

White Dove Well Water Organi



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5520 N Lone Owl Trail, Marana AZ 85653 | 520-401-3974 | whitedovewater@outlook.c...

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2014 OCT -2 P 12: 57

ORIGINAL

October 1, 2014

ARIZONA CORPORATION COMMISSION
DOCKET CONTROL

Arizona Corporation Commission
DOCKETED

OCT 02 2014

Docket Control Center
Arizona Corporation Commission
1200 W Washington Street
Phoenix Arizona 85007

DOCKETED BY 

Subj: RESPONSE TO INSUFFICIENCY - DOCKET # W-20911A-14-0294
- WHITE DOVE WATER

Ref: (a) Email from Arizona Corporation Commission - Insufficiency 092614 - Attached

This letter and included attachments serve as response to reference (a) request for further information to achieve sufficiency for White Dove Water.

The following information is included as re-submittals in accordance with the notification:

- Exhibit 1: Plant components, with documentation included to support cost estimates.
- Exhibit 2: Revised income statement (with and without Grant Funding)
- Exhibit 3: Revised Tariff schedule.
- Exhibit 4: Revised listing of parcels and lots, with vacant lot ownership identified.
- Exhibit 5: Documentation regarding conservation measures to be utilized as a regular business model.

Thank you as always for your continued consideration. We look forward to hearing from you soon.

Regards,



Niama M Duarte
Owner- White Dove Well Water Organization DBA White Dove Water
520-400-6997 Mobile
520-308-6466 Office/Home

White Dove Water

From: Jorn Keller <JKeller@azcc.gov>
Sent: Friday, September 26, 2014 4:24 PM
To: 'Whitedovewater@outlook.com'
Cc: Blessing Chukwu; Michael Thompson
Subject: CC&N Application Sufficiency
Attachments: Utility Plant in Service.xls; Income Statement.xls; Sample Tariff.pdf

Hi, Frank.

Per our telephone conversations, I am forwarding three forms that may help you reach sufficiency on the CC&N application.

The Code requires a verifiable list of plant components with documentation to support the cost estimate of each component. The NARUC Utility Plant in Service schedule categorizes the plant, and you can add more detailed descriptions as well as labor and installation costs, etc. The Nelson Drilling Quotation applies to \$46,800 of the \$75,000 plant expense, so documentation for \$28,200 is need.

Section B(5) p. requires an income statement, showing revenue and expenses for five years. The form attached shows the common revenue and expenses of water companies.

Section B(5) q. states that proposed rates be stated in the form of a proposed tariff. Attached is sample tariff for you to use.

The code asks for a description of conservation measures, the system will implement:

- iv. A description of any plans for the use of reclaimed water;
- v. A description of any plans for the use of recharge facilities;
- vi. A description of any plans for the use of surface water; and
- vii. A description of any other plans or programs to promote water conservation;

Finally, please forward the names of the owners of the vacant lots in the service area.

It would be best if we could proof your replies before you file them. Please call if you have questions.

Jorn

Jorn Keller, Public Utilities Analyst
Arizona Corporation Commission - Utilities FRA
1200 W. Washington St., Phoenix 85007-2927

602 542 0742

EXHIBIT 1

White Dove Water - Utility Plant in Service

ACCT. NO.	DESCRIPTION	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
		PLANT BALANCE									
301	Organization Costs	\$ 1,178.00	\$ 1,200.00	\$ 1,178.00	\$ 1,200.00	\$ 1,200.00	\$ 1,178.00	\$ 1,200.00	\$ 1,200.00	\$ 1,178.00	\$ 1,178.00
302	Franchise Costs										
303	Land & Land Rights	19,222.00	19,222.00	19,222.00	19,222.00	19,222.00	19,222.00	19,222.00	19,222.00	19,222.00	19,222.00
304	Structures & Improvements	6,987.00	6,952.07	6,917.30	6,882.72	6,848.30	6,813.83	6,779.36	6,744.89	6,710.42	6,675.95
307	Wells & Springs	49,072.35	48,826.99	48,582.85	48,339.94	48,098.24	47,855.33	47,612.42	47,369.51	47,126.60	46,883.70
311	Electric Pumping Equipment	3,010.00	2,994.95	2,979.98	2,965.08	2,950.25	2,935.37	2,920.49	2,905.61	2,890.73	2,875.85
320	Water Treatment Equipment	9,769.00	9,720.16	9,671.55	9,623.20	9,575.08	9,526.73	9,478.38	9,430.03	9,381.68	9,333.33
320.1	Water Treatment Plants										
320.2	Solutions & Feeders	500.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
330	Distribution Reservoirs & Standpipes										
330.1	Storage Tank	115,000.00	114,425.00	113,852.88	113,283.61	112,717.19	112,150.00	111,582.88	111,015.75	110,448.63	109,881.50
330.2	Pressure Tanks	6,693.00	6,659.54	6,626.24	6,593.11	6,560.14	6,527.07	6,494.00	6,461.00	6,428.00	6,395.00
331	Transmission & Distribution Mains	8,448.00									
333	Services	1,176.00	1,176.00	1,176.00	1,176.00	1,176.00	1,176.00	1,176.00	1,176.00	1,176.00	1,176.00
334	Meters & Meter Installations	250.00	1,500.00	2,250.00							
335	Hydrants	8,120.40	8,079.80	8,039.40	7,999.20	7,959.21	7,919.22	7,879.23	7,839.24	7,799.25	7,759.26
336	Backflow Prevention Devices	6,052.00									
339	Other Plant & Misc. Equip.										
340	Office Furniture & Fixtures	1,500.00									
340.1	Computer & Software	500.00			500.00						
341	Transportation Equipment										
342	Store Equipment										
343	Tools & Work Equipment	200.00		200.00						200.00	
344	Laboratory Equipment										
345	Power Operated Equipment										
345	Communications Equipment	200.00					200.00				
347	Miscellaneous Equipment										
348	Other Intangibles	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00	900.00
	TOTAL	\$ 238,777.75	\$ 221,856.49	\$ 221,796.20	\$ 219,084.85	\$ 217,584.41	\$ 216,073.00	\$ 214,561.55	\$ 213,050.10	\$ 211,538.65	\$ 210,027.20

Source: Pima County Assessors Office
 Source: www.factorysteeloverstock.com
 Source: Nelson Drilling Quote
 Source: Nelson Drilling Quote
 Source: www.reverseosmosis.com standard pricing
 Estimates of Chemical Usage
 Source: Quote for Aquastore Tank - Travis Hackworthy
 Source: Nelson Drilling Quote
 Source: Estimates based on Industry standard \$1.66 per Linear Foot. 5080 LF of transmission line required.
 Electrical estimates based on current pricing.
 Source: White Dove Water Tariff Rates.
 Source: www.napacinc.com - Standard Fire Hydrant Pricing
 Cost: \$356.00 standard pricing. 17 hookups.
 Estimate based on size building to be occupied.
 Estimate based on typical computer lifecycle costs.
 Estimate only.
 Phone estimates.
 Maintenance plan and landscaping

White Dove Water

From: Travis Hackworthy <THackworthy@engamerica.com>
Sent: Tuesday, September 2, 2014 11:23 AM
To: Frank and Niama Duarte
Cc: Kim Hackworthy
Subject: RE: Aquastore Drinking Water Tank Questions and Request for Quote

Frank,

Rough budget price on a Aquastore 17' diameter by 10' height which will give you 16,000 gallons is \$115,000.00 material/installation. The ring wall concrete foundation will add another 20K, but you maybe able to price that out locally.

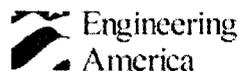
If you wanted to expand that same tank in the future to a 17' x15' by adding one glass steel ring (24,000 gallons) this would cost \$30,000.00 in the near future.

Let me know how you progress with your project, I will stop by to visit when I'm in the area.

Thanks,

Travis

[Engineering America - The Story of Us.](#)



Travis Hackworthy
Vice President / Regional Manager

Cell: 602-799-4708

thackworthy@engamerica.com

1820 East Ray Road, Chandler, AZ 85225

Ph: 480-895-1106 www.engamerica.com

America's employee-owned leader in liquid storage tank solutions



From: Frank and Niama Duarte [mailto:whitedovewater@outlook.com]
Sent: Tuesday, September 02, 2014 11:00 AM
To: Travis Hackworthy
Subject: RE: Aquastore Drinking Water Tank Questions and Request for Quote

Travis,

We're still in the preliminary stages for funding, so I don't want to waste your travel time to come out here if we don't have to.

Are you able to provide an estimate range for a tank of the size we discussed, for the purposes described, with installation, etc.?

I understand you could not be completely held to that figure.

You're welcome to come out anytime, however.

Thanks!

Frank

Sent from my Windows Phone

From: [Travis Hackworthy](#)
Sent: 8/29/2014 15:29
To: [White Dove Water](#)
Subject: RE: Aquastore Drinking Water Tank Questions and Request for Quote

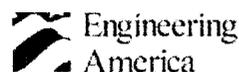
Frank,

Let me know what your schedule looks like next week to meet and talk about your project?

Thanks,

Travis

[Engineering America - The Story of Us.](#)



Travis Hackworthy
Vice President / Regional Manager

Cell: 602-799-4708

thackworthy@engamerica.com

1820 East Ray Road, Chandler, AZ 85225

Ph: 480-895-1106 www.engamerica.com

America's employee-owned leader in liquid storage tank solutions



From: White Dove Water [<mailto:whitedovewater@outlook.com>]
Sent: Friday, August 29, 2014 9:50 AM
To: Travis Hackworthy
Cc: whitedovewater@outlook.com
Subject: Aquastore Drinking Water Tank Questions and Request for Quote

Hi Travis,

Thanks for taking my call today. Ok, as stated, we are attempting to put together a water services company here in Marana (unincorporated Pima County), and are looking at different solutions for our drinking well-water needs.

We found your company on the web, and your Aquastore tanks look like a good fit for our needs. We also noticed that CST has many projects they have completed for the surrounding area, so it sounds like you are familiar with what we may need.

Therefore we are looking for a quote. Please provide information as applicable based on the following:

1. A complete turn-key package for a water tank solution. The size, as discussed, would be 10K expandable to 20K. The type is Aquastore (glass fused to steel tank), including any of the following solutions as outlined on your website:
 - a. Tank configuration and layout data
 - b. Budgeting plan
 - c. Product engineering specifications
 - d. Design criteria assistance
 - e. Tank layout drawings
 - f. Approval drawings
 - g. Certified drawings
 - h. Site preparation and layout
 - i. Tank construction scheduling
 - j. Structural calculations
 - k. Tank testing and commissioning
 - l. Tank inspection and repair
 - m. Maintenance services
 - n. Relocation or expansion
 - o. Concrete work
 - p. Pipe work (inlet, outlet, overflow, decant, etc.)
 - q. Insulation (spray foam, battens, etc.)
 - r. Dome installations
 - s. Turn-key tank construction

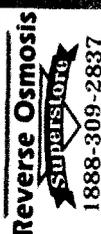
Additionally, as we are still shopping drillers, please let us know if you have a recommendation in that regards as well. We have a couple in mind, but welcome any new suggestions.

Thanks very much in advance. Look forward to hearing from you!

Regards,

Frank and Niama

Frank and Niama Duarte
White Dove Well Water Organization
DBA White Dove Water
520-401-3974
whitedovewater@outlook.com


Reverse Osmosis Superstore
 1888-309-2837

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- Carbon Block Filter
- Water Treatment Chemicals
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- GAC Granular Activated Carbon
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- RO Parts
- Shower Filter
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- Testing Strips/Meters

Home > Commercial RO Systems > ProMax 11,500 Gallons Per Day Reverse Osmosis System

ProMax 11,500 Gallons Per Day Reverse Osmosis System



Price: \$9,769.00
Weight: 150.00 LBS
Shipping: Free Shipping
Quantity: 1

[Click to enlarge](#)

Product Description



This ProMax Reverse Osmosis System is an excellent unit that is rated at 11,500 gallons of water per day. This system is built with quality, stainless steel housings, Goulds pump, and a recirculator to save water and money. This system also comes with a control panel that gives the operator ease of use and all functions at your fingertips. Very easy to install, simple to operate, and our trained staff provides technical support. Feel free to call if you have any questions at 1888-309-2837.

Standard Features

- * 4 NSF Certified Membranes on LP-11500
- * Stainless Steel Membrane Housing
- * Goulds Multi-Stage SS Centrifugal Pump

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- ProMax 1000 Reverse Osmosis **\$2,349.00**
- ProMax 2800 Reverse Osmosis **\$3,549.00**
- ProMax 7500 Reverse Osmosis **\$4,990.00**
- ProMax 8800 Reverse Osmosis **\$6,125.00**



EXHIBIT 2

White Dove Well Water Organization - OPERATING INCOME STATEMENT

LINE NO.	DESCRIPTION	Year 1	Year 2	Year 3	Year 4	Year 5
1	<u>REVENUES:</u>					
2	Metered Water Sales	\$ 360.00	\$ 5,760.00	\$ 5,760.00	\$ 5,760.00	\$ 5,760.00
3	Water Sales - Unmetered	\$ -	\$ -	\$ -	\$ -	\$ -
4	Other Operating Revenue	\$ -	\$ -	\$ -	\$ -	\$ -
5	Total Operating Revenues	\$ 360.00	\$ 5,760.00	\$ 5,760.00	\$ 5,760.00	\$ 5,760.00
6	<u>OPERATING EXPENSES:</u>					
7	Salaries & Wages	\$ -	\$ -	\$ -	\$ -	\$ -
8	Purchased Water	\$ -	\$ -	\$ -	\$ -	\$ -
9	Purchased Power	\$ 1,176.00	\$ 1,176.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00
10	Chemicals	\$ 500.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
11	Repairs & Maintenance	\$ 450.00	\$ 450.00	\$ 1,150.00	\$ 1,200.00	\$ 1,200.00
12	Office Supplies & Expense	\$ 750.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
13	Outside services	\$ 900.00	\$ 900.00	\$ 900.00	\$ 900.00	\$ 900.00
14	Water Testing	\$ 150.00	\$ 150.00	\$ 150.00	\$ 150.00	\$ 150.00
15	Rents	\$ -	\$ -	\$ -	\$ -	\$ -
16	Transportation Expense	\$ -	\$ -	\$ -	\$ -	\$ -
17	Insurance - General Liability	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00
18	Insurance - Health & Life	\$ 78.00	\$ 78.00	\$ 78.00	\$ 78.00	\$ 78.00
19	Regulatory Commission Expense	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
20	Miscellaneous Expense	\$ -	\$ -	\$ -	\$ -	\$ -
21	Depreciation Expense	\$ -	\$ -	\$ -	\$ -	\$ -
22	Taxes Other than Income	\$ -	\$ -	\$ -	\$ -	\$ -
23	Property Taxes	\$ 800.00	\$ 800.00	\$ 805.00	\$ 805.00	\$ 810.00
24	Income Tax	\$ -	\$ -	\$ -	\$ -	\$ -
25	Total Operating Expenses	\$ 4,654.00	\$ 4,254.00	\$ 5,283.00	\$ 5,333.00	\$ 5,338.00
26	Operating Income (Loss)	\$ (4,294.00)	\$ 1,506.00	\$ 477.00	\$ 427.00	\$ 422.00

White Dove Well Water Organization - OPERATING INCOME STATEMENT - With Grant Funding Included

LINE NO.	DESCRIPTION	Year 1	Year 2	Year 3	Year 4	Year 5
1	<u>REVENUES:</u>					
2	Metered Water Sales	\$ 360.00	\$ 5,760.00	\$ 5,760.00	\$ 5,760.00	\$ 5,760.00
3	Water Sales - Unmetered	\$ -	\$ -	\$ -	\$ -	\$ -
4	Other Operating Revenue - Grant Funding	\$ 365,761.20				
5	Total Operating Revenues	<u>\$ 366,121.20</u>	<u>\$ 160,312.45</u>	<u>\$ 105,061.97</u>	<u>\$ 49,997.91</u>	<u>\$ (4,776.52)</u>
6	<u>OPERATING EXPENSES:</u>					
7	Salaries & Wages	\$ -	\$ 45,298.24	\$ 45,298.24	\$ 45,298.24	\$ 45,298.24
8	Purchased Water	\$ -	\$ -	\$ -	\$ -	\$ -
9	Purchased Power	\$ 1,176.00	\$ 1,176.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00
10	Chemicals	\$ 500.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
11	Repairs & Maintenance	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,700.00	\$ 2,000.00
12	Office Supplies & Expense	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 400.00
13	Outside services	\$ 900.00	\$ 900.00	\$ 900.00	\$ 900.00	\$ 900.00
14	Water Testing	\$ 150.00	\$ 150.00	\$ 150.00	\$ 150.00	\$ 150.00
15	Rents	\$ -	\$ -	\$ -	\$ -	\$ -
16	Transportation Expense	\$ -	\$ -	\$ -	\$ -	\$ -
17	Insurance - General Liability	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00
18	Insurance - Health & Life	\$ 78.00	\$ 78.00	\$ 78.00	\$ 78.00	\$ 78.00
19	Regulatory Commission Expense	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
20	Miscellaneous Expense - Construction	\$ 206,164.75				
21	Depreciation Expense - Straight Line	\$ -	\$ 10,308.24	\$ 9,792.83	\$ 9,303.18	\$ 8,838.03
22	Taxes Other than Income	\$ -	\$ -	\$ -	\$ -	\$ -
23	Property Taxes	\$ 800.00	\$ 800.00	\$ 805.00	\$ 805.00	\$ 810.00
24	Income Tax	\$ -	\$ -	\$ -	\$ -	\$ -
25	Total Operating Expenses	<u>\$ 211,568.75</u>	<u>\$ 61,010.48</u>	<u>\$ 60,824.07</u>	<u>\$ 60,534.42</u>	<u>\$ 60,474.27</u>
26	Operating Income (Loss)	<u>\$ 154,552.45</u>	<u>\$ 99,301.97</u>	<u>\$ 44,237.91</u>	<u>\$ (10,536.52)</u>	<u>\$ (65,250.78)</u>

EXHIBIT 3

White Dove Well Water Organization

5520 N Lone Owl Trail, Marana AZ 85653 | 520-401-3974 | whitedovewater@outlook.com

TARIFF SCHEDULE Docket No: W-20911A-14-0294 Effective December 1, 2014

Usage Charges (Commodity Rates per 1000 gallons):

First Tier:	0 – 3,000 gallons	\$1.00
Second Tier:	3,001 – 9,000 gallons	\$2.44
Third Tier:	Over 9,000 gallons	\$3.00

Monthly Service Charges:

<u>METER SIZE</u>	<u>CHARGE</u>
5/8 X 3/4 Inch	\$10.50
1 Inch	\$13.00
1 1/2 Inch	\$19.50
2 Inch	\$27.50
3 Inch	\$33.75
4 Inch	\$72.75
6 Inch	\$185.25
8 Inch	\$330.50

Service Connections:

1. Service 2-inch or less

<u>SIZE</u>	<u>CHARGE</u>
1 inch	\$1500.00
2 Inch	\$1900.00

Meter Installation:

<u>SIZE</u>	<u>CHARGE</u>
5/8 X 3/4 Inch Meter	\$250.00
1 inch Meter	\$330.00
1 1/2 Inch Meter	\$475.00
2 Inch Meter	\$620.00

If concrete or asphalt pavement removal and replacement is required, a charge of \$500.00 for concrete and \$1000.00 for asphalt pavement will be added to the above.

2. Service Connections larger than 2-inch

The charge will be at-cost plus 7% for general administrative overhead.

Additional Service Charges

Establishment:	\$50.00 - \$200.00 (depending on size of meter)
Reconnection (Delinquent):	\$50.00
NSF Fee:	\$25.00
Meter Tampering:	\$ At-Cost to repair/replace
Service Charge (after hours)	\$50.00

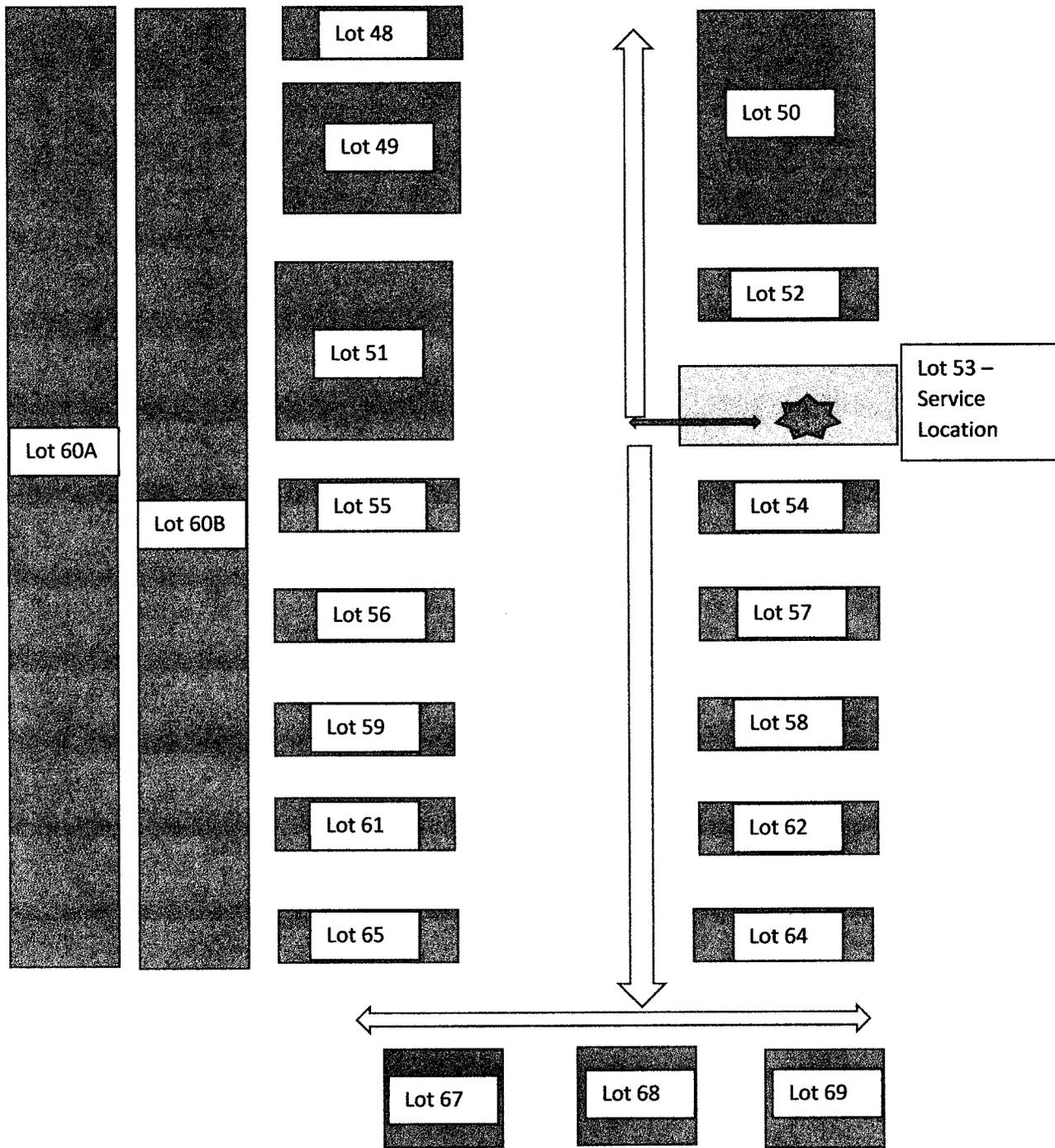
Water services must be established in the PROPERTY OWNER's NAME. All rates, regulations and rules are subject to change at any time.

EXHIBIT 4

WELL LOCATION AND TRANSMISSION LINES. SPACING INCLUDED FOR ILLUSTRATIVE PURPOSE.

PARCEL OWNERS BY NUMBER ON FOLLOWING OUTLINE:

- Lot 48 – Pedrigi, Linda
- Lot 49 – City of Tucson (Vacant)
- Lot 51 – CD Gemini Properties LLC (Vacant)
- Lot 50 – Lippman, Jerome Donald & Ellyn M (Vacant)
- Lot 52 – Merriman, Timothy and Lynell
- Lot 53 – WHITE DOVE WATER ORGANIZATION – Duarte, Niama and Frank
- Lot 54 – Parson, Robert and Low, Celia
- Lot 55 – Duffy, Cory
- Lot 56 – Sharpe, Linda and Robert
- Lot 57 – Sprenger, Rebecca and Greg
- Lot 58 – Maurici Gaetano Jr. (Vacant)
- Lot 59 – Jewell, Andrew
- Lots 60A and 60B – Los Guapos LLC (Vacant)
- Lot 61 – Maurici Gaetano Jr. (Vacant)
- Lot 62 – McCallister, Brandon
- Lot 64 – Victoratos, Constantinos
- Lot 65 – Mayfield, Sarah and Jeremy
- Lot 67 – Gensberg, Victor
- Lot 68 – Morningside Funding Property Managers
- Lot 69 – Campbell, Sandra and Gaylord



White Dove Water – Well System and Transmission Lines.
 (Expandable to Lot 60A and 60B when occupied)

EXHIBIT 5

White Dove Well Water Organization

5520 N Lone Owl Trail, Marana AZ 85653 | 520-401-3974 | whitedovewater@outlook.com

TYPICAL TIPS AND HINTS THAT WILL BE PROVIDED TO ALL CUSTOMERS. FORMAT MAY VARY DEPENDING ON WEBSITE AND OTHER TRANSMISSION MEDIUM (Flyers, Brochures, etc.)

White Dove Water is committed to helping you identify areas where you can conserve water in your everyday use, and save money in the process.

Here's some basic tips you can use to conserve everyday:

Indoors

Check for Leaks!

- **Fix a Leak:** Small household leaks can add up to gallons of water lost every day. Check your plumbing fixtures and irrigation systems each year.

In the bathroom—where over half of all water use inside a home takes place:

- Turn off the tap while shaving or brushing teeth.
- Showers use less water than baths, as long as you keep an eye on how long you've been lathering up!

In the kitchen:

- Plug up the sink or use a wash basin if washing dishes by hand.
- Use a dishwasher; and when you do, make sure it's fully loaded!
- While you're at it, scrape that plate instead of rinsing before loading it into the dishwasher.
- Keep a pitcher of drinking water in the refrigerator instead of letting the faucet run until the water is cool.
- Thaw in the refrigerator overnight rather than using a running tap of hot water.
- Add food wastes to your compost pile instead of using the garbage disposal.

In the laundry room—where you can be clean AND green:

- Wash only full loads of laundry or use the appropriate water level or load size selection on the washing machine.

In the Shower

- Many of us spend 10 to 20 minutes in the shower each day. You'll save water by installing a low-flow shower head and taking shorter showers.

White Dove Well Water Organization

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Toilets

- Modern, efficiently designed toilets use only 1.6 gallons of water per flush. Retrofitting your home or business with these "ultra low flush" toilets can save water. Additionally, a bad toilet flapper valve can cause a toilet to leak, and waste a substantial amount of water. To test for a leak, drop a little food coloring in the tank and – without flushing – see if it comes out in the bowl. If so, you probably have a leak and will need to have it repaired by a qualified repair person.

Washing your car

- When you wash your car or truck, make sure the hose is equipped with a spray nozzle that shuts off when you release the handle.

Appliances

- Consider purchasing a new-generation high-efficiency toilet that uses no more than 1.3 gallons of water per flush. Look for EPA's *WaterSense* labeling that ensures water-efficiency and third-party performance testing.

Outdoors

Of the estimated 29 billion gallons of water used daily by households in the United States, nearly 7 billion gallons, or 30 percent, is devoted to outdoor water use. In the hot summer months, or in dry climates, a household's outdoor water use can be as high as 70 percent.

In the yard—be beautiful and efficient:

- Create a water-smart landscape that is both beautiful and efficient to give your home the curb appeal you desire.
- Timing is everything! Knowing when and how much to water allows you to keep a healthy landscape. See below for details on keeping your landscape healthy.
- Upgrade to a WaterSense labeled controller if you have an in-ground irrigation system.
- Find a certified irrigation professional to install, maintain, or audit your irrigation system to ensure it is watering at peak efficiency.

Other outdoor uses—drop that hose and keep it covered:

White Dove Well Water Organization

5520 N Lone Owl Trail, Marana AZ 85653 | 520-401-3974 | whitedovewater@outlook.com

- Sweep driveways, sidewalks, and steps rather than hosing off.
- Wash the car with water from a bucket, or consider using a commercial car wash that recycles water.
- If you have a pool, use a cover to reduce evaporation when pool is not being used

Landscaping – Keeping it Healthy

A healthy and well-tended landscape makes you feel good while enriching your environment. And you can achieve it with minimal water usage. Here's some tips to a healthy landscape.

What happens if I don't water my plants enough?

If too much water is allowed to leave the soil, your plants will not be able to extract what's left for their own use, leading to stress. This makes plants weak, and susceptible to physical damage, insect damage and disease.

What happens if I over water my plants?

More gardens are harmed by too much water than not enough. Over watering causes nutrients to be flushed away, resulting in higher fertilizer requirements. Over watering also displaces oxygen from the soil, which leads to shallow roots and a landscape that is disease prone and weed infested.

When is the best time to water?

Watering in direct sunlight actually harms your yard and plants. Water droplets on leaves are like thousands of magnifying glasses, intensifying the sun's heat and causing "scald" or "burn" damage. Evaporation is also highest during the heat of the day, resulting in less water actually reaching the plants' roots.

The ideal time for lawn and plant watering is between 4 a.m. and 6 a.m. when evaporation is low, but never late in the evening. This gives the ground a chance to soak the water in and reach the root system of the plants. Watering late in the evening could possibly cause more disease and weed problems as they tend to develop more at night than during the day. If you split your irrigation times, make your second application during the early evening hours.

Some key points to remember

Create water zones by putting plants together that have similar water needs. Lawns have different water requirements than ornamental plants and trees. In addition, plants can be grouped into low, moderate and high water use areas. (Limit the number high water use plants in your landscape design, however). Each zone of plants should be irrigated according to its needs.

Since lawns and gardens should be watered in the early morning hours, a problem may not be discovered until it is too late. Test, adjust and repair your sprinkler heads and drip emitters weekly. Make sure the system is adjusted properly to avoid watering sidewalks and driveways. Consider replacing your old time clock with one of the new smart irrigation controllers on the

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market, today. Once programmed, these controllers irrigate based on evapotranspiration or air temperature. There are also "soil sensors" available which control the amount of irrigation taking place. These recent irrigation innovations are designed to apply the optimal amount of water throughout the year.

How long should you run your sprinklers, and how often?

In terms of sprinkler run times, there is no one answer to fit all applications. The optimal amount of water needed varies considerably depending on your location within our service area, types of sprinklers used, amount of sun an area receives, soil type and the kind of plant being watered (lawn vs. shrubs, for example).

Ideally, each time your lawn is watered the water should soak into the ground about 6 to 8 inches. This encourages deep root growth. This principle of deep watering applies to other types of plants, as well. Trees and shrubs will require deeper watering using other types of emitters to reach their greater root depths, however. Periodically, test the soil moisture with a shovel or screwdriver. If the soil is moist throughout, you're watering times are most likely in the ballpark. Most likely (depending on sprinkler type) this can be accomplished by watering your lawn no more than 15 minutes each day during the summer and less during the cooler months. Trees and other types of plants have different water needs, and the optimal times vary considerably based on conditions and type of plant.

Water conservation is easy to achieve!