

ORIGINAL



0000147139

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3 Chino Valley, AZ 86323  
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RECEIVED

2013 AUG -5 P 1:45

BEFORE THE ARIZONA CORPORATION COMMISSION

AZ CORP COMMISSION

Arizona Corporation Commission

DOCKETED

COMMISSIONERS

AUG - 5 2013

6 BOB STUMP, CHAIRMAN  
7 GARY PIERCE  
8 BRENDA BURNS  
9 BOB BURNS  
10 SUSAN BITTER SMITH

DOCKETED BY	NR
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10 IN THE MATTER OF THE APPLICATION OF  
11 GRANITE MOUNTAIN WATER COMPANY, INC.,  
12 FOR APPROVAL OF RATE INCREASE.

DOCKET NO. W-02467A-09-0333

12 IN THE MATTER OF THE APPLICATION OF  
13 GRANITE MOUNTAIN WATER COMPANY, INC.,  
14 FOR APPROVAL OF FINANCINGS.

DOCKET NO. W-02467A-09-0334

14 IN THE MATTER OF THE APPLICATION OF  
15 GRANITE MOUNTAIN WATER COMPANY,  
16 INC., FOR AUTHORITY TO INCUR LONG-  
17 TERM DEBT.

DOCKET NO. W-02467A-10-0483

**AMENDED REQUEST TO  
MODIFY DECISIONS**

20 THIS AMENDED Request to Modify Decisions now attempts to set forth  
21 Granite Mountain Water Company's ("GMWC") revised plan after several  
22 attempts have derailed. In meeting with legal Counsel Robin Mitchell and staff  
23 members on May 21<sup>st</sup>, it was concluded that GMWC should work closely with  
24 personnel of Arizona Department of Environmental Quality ("ADEQ") employ  
25 engineers and water specialists to work with the Arizona Corporation  
26 Commission's ("the Commission") engineers and staff to develop a workable plan.  
27 It was further recommended that GMWC work closely with personnel of ADWR  
28

1 and WIFA now that the Short Spur well has come into GMWC's control and has  
2 been tested.  
3

4 After meeting with the Commission, GMWC met with ADEQ, WIFA and  
5 employed the engineering firms BC Engineering and Tim Robbins Engineering a  
6 water specialist. GMWC met with ADWR early the next week with the goal of  
7 reaching agreement on all points, reducing the same to writing, advising the  
8 Commission and Honorable Administrative Judge Sarah N. Harpring on all  
9 required matters, and have final order to act upon before expiration of the WIFA  
10 financing commitment, which has an expiration date of August 15<sup>th</sup>, 2013. A  
11 summary of GMWC's plan is outlined in the letter dated May 26, 2013 filed May  
12 28<sup>th</sup>, a copy of which is provided herewith as Exhibit "A".  
13

14 GMWC has two primary objectives:  
15

16  
17 1). The two wells (Well #3 [ADWR 55-511771] and Well #4 [ADWR 55-  
18 554078]) that are currently serving the water company are located on and  
19 adjacent to the parcel where Granite Mountain Stables is located. The parcel  
20 is owned by Daniel P. Levie. These wells and well houses have the  
21 appropriate easements across the parcels for the water mains. These two wells  
22 are relatively close together and likely draw water from the same underground  
23 aquifer. There is solid granite rock approximately 300 to 400 feet below the  
24 surface in many places adjacent to the wells and the sloping hill near Mr.  
25 Levie's home. We therefore have a concern about the quality of the water  
26 due to a slow increase in nitrate levels at each well over the last few years.  
27 These levels are below required limits, but have in the past tested higher than  
28

1 the minimum reporting limits (see herewith as Exhibit "B"). GMWC has had  
2 increased monitoring per ADEQ standards for a little over a year. The testing  
3 frequencies have been reduced per ADEQ rules on both wells, although the  
4 levels remain a concern to GMWC.

5  
6 2). Well #5 (ADWR 55-622083) is a "grandfathered" well that can and will  
7 be eventually replaced. The primary concern has been "where to move and re-  
8 drill" the well. Before now the only possibility for a site for the replacement  
9 well was on a lot owned by Daniel Levie (Site with prior plans). GMWC  
10 planned and engineered facilities on that lot and intended to proceed even if it  
11 was less desirable because of its close proximity to wells #3 and #4 and  
12 possible contamination by increased nitrate levels in the area. It is also  
13 located closer to the two existing production wells that could affect draw-  
14 down levels.  
15

16  
17 While attempting to work out the most desirable plan for a new well with 100  
18 gpm capacity as ordered by the Commission, we learned of a neighboring lot  
19 and home on Short Spur Trail that was going into foreclosure. That lot had an  
20 existing domestic well located on it. From the well report, we learned that the  
21 well had been drilled in 2006 to a depth of 360 feet. At the end of the report  
22 was a comment from the well driller stating "Strong Water". As of January  
23 22, 2013, we were able to test the well production for quantity and draw-  
24 down. The well test results are attached as Exhibit "C". The well is located  
25 on a parcel of +/- 1.46 acres. It is our intent to work with the purchaser of this  
26 property to acquire the well, well site, and additional easement(s) and a large  
27 part of the acreage for a future well and other uses as, and when necessary.  
28

1  
2 BASED UPON THE SUPPLEMENTAL STAFF REPORT, Staff currently  
3 recommends that the Commission:

4 1. Grant GMWC authorization to incur an 18- to 22-year amortizing loan  
5 with WIFA in an amount not to exceed \$181,320, at an interest rate not to  
6 exceed 5.00 percent per annum, subject to the condition that the terms of the  
7 WIFA loan do not require a DSC greater than 1.20 and for the purposes of:

- 8 a. Purchasing an existing well or drilling a new well with a minimum of  
9 100 GPM capacity,  
10 b. Installing a new storage tank with a minimum of 100,000 gallons  
11 storage capacity or  
12 c. Providing any combination of production and storage capacity that  
13 provides minimum capacity needed.  
14

15  
16 GMWC elects to avail itself of option (c.), 'To provide any combination of  
17 production and storage capacity that provides the minimum capacity needed'.

18 GMWC would like to request modification of Decision 71869 to reflect GMWC  
19 decision to choose option (c) to add a new production well and 50,000 gallon water  
20 storage tank.  
21

22 In Decision 72377 (May 27, 2011), issued in docket W-02467A-0483, the  
23 Commission granted approval for Financing for GMWC to incur long-term debt in  
24 the amount of \$181,320. GMWC applied for this amount based on the true  
25 estimates received for the two projects, prior to learning of the WIFA requirement  
26 to comply with the federally mandated "Davis-Bacon" Act, which subsequently  
27  
28

1 increased costs by approximately thirty percent (30%). The revised estimate to  
2 complete both projects was \$240,808 (see Exhibit "D").  
3

4 GMWC would like to propose modification of Decision 72377 to comply with the  
5 change in scope of the projects. GMWC could reduce the costs of the projects by  
6 acquiring the Short Spur well as opposed to drilling a new well. GMWC could also  
7 reduce the cost of the water storage tank by purchasing a prefabricated tank as  
8 opposed to having to construct a storage tank onsite. GMWC believes that it would  
9 save a significant amount for rate payers with the modification in long-term debt.  
10 The current estimate for the projects totals \$196,032.  
11

12  
13 GMWC would like to request modification of Decision 72377 to allow for long-  
14 term debt not to exceed \$196,032; to have any unused authorization to incur long-  
15 term debt granted in the proceeding to terminate no sooner than June 1, 2014; and  
16 have the compliance items listed in the Decision to be extended to comply with the  
17 Commission's ruling on the request for an Extension of time on Decision 72294.  
18

19 GMWC agrees to provide the additional new well on Short Spur and an additional  
20 50,000 gallon storage tank adjacent to the existing 2 tanks on the hill (112,667  
21 total) at the current tank locations. (See new calculations by Engineer, Exhibit  
22 "E").  
23

24  
25 The purchase of an existing new well is not a possible option as no such well  
26 exists. If GMWC were to drill a new well on the first intended well site, the  
27 minimum 100 gpm capacity required by the Commission order could not be  
28

1 assured. The Short Spur location is the best option to meet the requirements  
2 ordered by the Commission.

3  
4 We do now have available the new Short Spur well together with a very  
5 important future prospective well site that is within 660' of the Grandfathered well  
6 #5. We could drill at any time when needed and as funds are available.  
7

8  
9 This could be a new larger diameter well to replace well #5, as additional  
10 water is needed. This is another reason that the Short Spur Location is GMWC's  
11 best option to meet the requirements ordered by the Commission.  
12

13 GMWC is in the process of having the water quality tested for drinking  
14 water standards. When GMWC receives the testing results GMWC will file the  
15 results with the Commission's Docket Control Center.  
16

17 GMWC is in the process of working with ADWR to convert well #6 to a  
18 production non- exempt well and determine the maximum pumping capacity.  
19 When GMWC receives approval from ADWR, GMWC will file the results with  
20 the Commission's Docket Control Center.  
21

22 Installing a new 100,000 gallon storage tank is not an available option as  
23 GMWC has no site for such a tank. GMWC has a site for only a 50,000 gallon tank  
24 on the hill beside the other two existing tanks. When the last 50,000 gallon storage  
25 tank was completed the original 19,000 gallon tank (which was objected to by the  
26 homeowners association because of height) was cut down to the same height as the  
27 last new 50,000 gallon tank constructed (leaving a total storage of 62,667 gallons)  
28

1 and the storage easement was fenced, landscaped and prepared by leveling a site in  
2 the mountainside for another 50,000 gallon tank together with the now existing  
3 12,667 and 50,000 gallon tanks. We elect #1-c providing a combination of new  
4 well production and storage capacity as submitted by GMWC engineers.  
5

6           2. GMWC stands willing and ready to file a compliance item for the AOC  
7 issued for the option we wish to implement to meet the requirements of (1) above.  
8

9           3. GMWC respectfully requests that the cost and expense incurred to  
10 purchase the new production well and install the required infrastructure and storage  
11 tank be considered beneficial to its customers by the Commission in the future  
12 determination of GMWC's Application for Approval of a rate increase.  
13

14           4. GMWC requires and approves authorization to pledge its assets in  
15 Arizona pursuant to ARS 40-285 in connection with any indebtedness authorized  
16 in this proceeding.  
17

18           5. GMWC requests authorization to establish an expiration date of June 1,  
19 2014 for any unused authorization to incur debt granted in this proceeding.  
20

21           6. GMWC requests authorization to engage in any transaction and to  
22 execute documents necessary to effectuate the authorizations granted.  
23

24           7. GMWC agrees that the Commission require, within 60 days of the  
25 execution of any financing transaction authorized herein, to file with Docket  
26 Control, as a Compliance item in this matter, a letter summarizing the transaction,  
27 and to provide to Staff's Compliance Section a copy of the loan documents.  
28

1 8. GMWC agrees that the Commission requires, in the month the WIFA  
2 loan closes and every month thereafter, to set aside \$10.00 of each customer's bill  
3 in a separate interest-bearing account, with the proceeds to be used only to pay  
4 WIFA.

5 GMWC acknowledges Staff's statement concluding paragraph and requests that  
6 Staff re-examine the report Bill Carnes of BC Engineering and Water Specialist,  
7 Tim Robbins. Their engineering report states that GMWC already has more than  
8 60,000 gallons of water storage capacity. Therefore the Fire Storage Capacity is  
9 met (see Exhibit E). It is GMWC's position that because of the variance given to  
10 GMWC from Central Yavapai Fire District on November 19, 1996 (see Exhibit F  
11 attached) that GMWC has always met the Fire Flow requirements of five hundred  
12 (500) gallons per minute, for a minimum of thirty (30) minutes for a total storage  
13 capacity of 15,000 gallons. This requirement is much less than the existing storage  
14 capacity of 62,667 gallons.  
15

16  
17 We respectfully submit that the business decisions requested are for the benefit of  
18 the GMWC and its customers. We are looking at the "long haul" perspective of  
19 GMWC. With the addition of production well #6 and the 50,000 gallon storage  
20 tank, GMWC will increase its capacity to provide water to its current and future  
21 customers.  
22

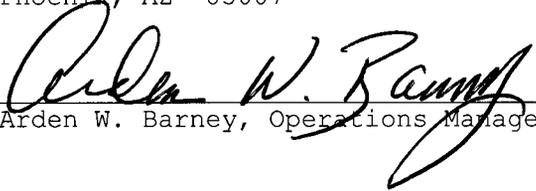
23  
24 RESPECTFULLY SUBMITTED this 31st day of July, 2013.

25  
26   
27 Paul D. Levie  
28 Attorney for Granite Mountain Water  
Company, Inc.

Original and 13 copies filed on

1 The 5<sup>th</sup> day of Aug., 2013, with:

2 Docket Control  
3 Arizona Corporation Commission  
4 1200 West Washington  
5 Phoenix, AZ 85007

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Arden W. Barney, Operations Manager

Granite Mountain Water Company, Inc.  
PO Box 350 Chino Valley, AZ 86323  
The Office of Paul D. Levie

Robin Mitchell, Esq.  
Legal Division  
Arizona Corporation Commission  
1200 W. Washington  
Phoenix, AZ 85007

# EXHIBIT A

May 24, 2013

Granite Mountain Water Company, herein-after "Granite".

1. Granite was ordered by the court to:

- (a) Drill a new well OR
- (b) Provide additional storage

Pursuant to the Order Granite:

(a) Proceeded to plan for drilling a new well on a lot adjacent to Granite's grandfathered well #5 and prepared plans for use of that new well as replacement for well #5 and submitted those plans as well #6.

(b) Granite had already augmented its 19,000 gallon storage (tank #1) with a 50,000 gallon new storage tank (tank #2), dug and flattened a larger storage area, fenced and landscaped the site, agreed with the Home Owners Association to cut down the higher, more view-obstructing 9,000 gallon tank to the height of the larger radius 50,000 gal tank and further prepared and flattened space for another (2<sup>nd</sup>) 50,000 gal tank (tank #3) identical within the same landscaped enclosure. So Granite actually planned to do both, drill a new well and increase the storage to 111,700 gallons.

(c) Granite also made application for a WIFA loan.

While the foregoing plans were in progress there was no shortage of water supply or storage. Water supply and adequate storage was being provided basically and adequately by well #4, and if necessary, test well #3 would kick on with its full production (which was seldom used).

At such time Granite learned of the possible availability of the Short Spur property inasmuch as notice of foreclosure had been given the owner, James Jordan by the 1<sup>st</sup> mortgagor. It had on it an older home in run down condition, and a yard sale of the owners' last worldly possessions was being conducted by James. He had a recently drilled a news domestic well, the well report of which contained a hand written notation "Strong water".

It was a large lot of approximately 1.5 acres and had an adequate well-house, a sort of studio apartment, a tack shack, another storage unit and it was within 300 feet (nearest point) and approximately 500 feet (farthest point) from Granite's grandfathered well.

An added benefit is that the well #6 location is upstream from Granite Mountain Stables and more distant from wells #3 and #4. Neither Granite nor owner of Granite, Paul Levie, were able to finance purchase of the home and lot, which was purchased by Shauna (Paul's daughter) and John Duke for \$155, 000., closing on Feb 5, 2013.

I think we have become entangled in the minutiae of long interrogatories and responses between Granite and Engineering to a point at which we cannot see the forest for the trees. We have now hired Haywood & Associates Engineer Bill Carnes and Specialist Timothy Robbins to analyze the facts and

assist the Corporation Commission engineers and make calculations to assure that the now intended new well #6 and added storage will meet Arizona Department of Environmental Quality requirements.

A deed for the wellsite and an easement for much of the rest of the 1.5 acre lot (containing the other buildings) (except a reasonable area around the home) is being prepared for signatures which will place the well and easement upon the other outbuildings solidly in the name and ownership possession of Granite. Granite at present owns no land in the area for an office or storage of equipment and supplies for which this property will be ideal. It will also be ideal for any further wellsites in the future upstream from Granite Mountain Stables.

An amended request to modify decisions based upon this letter will be prepared and filed with the exhibits as soon as we have the exhibits and prepared plans for the well and tank are approved by the engineer.

We fear that Granite has by lapse of time, the minutiae of extended interrogatories, and our failure to comprehend the pertinent formulae and calculations, lost the objective of providing a well or a tank. We are providing both and the plans are all buried in the numerous interrogatories and the pumping test of well #6.

If you, Robin, will as you suggested, postpone the set hearing to give us time to achieve the foregoing proposals and reduce the same to agreement, we may as you also suggested, be able to give the staff Commission and the judge all the information they need and desire to make an appropriate decision.

While we have been working out this purchase of the new well and site we have tried to keep the corporation commission and the judge as fully informed as possible as well as perform the necessary production tests.

We recognize that the new well quality tests will need to be completed. We met with the ADEQ and also briefly with WIFA representatives to keep them advised and be in a position to get ADEQ's necessary approval and meet the time constraints of WIFA.

We will also be meeting with ADWR to meet any requirements they have for the new well. We appreciate the opportunity to have met with you and staff members Dorothy, Jack, Scott and Gordon. Would you please see that they each receive a copy of this letter? You have clarified many questions and once it has been determined that the well production and added storage capacity meet the necessary requirements we should be ready for approval by the Commission.

Thanks again,



Paul D. Levie, P.C.  
Granite Mountain Water Company, Inc.

And



Arden W. Barney, C.E.O.  
Granite Mountain Water Company, Inc.

cc:/ ADEQ; ADWR; WIFA

Cc List:

ATTN: Kevin Cregon  
Arizona Department of Water Resources  
Water Management Division  
3550 North Central Avenue  
Phoenix, AZ 85012

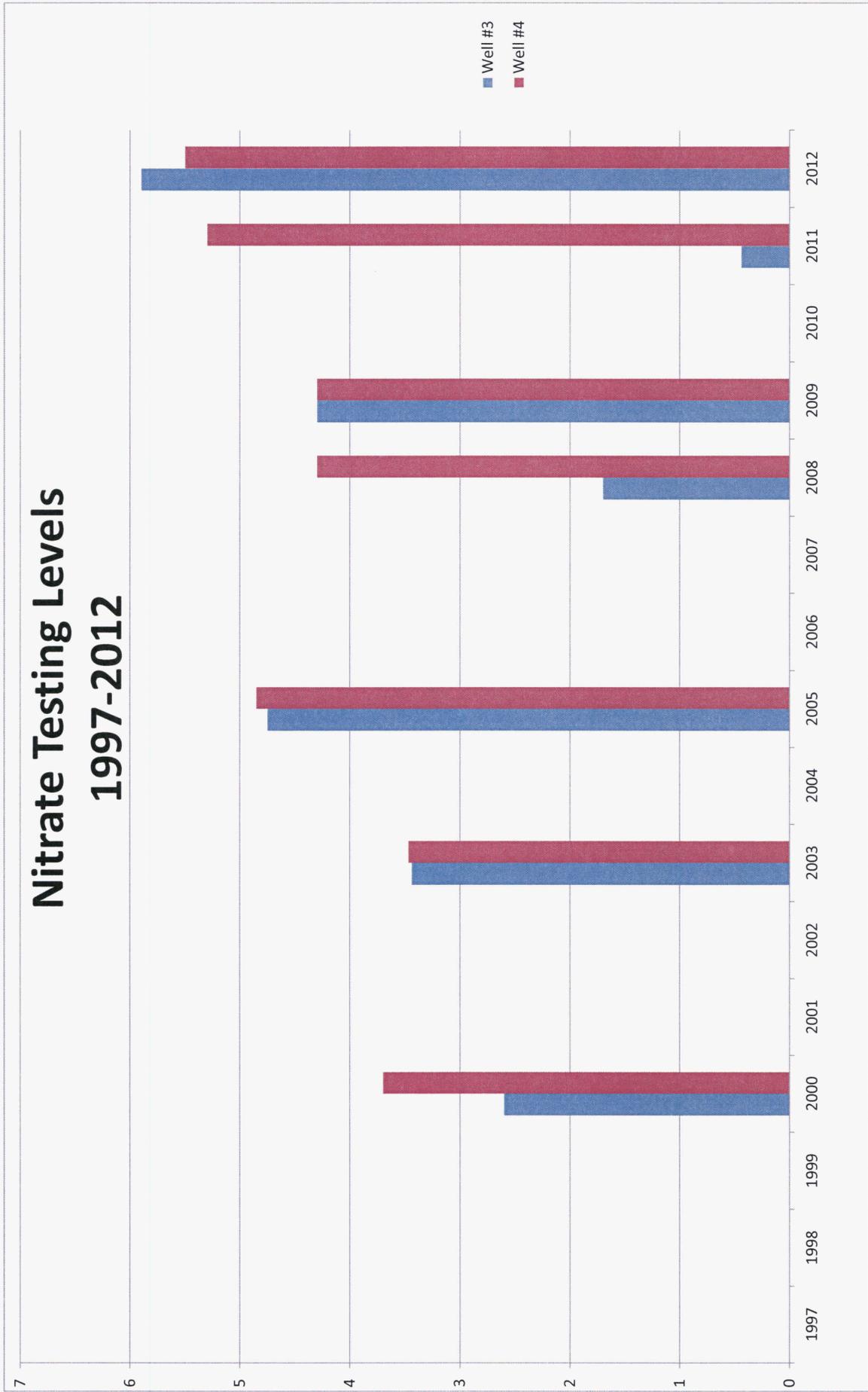
ATTN: Robin Mitchell, Esq.  
Legal Division  
Arizona Corporation Commission  
1200 W. Washington  
Phoenix, AZ 85007

ATTN: Frank Smaila  
Office of Administrative Counsel  
Arizona Department of Environmental Quality  
1110 W. Washington Street  
Phoenix, AZ 85007

ATTN: Sara Konrad  
Water Infrastructure Finance Authority of Arizona  
1110 W. Washington Street  
Suite 290  
Phoenix, AZ 85007

cc:/ ADEQ; ADWR; WIFA

# Nitrate Testing Levels 1997-2012



# EXHIBIT B

**GRANITE MTN WATER**

DATE 1/23/13

PUMP TEST FOR 2475 SHORT SPUR TRAIL PUMP &amp; MOTOR SET @ 360'

STATIC WATER LEVEL @ START 253.3FT      PUMPING RATE @ 60+GPM

<u>TIME</u>	<u>STATIC WATER LEVEL</u>	<u>GPM</u>	<u>TOTALIZER</u>	<u>PSI NOTES</u>
2:58	271.5		7052227	
3:01	277	66	7052400	120
3:03	285	83	7052654	CHANGE PSI TO 75
3:05	293	80	7052796	CHANGE PSI TO 80
3:06	297	79	7052935	
3:08	301.4	79	7053090	80
3:10	301.1	78	7053230	80
3:13	307.3	76	7053512	85
3:16	305.4	76	7053701	85
3:17	306	76	7053865	85
3:20	305.5	75	7054058	85

**EXHIBIT C**

PAGE 2

<b>3:28</b>	<b>305.5</b>	<b>75</b>	<b>7054614</b>	<b>85</b>
<b>3:35</b>	<b>308</b>	<b>75</b>	<b>7055190</b>	<b>85</b>
<b>3:45</b>	<b>309.4</b>	<b>74.4</b>	<b>7055940</b>	<b>80</b>
<b>3:55</b>	<b>310</b>	<b>74.3</b>	<b>7056490</b>	<b>80</b> CRANED BACK TO 70 GPM 90PSI
<b>4:05</b>	<b>310</b>	<b>70</b>	<b>7057388</b>	<b>90</b>
<b>4:17</b>	<b>311</b>	<b>70</b>	<b>7058234</b>	<b>90</b>
<b>4:27</b>	<b>311</b>	<b>70</b>	<b>7058983</b>	<b>90</b>
<b>4:53</b>	<b>311</b>	<b>70</b>	<b>7060733</b>	<b>90</b>
<b>5:23</b>	<b>311</b>	<b>70</b>	<b>7062754</b>	<b>90</b>
<b>5:45</b>	<b>311</b>	<b>70</b>	<b>7064391</b>	<b>90</b>
<b>6:00</b>	<b>311</b>	<b>70</b>	<b>7065427</b>	<b>90</b>

**NOTES: WELL SUSTAINS 70 GPM WITH 58' OF DRAW  
DOWN. 3 HOURS OF PUMPING**

PUMP TEST FOR 2475 SHORT SPUR TRAIL PUMP &amp; MOTOR SET @ 360'

STATIC WATER LEVEL @ START 265FT      PUMPING RATE @ 35 GPM FOR 2.5 HOURS

<u>TIME</u>	<u>STATIC WATER LEVEL</u>	<u>GPM</u>	<u>TOTALIZER</u>	<u>PSI</u>	<u>NOTES</u>
9:25	268	42			
9:27	267.3	39	7066730	150	
9:31	267.6	39	7066857	150	
9:36	266.8	35	7067079	150	ADJUSTED BACK TO 35 GPM
9:42	266	33	7067269	158	
9:50	266.2	34	7067616	158	
10:00	265.6	32	7067958	158	
10;21	266.5	35	7068576	155	ADJUSTED BACK TO 35 GPM
10:32	266.5	35	7068980	150	
10:42	266.5	35	7069313	155	
10:53	266.5	35	7069720	155	
11:02	266.5	35	7070012	155	
11:16	266.5	35	7070506	155	
11:33	266.5	35	7071089	155	
11:46	266.5	34	7071520	155	
12:00P	266.5	35	7071977	155	

**NOTES: WELL SUSTAINS 35 GPM WITH 13' OF DRAW  
DOWN - 2.5 HOURS OF PUMPING**

**BEFORE DAVIS BACON REQUIREMENT**

Tank & Well Cost Calculations

Phase II Tank #3	Tank Structural Engineering/Design	\$2,000.00
	Permit for Storage Tank-Deposit	\$1,000.00
	Permit for Storage Tank-Balance	\$400.00
	Bedding Material to Level Tank Foundation	\$502.27
	Compaction Report	\$515.00
	Tank Construction	\$57,850.00
	Pipe and Valves for Tank Connection	\$940.25
	<b>Totals</b>	<b>\$62,307.52</b>

Phase I Well #5

Drilling	Drill Tech	\$25,337.90	
Pump/Electrical	Drill Tech	\$20,000.00	\$6,664.00 Primary Line @ \$16.66/ft
Electrical Conduit	McMains & Sons	\$5,740.20	\$102.00 Service Wire @ \$5.10/ft
Water Mains	McMains & Sons	\$27,537.02	\$15,519.00 Switch Gear @ \$15,519
Electricity	APS	\$35,562.00	\$13,277.00 Transformer 277/480V @ \$13,277
Chlorination	Blue Book	\$700.00	
Structure/Fencing	Desert Snow/GBSI	\$10,000.00	
		\$124,877.12	\$35,562.00
		\$187,184.64 Subtotal	
		\$9,359.23 5% Misc	
		<b>\$196,543.87 Total</b>	

**AFTER DAVIS BACON REQUIREMENT**

Tank & Well Cost Calculations

Phase II Tank #3	Tank Structural Engineering/Design	\$2,000.00
	Permit for Storage Tank-Deposit	\$1,000.00
	Permit for Storage Tank-Balance	\$400.00
	Bedding Material to Level Tank Foundation	\$502.27
	Compaction Report	\$515.00
	Tank Construction	\$66,850.00
	Pipe and Valves for Tank Connection	\$940.25
	<b>Totals</b>	<b>\$71,307.52</b>

Phase I Well #5

Drilling	Drill Tech	\$36,347.77	
Pump/Electrical	Drill Tech	\$27,000.00	\$6,664.00 Primary Line @ \$16.66/ft
Electrical Conduit	McMains & Sons	\$7,749.27	\$102.00 Service Wire @ \$5.10/ft
Water Mains	McMains & Sons	\$37,174.98	\$15,519.00 Switch Gear @ \$15,519
Electricity	APS	\$35,562.00	\$13,277.00 Transformer 277/480V @ \$13,277
Chlorination	Blue Book	\$700.00	
Structure/Fencing	Desert Snow/GBSI	\$13,500.00	
		\$158,034.02	\$35,562.00
		\$229,341.54 Subtotal	
		\$11,467.08 5% Misc	
		<b>\$240,808.61 Total</b>	

**ACQUIRING DOMESTIC WELL & INSTALLING PREFABRICATED TANK**

Tank & Well Cost Calculations

Phase II Tank #3	Tank Structural Engineering/Design	\$2,000.00
	Permit for Storage Tank-Deposit	\$1,000.00
	Permit for Storage Tank-Balance	\$400.00
	Bedding Material to Level Tank Foundation	\$502.27
	Compaction Report	\$515.00
	Tank Construction	\$55,000.00
	Pipe and Valves for Tank Connection	\$940.25
	<b>Totals</b>	<b>\$59,457.52</b>

Phase I Well #6

Well	Esements/Water Rights	\$25,000.00
	New Pump/Electrica Drill Tech	\$50,000.00
	Water Mains	\$9,000.00
	Electricity	\$14,040.00
	Chlorination	\$15,000.00
	Well House	\$700.00
		\$13,500.00
		<b>\$127,240.00</b>
		\$186,697.52 Subtotal
		\$9,334.88 5% Misc
		<b>\$196,032.40 Total</b>

**EXHIBIT D**

# **EXHIBIT E WATER SUPPLY AND FIRE FLOW DESIGN REPORT**

## **FOR GRANITE MOUNTAIN WATER COMPANY**

**GRANITE MOUNTAIN WATER COMPANY**

**P.O. BOX 350**

**CHINO VALLEY, AZ 86323**

**928-776-9641**

**CONTACT PERSON: ARDEN BARNEY**

**REPORT PREPARED BY:**

**BC ENGINEERING**

**212 S. MARINA STREET**

**PRESCOTT, AZ 86303**

**928-899-8772**

**CONTACT PERSON: WILLIAM J CARNES**

**July 2, 2013**

## INTRODUCTION

This report is to calculate and verify the water usage demand and the fire flow demand for the GRANITE MOUNTAIN WATER COMPANY in Prescott, Arizona. The GRANITE MOUNTAIN WATER COMPANY serves the GRANITE MOUNTAIN HOMESITES SUBDIVISION located northwest of Prescott on Williamson Valley Road.

Currently, there are 112 lots being served by the water company. At total build-out, there will be 175 lots being served by the water company. With a design capita of 2.5 persons per lot, that equates to 438 people will be served by the water company at total build-out.

Presently, there are two wells, well #3 and well #4, supplying water for the water company with construction plans being submitted for a third well to be added for water production for the company. There are currently two storage tanks serving the water company. One of 50,000 gallons capacity and the other with 12,667 gallons capacity, making a total storage capacity of 62,667 gallons storage.

## WATER DEMAND FOR WATER DISTRICT

As stated above, at total build-out, the water district will have 175 lots being served by the water company. Historic data for the water district shows that the average daily water usage for each lot is 265 gallons per day. The water company uses this 265 gpd water usage and uses an average of 2.5 persons per lot in their design calculations. Therefore, at total build-out, the water demand for the district will be:

### **AVERAGE DAILY DEMAND**

$$175 \text{ lots} \times 265 \text{ gpd/lot} = 46,375 \text{ gallons per day water demand or } 32 \text{ gpm}$$

### **MAXIMUM DAILY DEMAND**

$$1.8 \times \text{average daily demand} = 1.8 \times 46,375 \text{ gallons} = 83,475 \text{ gallons per day} \\ \text{or } 58 \text{ gpm}$$

### **PEAK HOURLY DEMAND**

$$1.7 \times \text{maximum daily demand} = 1.7 \times 83,475 \text{ gallons} = 141,908 \text{ gallons per day} \\ \text{or } 99 \text{ gpm}$$

## WATER SUPPLY FOR WATER DISTRICT

As stated above, the water company has two wells, well #3 and well #4, that currently supply water for the water district, and a third proposed well, well #6 that will be added shortly to supply water for the water district. The quantity of water that each well can produce is:

Well #3 produces	22 gpm	or	31,680 gallons per day
Well #4 produces	60 gpm	or	86,400 gallons per day
Well #6 will produce	70 gpm	or	100,800 gallons per day

Water from the wells is pumped to two existing storage tanks, one of 50,000 gallons storage capacity and one of 12,667 gallons storage capacity. Water is supplied throughout the water district through a 2,000 gallon hydroneumatic tank and two 15 hp booster pumps, each having a pumping capacity of 250 gpm.

## OPERATIONAL STORAGE REQUIREMENTS

Operational storage requirements for the water district are based on the water demand at total build-out of 175 lots which has, as calculated above, the average daily demand of 46,375 gallons per day. The current storage capacity of the water system is 62,667 gallons with the two existing storage tanks. This is greater than the average daily demand of 46,375 gallons, so therefore the operational daily storage requirements are met.

Fire flow storage requirements are based on the approved fire flows and fire suppression systems required for the lots at the time the various units of Granite Mountain Homesites were platted and approved by Yavapai County. The required fire flow for these platted units of Granite Mountain Homesites is 500 gpm for a duration of 2 hours which is equal to 60,000 gallons. Along with this required fire flow of 500 gpm is a note called "Fire Suppression" on the cover of the plats that states each home within the subdivision will be built with fire sprinklers or other approved fire suppression system. These two fire suppression requirements were a condition of the approval for each platted unit of Granite Mountain Homesites with Yavapai County and is stated as a part of the Department of Real Estate Public Report that is filed with each plat. Therefore, fire flow storage requirements for the water district are:

$$500 \text{ gpm} \times 120 \text{ minutes duration} = 60,000 \text{ gallons}$$

The storage capacity of the two existing storage tanks is 62,667 gallons, which is greater than the required fire flow storage of 60,000 gallons, therefore the fire storage capacity for the water system is met.

## CONCLUSIONS AND RECOMMENDATIONS

Granite Mountain Water Company is putting into service a third high production well for their water district, and construction plans for the connection of this third well to the subdivision domestic water system are being submitted along with this water report. The three wells will work together or alternate to pump water to the storage tanks. The two storage tanks have a total capacity of 62,667 gallons.

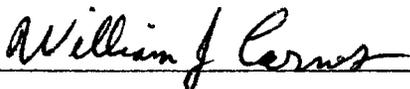
At present, there are 112 lots being served by the water company. At total build-out, there will be 175 lots with service connections to the water company system. At a Granite Mountain Water Company historic water usage demand for each lot of 265 gallons per day, that gives a water demand of  $265 \text{ gpd/lot} \times 175 \text{ lots} = 46,375 \text{ gallons per day}$ . With the existing storage capacity of 62,667 gallons, this is more than the daily demand of 46,375 gallons and provides adequate daily storage capacity.

The fire flow storage capacity requirement for the Granite Mountain Homesite Subdivision is 500 gpm for a duration of 2 hours and that each house built in the subdivision be sprinkled or have another approved fire suppression system as recorded on the approved plat and as stated within the filed Department of Real Estate Public Report. The fire storage capacity requirement is therefore:

$$500 \text{ gpm} \times 120 \text{ minutes} = 60,000 \text{ gallons.}$$

The capacity of the existing two storage tanks is 62,667 gallons, which is greater than the required 60,000 gallons and the fire flow storage capacity requirement is met.

With the addition of a third well, which will nearly double the water production for the Granite Mountain Water Company, and showing, with the above calculations, that the daily demand storage and the fire flow storage is adequate for the subdivision, I recommend that the Granite Mountain Water Company water system is adequate to provide the needed water demand for the subdivision at total build-out. Thank you for your time and effort in the review of this water report and accompanying new well construction plans.

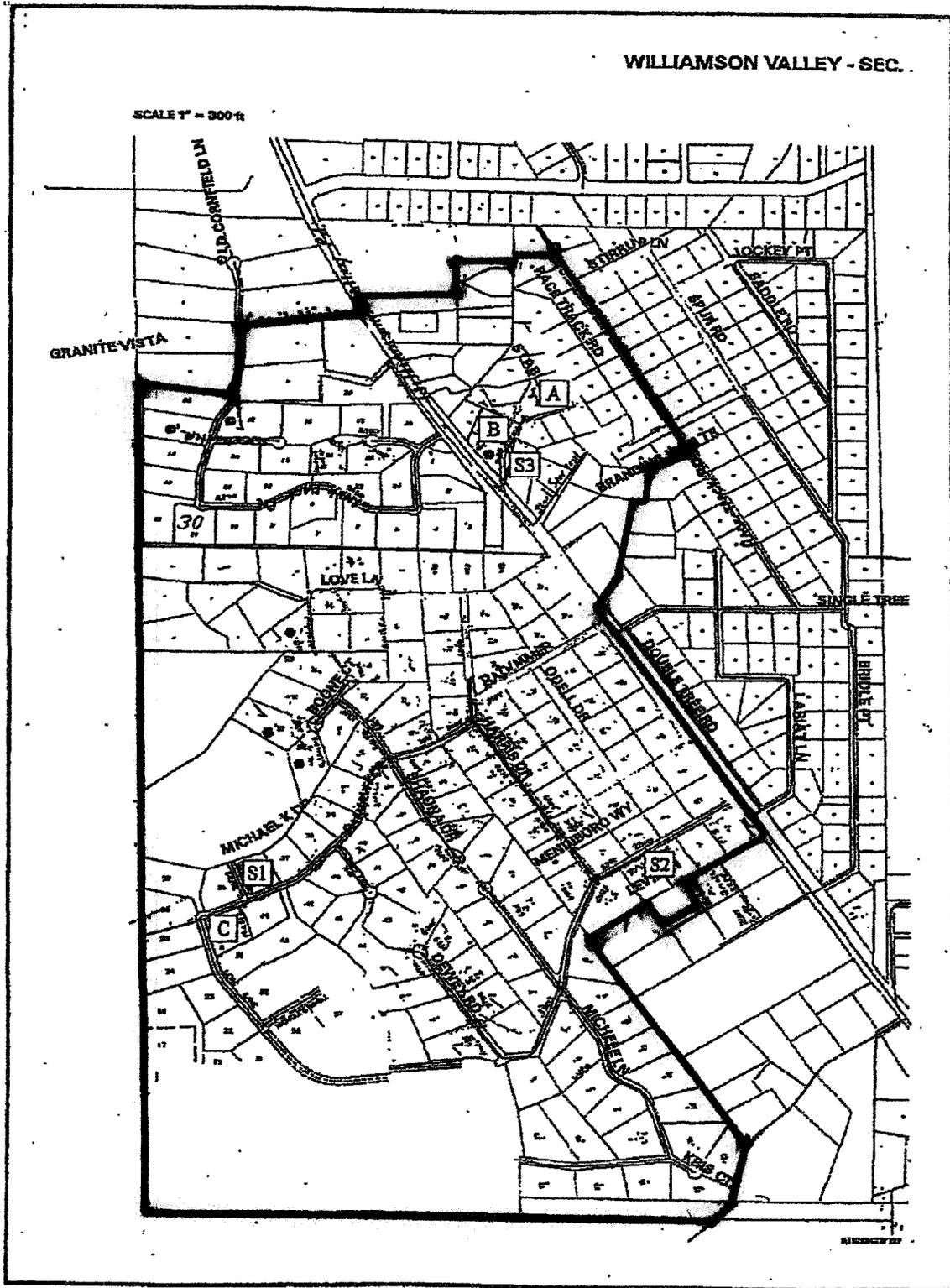


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William J Carnes, P.E.

# GRANITE MOUNTAIN WATER COMPANY

## SERVICE AREA



**FIRE SUPPRESSION NOTE FROM COVER OF GRANITE MOUNTAIN HOMESITES, UNIT 5, PHASE 3 SUBDIVISION PLAT RECORDED IN BOOK 55, PAGE 84:**

**THIS IS AN EXAMPLE OF THE FIRE FLOW AND FIRE SUPPRESSION THAT WAS REVIEWED AND APPROVED WHEN THE CONSTRUCTION PLANS AND THE FINAL PLAT OF EACH UNIT OF GRANITE MOUNTAIN HOMESITES WERE APPROVED BY YAVAPAI COUNTY.**

**ASSURANCE**

SATISFACTORY ASSURANCE IN THE FORM OF A CONSTRUCTION AGREEMENT FROM WELLS FARGO IN THE AMOUNT OF \$250,000 HAS BEEN PROVIDED IN THE FULL AMOUNT NECESSARY TO GUARANTEE THE INSTALLATION OF STREETS, WATER, AND ALL REQUIRED IMPROVEMENTS IN THIS SUBDIVISION (ELECTRIC) (PHONE) UTILITY SERVICES HAVE BEEN ASSURED BY LETTER FROM THE APPROPRIATE UTILITY COMPANIES

BY: *Bob Springer*  
CHAIRMAN

*1/24/06*  
DATE

ATTEST: *Jan Stadden*  
CLERK OF THE BOARD

*1/24/06*  
DATE



**FIRE SUPPRESSION NOTE**

ALL RESIDENTIAL STRUCTURES WITHIN THIS SUBDIVISION SHALL BE CONSTRUCTED WITH FIRE SUPPRESSIONS SYSTEMS (SPRINKLERS OR OTHER ACCEPTABLE METHOD) APPROVED BY THE CENTRAL YAVAPAI FIRE DISTRICT

**CC & R's**

THE DECLARATION OF RESTRICTIONS FOR THIS SUBDIVISION IS BY ANNEXATION DECLARATION RECORDED IN BOOK **4357** OF OFFICIAL RECORDS, PAGE **817**, INCORPORATING THAT CERTAIN DECLARATION COVENANTS, CONDITIONS AND RESTRICTIONS FOR GRANITE MOUNTAIN HOMESITES, UNIT V, PHASE 2, DATED JUNE 8, 2005 AND RECORDED JUNE 23, 2005 IN BOOK 4278, PAGE 523 OF THE OFFICIAL RECORDS OF YAVAPAI COUNTY, ARIZONA



Central Yavapai Fire District  
8555 E. Yavapai Road  
Prescott Valley, AZ 86314

November 19, 1996

# EXHIBIT F

Mr. Michael Haywood  
Haywood and Associates  
Goodwin Street  
Prescott, Arizona 86301

Re: Variance - Granite Mountain Homesites Unit 5 and Granite Park Ranch

Dear Mr. Haywood:

The Central Yavapai Fire District Fire Code Board of Appeals met on November 13, 1996, to consider the variance request for the above referenced subdivisions. The variance was approved with the following stipulations:

- ✓1. All residential buildings hereby constructed within the proposed subdivisions shall have a sprinkler system installed according to National Fire Protection Association Standard 13-D and Central Yavapai Fire District's requirements. A copy of these requirements is attached.
2. The residential sprinkler system requirements for all residential buildings within Granite Park Ranch and Granite Mountain Homesites Unit 5 subdivisions shall be recorded with Yavapai County as Covenants, Conditions, and Restrictions. Proof of this recording shall be provided prior to approval of the final plat.
- ✓3. The sprinkler system requirement shall appear on the face of the final subdivision plat prior to submittal to Yavapai County for approval.
4. One fire hydrant capable of flowing a minimum of five hundred (500) gallons per minute, for a minimum of thirty (30) minutes, shall be installed in each of the subdivisions. These hydrants shall be tested and approved by Central Yavapai personnel prior to final acceptance.
5. The applicant shall provide the Fire District with a list of all parcel numbers within the two subdivisions.
- ✓6. The number of lots to be served by this current water supply system shall be set at a maximum of 188 lots to include 80 existing lots, 79 proposed Granite Mountain

(continued)

Mr. Michael Haywood  
November 19, 1996  
Page 2

Homesites Unit 5 lots, and 29 Granite Park Ranch lots as was detailed by Mr. Huza in his water system design report for Granite Park Ranch subdivision. No additional lots shall be added to this water system without a significant improvement in storage capacity and the ability to supply sufficient pressures.

Please call me at 772-7711 if you have any questions, or if I can be of any further assistance.

Sincerely,



Paul J. Hernandez  
Fire Marshal

PJH/dd

xc: Mike Kelly, Yavapai County Planning  
and Building Department  
Development File  
File