump Yield(gpm)</u>	<u>Total Pump Yield(gpd)</u>	<u>Adjusted Pump Yield(gpd)*</u>
Well 2	180	259,200	0
Well 3	300	432,000	432,000
Well 4	650	936,000	0
Well 5	500	720,000	720,000
		2,347,200	1,152,000

*\*excludes largest producing well (well 4) and offline well (well 2).*

Storage required (gallons) = average daily demand (gpd) minus daily production capacity excluding largest well (gpd)

Storage required = 307,075 gpd – 1,152,000 gpd = (-) 844,925 gallons

In accordance with A.A.C. R18-5-503, the required storage can be discounted by the daily production capacity (excluding the largest well). The required storage for Tubac, based on the Department of Environmental Quality's Rule for Storage Requirements, is less than zero. This storage requirement calculation does not account for conveyance constraints in the distribution system. Through further analysis, EPCOR completed a system evaluation and hydraulic analysis of key system components. A review of supply, demand, conveyance, and storage was completed. As a result of this engineering analysis, a multi-year capital plan has been created to proactively address system needs.

Prior to placing capital, operational system adjustments have been recently implemented which are intended to improve existing system performance. EPCOR will continue to monitor the effects of these system adjustments along with other operating constraints to ensure that storage needs can be met as the system ages and customer demands or patterns change.

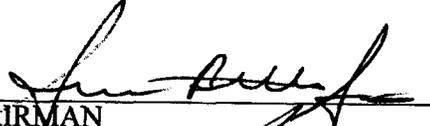
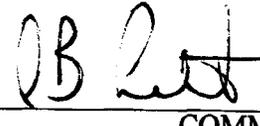
Ongoing evaluation will allow EPCOR to identify and prioritize future capital investments, including additional storage, if necessary.

1 program, EPCOR Water Arizona, Inc. shall: file annual reports regarding the tank maintenance costs;  
2 include a true-up for over- or under- recovery of actual costs compared to projections; and prepare a  
3 Plan of Administration, in a form acceptable to Staff, within 60 days of the effective date of this  
4 Decision.

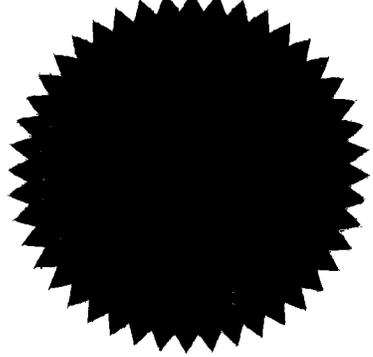
5 IT IS FURTHER ORDERED that EPCOR Water Arizona, Inc. shall conduct a hydraulic  
6 study as soon as possible regarding the need for additional storage for the Tubac Water District, and  
7 within 180 days file its recommendation regarding the need for additional storage with Docket  
8 Control, as a compliance item in this docket.

9 IT IS FURTHER ORDERED that this Decision shall become effective immediately.

10 BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

11    
12  
13 CHAIRMAN COMMISSIONER

14     
15 COMMISSIONER COMMISSIONER COMMISSIONER



17 IN WITNESS WHEREOF, I, JODI JERICH, Executive  
18 Director of the Arizona Corporation Commission, have  
19 hereunto set my hand and caused the official seal of the  
20 Commission to be affixed at the Capitol, in the City of Phoenix,  
21 this 8<sup>th</sup> day of September, 2015.

22   
23 JODI JERICH  
24 EXECUTIVE DIRECTOR

25 DISSENT 

26 DISSENT \_\_\_\_\_  
27 DDN:dp