

STATE OF
COLORADO

Pittinger - DNR, Rachel <rachel.pittinger@state.co.us>

AAMD Loan Approval followup

4 messages

Pittinger - DNR, Rachel <rachel.pittinger@state.co.us>
To: Judy <judy@metro-district.com>

Wed, Sep 26, 2018 at 11:51 AM

Hi Judy.

Thanks again for making the drive to Steamboat Springs and attending the Board meeting. Congratulations on loan approval! Since your original loan application requests an amount different than what was approved by the Board, we would like written confirmation that you are aware of this change and this increase to your loan application amount. Please respond to this email stating you confirm the requested loan amount and term by the Arabian Acres Metropolitan District is \$400,000 for a 10-year term as approved at the CWCB Board meeting held on September 20, 2018. Thanks again.

Sincerely,
Rachel

Rachel Pittinger, P.E.
Project Manager
Finance Section

**COLORADO**Colorado Water
Conservation Board

Department of Natural Resources

O 303.866.3441 x 3254 | C 720.607.3549
1313 Sherman St., Rm. 718, Denver, CO 80203
rachel.pittinger@state.co.us | cwcb.state.co.us

Judy <judy@metro-district.com>
To: "Pittinger - DNR, Rachel" <rachel.pittinger@state.co.us>

Wed, Sep 26, 2018 at 1:05 PM

'I do.' Feel like I'm getting married.

Absolutely, we approve of the change. Do you need a letter?

Sincerely,

Judy Bertrand, Owner & CEO
Metropolitan District Management
23005 Whispering Woods
Golden, CO 80401
303-704-9438

www.metro-district.com
Judy@metro-district.com

[Quoted text hidden]

Pittinger - DNR, Rachel <rachel.pittinger@state.co.us>
To: Judy <judy@metro-district.com>

Wed, Sep 26, 2018 at 1:27 PM

Hi Judy.

Ha, You are too much! Your email confirming is fine. No need for a letter unless you would like one.

Thanks.
Rachel

Rachel Pittinger, P.E.
Project Manager
Finance Section
O 303.866.3441 x 3254 | C 720.607.3549
[Quoted text hidden]

Judy <judy@metro-district.com>
To: "Pittinger - DNR, Rachel" <rachel.pittinger@state.co.us>

Wed, Sep 26, 2018 at 1:36 PM

Why in Gawd's name would I want to prepare a letter? I was just hoping this was good enough!

9/26/2018

State.co.us Executive Branch Mail - AAMD Loan Approval followup

Just got off a 2 hour call with an Engineer, Attorney, Property Owner and Golf Course Director about a pond location in Battlement Mesa. The sharp fine tip .5 pen kept moving closer to my jugular vein hoping the call would end. Too much conversation about .99 cff, water lines, millions of gallons of water storage. I don't know how you do it!

Sincerely,

Judy Bertrand, Owner & CEO
Metropolitan District Management
23005 Whispering Woods
Golden, CO 80401
303-704-9438

www.metro-district.com
Judy@metro-district.com

----- Original Message -----

Subject: Re: AAMD Loan Approval followup

From: "Pittinger - DNR, Rachel" <rachel.pittinger@state.co.us>

[Quoted text hidden]



STATE OF
COLORADO

Pittinger - DNR, Rachel <rachel.pittinger@state.co.us>

AAMD - Norm at Mountain Mutual regarding water

1 message

Judy <judy@metro-district.com>
To: - Pittinger <rachel.pittinger@state.co.us>
Cc: Norm Lewis <norm@hch2o.com>

Thu, Jun 28, 2018 at 10:38 AM

Norm's number is 303-989-6932 or 303-717-1810. I've copied him on this email.

Sincerely,

Judy Bertrand, Owner & CEO
Metropolitan District Management
23005 Whispering Woods
Golden, CO 80401
303-704-9438

www.metro-district.com
Judy@metro-district.com

3. DESCRIPTION OF EXISTING FACILITIES

3.1 SERVICE AREA FEATURES

Principal distribution system components are shown on the attached Distribution System Map included in the Appendix. Elements shown include two water treatment plants (Control Buildings A and B), a 38,200 gallon water storage/disinfection tank, 9 wells, and distribution lines. Air relief valves, isolation valves, and blow off hydrants are also part of the distribution system but are not shown on the attached Distribution System Map.

3.2 FACILITIES LAYOUT AND DESCRIPTION

3.2.1 RAW WATER QUANTITY

There are currently nine wells installed in the District. Water from the wells is treated in two locations. Control Building A treats Wells 1, 2, 6, 7, and 8. Control Building B treats Wells 3, 4, 5, and 9. Control Building A feeds a 38,200 gallon disinfection/water storage tank with a 2 inch line. Control Building B discharges to a 12 inch PVC pipe loop approximately 90 feet long prior to the distribution system entry point. One of the recommended alternatives includes adding SCADA capabilities to improve the well call-to-run signal timing.

Table 4: Well Summary

Well #	Well Depth (Feet)	Control Building	Initial Rating (GPM)	Approx. Current Yield (GPM)
1 (Permit# 044597-F)	120	A	3	Control Building A " Approximate Current Yield of 13.5 GPM (19,400 GPD)
2 (Permit# 74381-F)	300	A	2	
6 (Permit# 053350-F)	300	A	4	
7 (Permit # 054114-F)	400	A	1.5	
8 (Permit# 055182-F)	380	A	3	
3 (Permit# 051210-F)	20	B	5	Control Building B Approximate Current Yield of 12.2 GPM (17,500 GPD)
4 (Permit# 051408-F)	200	B	1.5	
5 (Permit# 68439-F)	600	B	0.75	
9 (Permit #77155-F)	600	B	5	

Water production rates of the existing wells have decreased over the years, at times making it difficult for the system to provide enough water to the residents. The problem results from the wells needing to produce extra water to make up for the distribution losses or occasional peak flow demands from the commercial taps. Current well production capacity based on current yields from Control Buildings A and B is about 25 GPM or 36,000 GPD. If the current production rate continues and water losses are minimized there would be an adequate supply volume for the

Water Enterprise Fund	2015	2016	2017	Prior Years	With Project
Operating Revenue	\$370,959	\$345,409	\$348,118	\$354,829	\$354,829
Operating Expense	\$196,169	\$176,754	\$150,445	\$174,456	\$174,456
Operating Rev - Op. Expense	\$174,790	\$168,655	\$197,673	\$180,373	\$180,373
Total Debt Service	\$0	\$0	\$0	\$0	\$49,086
Cash Reserves	\$76,893	\$251,901	\$200,582	\$200,582	\$200,582
Current Expense	\$196,169	\$176,754	\$150,445	\$174,456	\$223,542
Without Project					
Operating Ratio (Op. Rev. / Op. Exp.)	203%	355/175			159% 355K/224K
Debt Service Coverage (Total Elig. Rev. - Op. Exp. / Total Debt Service)	#DIV/0!				367% $\frac{355-174}{49086}$
Cash Reserves to Current Expense (Cash Reserves / Current Expense)	115%	200.5/175			90% 200.5/224
Cost per AF (17 AF)	\$10,262.12	175K/17AF			\$13,149.53 \$2693.33 (debt per tap) $\frac{404,000}{150}$
Total Project	\$400,000				
Loan Request	\$400,000				
1% Service Fee	\$4,000				
Total Loan Amount (Including 1% Service Fee)	\$404,000				
Payment	\$44,624				
Reserve Account	\$4,462				
Payment including 10% Reserve	\$49,086				
Existing Debt Service (Annual Payment)	\$0				
Number of Shareholders (taps)	150				
Increase in assessment per tap	\$0.00				
Potential New Total Assessment	\$0.00				
Average Annual Diversions (AF)	17				
Interest Rate	100% Low-income Muni (received DAC status 8/2018)				

Amortization Schedule

Input Form

INPUT

Total Project \$400,000 \$404,000 Collateral Value
 Company Cash \$0 Shares needed
 Loan \$400,000 100%
 1% \$4,000
 Total w/ service fee \$404,000

Borrower Name Arabian Acres Metro District

Project Name Meter Installation and Implementation

Loan Amount \$404,000

Loan Type (Ag, Low, Med, High, Com) Low-Inc Muni

Interest Rate (30-year term) 2.45% AAMD Qualifies for low income rate, received DAC status 8/2018

Results				
Loan Term	Interest Rate*	Annual Loan Payment	Total Loan Payout	Reserve Account
10	1.85%	\$44,624	\$446,237	\$2,940.76
15	2.20%	\$31,914	\$478,708	\$35,105.25
20	2.20%	\$25,187	\$503,735	\$27,705.42
25	2.45%	\$21,802	\$545,057	\$23,982.49
30	2.45%	\$19,174	\$575,211	\$21,091.09
40	1.50%	\$13,505	\$540,182	\$14,855.00

*Interest Rate for 10, 15 & 20-yr loan is automatically reduced

Median Household Income in the Past 12 Months

US Census Bureau Table: B19013

Data Set: 2012-2016 American Community Survey 5-yr (downloaded 6/2018)

<https://demography.dola.colorado.gov/census-acs/american-community-survey-data/#american-community-survey-data-for-colorado>

FIPS	Geographic Area	Estimate	Margin of Error (+/-)	Rank
	US	\$53,482		
000	Colorado	\$62,520	\$287	
001	Adams County	\$61,444	\$985	20
003	Alamosa County	\$32,385	\$3,599	61
005	Arapahoe County	\$66,288	\$628	12
007	Archuleta County	\$45,607	\$4,241	38
009	Baca County	\$37,477	\$3,196	55
011	Bent County	\$34,773	\$5,957	56
013	Boulder County	\$72,282	\$1,203	5
014	Broomfield County	\$83,334	\$2,790	3
015	Chaffee County	\$50,993	\$2,307	29
017	Cheyenne County	\$54,375	\$3,787	26
019	Clear Creek County	\$68,250	\$5,320	9
021	Conejos County	\$34,630	\$2,794	57
023	Costilla County	\$26,610	\$3,906	64
025	Crowley County	\$31,719	\$3,534	63
027	Custer County	\$38,605	\$4,710	53
029	Delta County	\$42,011	\$2,339	46
031	Denver County	\$56,258	\$883	25
033	Dolores County	\$32,240	\$3,582	62
035	Douglas County	\$105,759	\$1,690	1
037	Eagle County	\$78,763	\$3,924	4
039	Elbert County	\$87,288	\$3,230	2
041	El Paso County	\$60,219	\$868	22
043	Fremont County	\$42,308	\$1,887	44
045	Garfield County	\$61,300	\$2,979	21
047	Gilpin County	\$67,544	\$11,078	11
049	Grand County	\$67,623	\$4,520	10
051	Gunnison County	\$50,746	\$3,990	30
053	Hinsdale County	\$51,250	\$10,651	28
055	Huerfano County	\$33,257	\$3,275	59
057	Jackson County	\$45,053	\$5,212	39
059	Jefferson County	\$72,017	\$732	6
061	Kiowa County	\$38,385	\$3,646	54
063	Kit Carson County	\$44,449	\$6,458	40
065	Lake County	\$46,928	\$12,843	36
067	La Plata County	\$61,910	\$2,330	18
069	Larimer County	\$61,942	\$1,051	17
071	Las Animas County	\$42,808	\$3,023	43
073	Lincoln County	\$40,438	\$3,362	51
075	Logan County	\$43,340	\$4,492	42
077	Mesa County	\$50,070	\$1,685	31
079	Mineral County	\$49,125	\$7,775	33
081	Moffat County	\$53,664	\$4,678	27
083	Montezuma County	\$41,622	\$2,453	48
085	Montrose County	\$43,890	\$2,941	41
087	Morgan County	\$49,495	\$2,108	32
089	Otero County	\$34,477	\$3,630	58
091	Ouray County	\$62,800	\$4,623	16
093	Park County	\$61,675	\$4,821	19
095	Phillips County	\$46,955	\$6,522	35
097	Pitkin County	\$69,789	\$8,113	8
099	Prowers County	\$41,037	\$2,895	50
101	Pueblo County	\$42,000	\$978	47
103	Rio Blanco County	\$56,771	\$9,808	24
105	Rio Grande County	\$40,177	\$3,832	52
107	Routt County	\$63,505	\$4,842	14
109	Saguache County	\$32,457	\$3,677	60
111	San Juan County	\$41,250	\$12,794	49
113	San Miguel County	\$58,170	\$4,648	23
115	Sedgwick County	\$46,977	\$3,747	34
117	Summit County	\$70,192	\$4,595	7
119	Teller County	\$63,723	\$4,288	13
121	Washington County	\$46,315	\$2,485	37
123	Weld County	\$62,820	\$1,323	15
125	Yuma County	\$42,026	\$3,485	45

98.28%
51.80%
106.03%
72.95%
59.94%
55.62%
115.61%
133.29%
81.56%
86.97%
109.17%
55.39%
42.56%
50.73%
61.75%
67.20%
89.98%
51.57%
169.16%
125.98%
139.62%
96.32%
67.67%
98.05%
108.04%
108.16%
81.17%
81.97%
53.19%
72.06%
115.19%
61.40%
71.10%
75.06%
99.02%
99.08%
68.47%
64.68%
69.32%
80.09%
78.57%
85.83%
66.57%
70.20%
79.17%
55.15%
100.45%
98.65%
75.10%
111.63%
65.64%
67.18%
90.80%
64.26%
101.58%
51.91%
65.98%
93.04%
75.14%
112.27%
101.92%
74.08%
100.48%
67.22%

111% high
80-110% middle
79% low

(prior to DAC approval 8/2018)



iPERL Smart Water Meter

Electromagnetic Flow Measurement System

CAPABILITIES

- The iPERL meter has an operating range of 0.11 gpm (0.025 m³/hr) to 55 gpm (12.5 m³/hr)—it even starts to register flow as low as 0.03 gpm (0.007 m³/hr).
- Sizes include: 5/8" (DN 15mm), 3/4" (DN 20mm) and 1" (DN 25mm)
- iPERL can be installed horizontally, vertically or diagonally.

BENEFITS

- Maximize investment with iPERL's magnetic technology, which delivers a 20-year accuracy warranty, with no repairs
- Get smart water alarms to detect issues such as leaks, reverse flow, empty pipe, etc.
- Improve low flow accuracy to drive additional revenue

Sensus iPERL® smart water meters are designed to capture both lost water and lost revenue. The innovative magnetic technology delivers unmatched low flow registration and minimal pressure loss. With no moving parts, iPERL maintains its accuracy over a 20 year lifetime and is equipped with smart water alarms – delivering the intelligence you need to quickly resolve issues in the field.

Industry Leading Performance

The patented measurement technology of the iPERL water meter provides enhanced accuracy at both low and high flows. Over a 20-year lifespan, your iPERL will measure just as accurately as the day it was installed.

Solid State Magnetic Technology

By avoiding the use of a mechanical measuring element inside the flow tube, metering performance is linear over the entire flow range – ensuring no reduction in accuracy at any flow rate over the life of the meter. The iPERL meter uses our patented remanent magnetic field technology – requiring far less energy and delivering superior accuracy.

Alarms

Quick resolution of field issues is made possible with smart water alarms including leak detection, reverse flow, empty pipe, magnetic tamper and low battery. When integrated with our FlexNet® communication network, remotely gathering and transmitting data has never been more reliable or profitable.

Construction

The iPERL meter body is made of composite alloy and contains no metal material. Inside the meter body is an electronic register and a measuring device that is comprised of a composite alloy flow tube. Embedded in the flow tube are coated silver electrodes. iPERL utilizes these to measure the fluid velocity through the flow tube – enabling less power consumption and predictable meter performance. The iPERL meter has a 20-year accuracy warranty and a 20-year battery life guarantee.



iPERL Smart Water Meter

Electronic Register

The 9-digit hermetically-sealed electronic register with LCD display was designed to eliminate dirt, fog and moisture contamination in pit settings. The large, easy-to-read display includes AMR digits, direction of flow, units of measure and smart water alarms. The AMR digits and units of measure are fully programmable. The register also provides integrated customer data logging.

AMI / AMR Compatibility

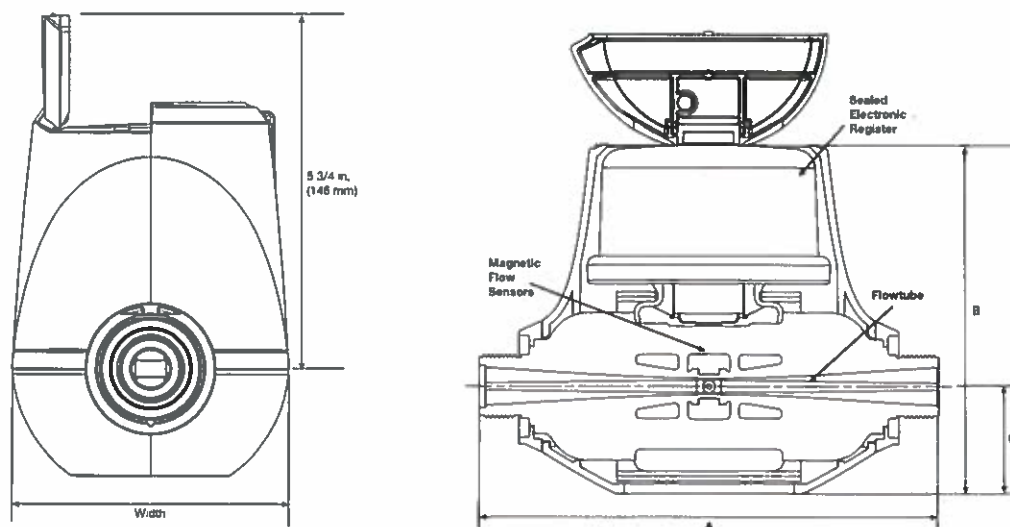
Sensus iPERL meters are compatible with common AMR/AMI systems, including the Sensus FlexNet® communication network.

Conformance to Standards

The iPERL meter far exceeds the most recent revision of ANSI/AWWA Standard C-700 and C-710 for accuracy and pressure loss requirements. All iPERL meters are NSF/ANSI Standard 61 Annex F and G compliant and tested to AWWA standards.

Tamper Resistant

The integrated construction of the iPERL water meter prevents removal of the register to obtain free water. The magnetic tamper and low field alarms will both indicate any attempt to tamper with the magnetic field of the iPERL meter.



Dimensions and Net Weights

Size	A (lay length)	B	C	Spud Ends	NPSM Thread Size	Width	Net Weight
5/8" (DN 15 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	5/8" (15 mm)	3/4" (19 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4"S (5/8" x 3/4") (DN 20 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4" (DN 20 mm)	9" (229 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.2 lb. (1.5 kg)
1" (DN 25 mm)	10-3/4" (273 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	1" (25 mm)	1-1/4" (32 mm)	4-1/2" (114 mm)	3.3 lb. (1.6 kg)



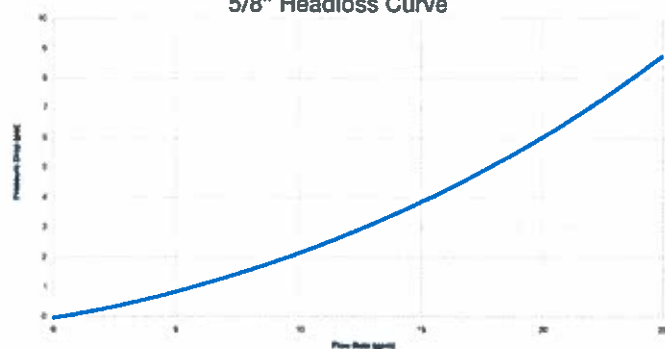
iPERL Smart Water Meter

Specifications

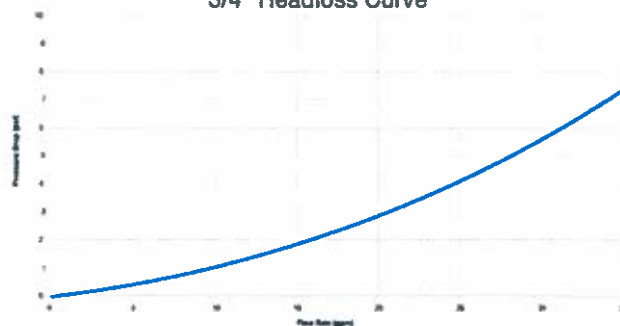
Service	Measurement of potable and reclaimed water. Water operating temperature range of 33°F (0.56°C) -80°F (26.7°C)
Starting Flow	5/8" (DN 15mm) size: 0.03 gpm (0.007 m³/h) 3/4" (DN 20mm) size: 0.03 gpm (0.007 m³/h) 1" (DN 25mm) size: 0.11 gpm (0.025 m³/h)
Low Flow Range (±3%)	5/8" (DN 15mm) size: >0.11 gpm (0.025 m³/hr) to <0.18 gpm (0.041 m³/hr) 3/4" (DN 20mm) size: >0.11 gpm (0.025 m³/hr) to <0.18 gpm (0.041 m³/hr) 1" (DN 25mm) size: >0.3 gpm (0.068 m³/hr) to <0.4 gpm (0.09 m³/hr)
Normal Water Operating Flow Range (±1.5%)	5/8" (DN 15mm) size: 0.18 to 25 gpm (0.04 to 5.7 m³/hr) 3/4" (DN 20mm) size: 0.18 to 35 gpm (0.04 to 8.0 m³/hr) 1" (DN 25mm) size: 0.4 to 55 gpm (0.09 to 12.5 m³/hr)
Maximum Operating Pressure	5/8" and 3/4" size: 200 psi (13.8 bar) 1" size: 175 psi (12.1 bar)
Measurement Technology	Solid state electromagnetic flow
Register	Hermetically sealed, 9-digit programmable electronic register; AMR/AMI compatible; iPERL register programmable using the UniPro® communicator and FieldLogic™ software
Materials	External housing – Thermal plastic; Flowtube – Polyphenylene sulfide alloy; Electrode – Silver/silver chloride; Register cover – Tempered glass
Alarm Defaults	Alarm Duration – 90 days; Leak Duration before alarm is triggered – 24 hours; Datalog Interval – 1 hour; Alarm Mask

Headloss Curves

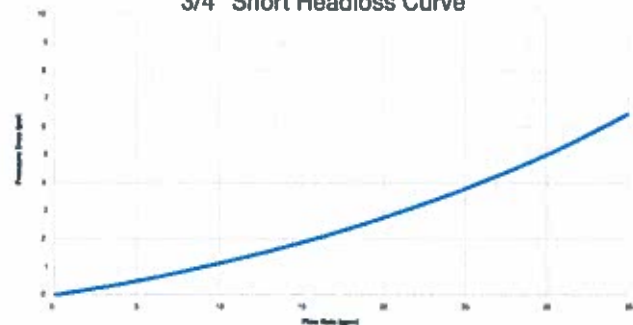
5/8" Headloss Curve



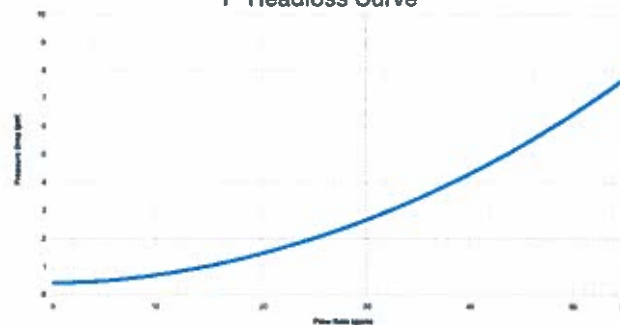
3/4" Headloss Curve



3/4" Short Headloss Curve



1" Headloss Curve



Composite Water Meters: Setting the Standard

White Paper

For the past 150 years, Sensus has brought water metering products to market that have led the industry in technology, efficiency and accuracy. Today, as no different as environmental regulations and sustainable technologies are key concerns for water utilities, Sensus is on the leading edge of these concerns and offers products commensurate with durable composite materials that create a new standard in the water metering industry. As environmental responsibility is increasingly mandated, the entire industry is evolving the way it approaches intelligent water distribution systems.

Sensus made a conscious decision to develop composite meters for its residential water meters, moving them stronger and more durable. The new composite meters have been successfully launched in Europe where they have met with widespread acceptance. Composite meters were introduced in North America in 2010 with the launch of the Sensus PEER™ residential water meter.

The PEER™ intelligent water management system features a construction with dual tank™ the front-line component of a long-life, non-metallic composite meter. The Sensus ACUSTICAM™ positive displacement meter is composed of a fiber reinforced thermoplastic material.

Composite meters are much lighter than their metal counterparts and require less energy to manufacture and ship.



Composite Meters are Strong

When evaluating alternative materials to replace traditional bronze, Sensus considered many criteria including conductivity, thermal coefficient of expansion, tension strength and corrosion strength.

Yield strength measures the stress point at which a material begins to deform plastically. Prior to the yield point, materials will deform elastically and will return to its original shape once the applied stress is removed. Once the yield point is passed, some fraction of the deformation will be permanent. Elongation is calculated as a percentage and is based on the deformation or stretching of a material under stress. The yield strength and elongation material characteristics are important factors in determining suitable materials for use in a water utility environment due to the

Arabian Acres Distribution & Treatment Funding

THE ITEMS IN THIS HANDOUT ARE A WISHLIST OF POTENTIAL IMPROVEMENTS.
THE IMPLEMENTATION OF ITEMS AND THEIR TIMING TO BE BASED ON DISTRICT PREFERENCES.

Group #1 Potable Water Automatic Meter Reading System	• \$389,817 • Colorado Water Conservation Board Loan application is under review. Interest rate of about 2.15% with 10-year term. • District is also applying for DOLA EIAF Grant which, if awarded, could cover 50% of the project costs. • Design for the water meters is underway.
Group #2 Arabian Acres Distribution & Treatment Improvements	• \$6,819,971 • Funding application process is underway. District is pursuing becoming classified as a disadvantaged community. If successful, district could potentially receive a \$3,000,000 loan with a 0% interest rate and a \$300,000 grant for professional fees. • District is applying for a \$1,000,000 DOLA EIAF Grant which, if awarded, would decrease the loan amount.
Group #3 Trout Haven Extension	• \$3,410,735 • District is in the process of engaging the Trout Haven community to determine their interest. • District could pursue a loan. Debt service for the loan would be paid by the Trout Haven community. Multiple scenarios for debt repayment options exist.

DISTRICT COURT, WATER DIVISION 1, COLORADO

CASE NO. 94CW281

FILED IN
DISTRICT OF

NOV 28 '95

WELD COUNTY, COLO.

FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE OF THE
WATER COURT APPROVING A PLAN FOR AUGMENTATION AND CHANGE OF WATER
RIGHTS, INCLUDING EXCHANGES

CONCERNING THE APPLICATION FOR WATER RIGHTS OF A. C. RUPP (A/K/A
THE ARABIAN ACRES WATER COMPANY), NORTH FORK ASSOCIATES AND THE
MOUNTAIN MUTUAL RESERVOIR COMPANY,

IN TELLER AND PARK COUNTIES

THIS MATTER, having come on for consideration upon the
Application of A. C. Rupp (a/k/a the Arabian Acres Water Company),
North Fork Associates and Mountain Mutual Reservoir Company for
Approval of a Plan for Augmentation and Change of Water Rights,
Including Exchanges, and the Referee having considered the
pleadings, the files herein, the evidence presented and the
comments of the Division Engineer does find.

The Application was filed with the Water Clerk, Water Division
No. 1, on December 30, 1994. All notices required by law of the
filing of this Application have been fulfilled, and the Referee has
jurisdiction over the subject matter of this proceeding and over
all parties affected hereby, whether they have appeared or not.
The land and water rights involved herein are not included within
the boundaries of any designated groundwater basin.

Statements of Opposition to the Application were filed on
February 15, 1995, by Lost Dutchman Creek, Inc.; on February 27,
1995, by the Highland Lakes Water District; on February 27, 1995,
by Donna L. Loudon; and on February 28, 1995, by the Farmers
Reservoir and Irrigation Company. Donna L. Loudon subsequently
withdrew her Statement of Opposition. No other statements of
opposition have been filed and the time for filing such statements
has now expired.

FINDINGS OF FACT

1. A. C. Rupp and members of his family (hereinafter
referred to as "Rupp"), operate a private water system which is
referred to as the Arabian Acres Water Company. The system
provides municipal water service to the Arabian Acres Subdivision
and surrounding areas. When originally platted in the mid 1960's,
the Arabian Acres Subdivision consisted of 229 single family lots

12-28-95
FERN A. KOEHLER

CLERK OF DISTRICT COURT
WELD COUNTY, COLORADO

located within the W 1/2 of Section 16, Township 13 South, Range 70 West, 6th P.M., Teller County. The lots are approximately 29,000 square feet in size. Rupp owns property adjacent to the Arabian Acres Subdivision in Section 9, Township 13 South, Range 70 West, 6th P.M. which will be subdivided into residential lots having sizes of between 0.5 and 2.5 acres each. Current plans are to create an additional 50 to 75 lots, all of which will receive water service from the system operated by the Arabian Acres Water Company. In addition, water service will be provided to customers located in Sections 9, 16 and 17, Township 13 South, Range 70 West, 6th P.M. Rupp's mailing address is as follows:

A. C. Rupp
Arabian Acres Water Company
3579 County Road 42
Florissant, Colorado 80816

2. Rupp owns the following wells which are used to supply the water requirements of customers of the Arabian Acres Water Company:

a. Rupp Well No. 1-55210. The well is located in the NE 1/4 SW 1/4 of Section 16, Township 13 South, Range 70 West, 6th P.M., Teller County, at a point approximately 2,062 feet North and 1,725 feet East of the Southwest corner of said Section 16. The well can also be described as being located on Lot 11, Block 8 of the Arabian Acres Subdivision, Second Filing. Its source is groundwater which is tributary to an unnamed tributary of Grape Creek, a tributary of Twin Creek, which in turn is a tributary of the South Platte River. A Decree for the well was entered in Case No. W-7410-73, dated February 28, 1977, in the amount of 0.11 of a cubic foot per second for domestic and stock watering purposes.

b. Rupp Well No. 4-58790. The well is located in the NW 1/4 SW 1/4 of Section 16, Township 13 South, Range 70 West, 6th P.M., Teller County, at a point approximately 2,580 feet from the South section line and 1,100 feet from the West section line of said Section 16. Its source is groundwater which is tributary to an unnamed tributary of Grape Creek, a tributary of Twin Creek, which in turn is a tributary of the South Platte River. A Decree for the well was entered in Case No. W-7410-73, dated February 28, 1977, in the amount of 0.09 of a cubic foot per second for domestic and stock watering purposes. The well was originally located in the SW 1/4 NW 1/4 of Section 16 approximately 1,000 feet from its current location. The well was redrilled in September of 1994 pursuant to Permit No. 044311-F.

Pursuant to the Decree entered in Case No. 81CW379, water diverted from the Rupp Well No. 1-55210 and the Rupp Well No. 4-58790 was authorized to be used as a source of supply for the municipal water system operated by the Arabian Acres Water Company.

3. As the physical water requirements of the customers of the Arabian Acres Water Company increase, Rupp shall be allowed to construct up to fifteen additional wells pursuant to this augmentation plan. Such wells will be located in the W 1/2 of Section 16, the E 1/2 SW 1/4 SW 1/4 of Section 9 and the SE 1/4 SW 1/4 of Section 9, Township 13 South, Range 70 West, 6th P.M. When Rupp desires to construct an additional well or wells, permits for same shall be obtained from the State Engineer's office pursuant to the provisions set forth in Paragraph No. 28, infra. Each new well will divert groundwater which is tributary to Grape Creek and/or Twin Creek, for municipal, domestic and stock watering purposes. The rate of diversion shall be 50 gallons per minute, or the capacity of the well once constructed, whichever is less. All such wells will be administered in accordance with this plan for augmentation.

4. The Arabian Acres Subdivision was included in a plan for augmentation decreed by the Water Court in 1986 (i.e. Case No. 81CW379). The source of augmentation water in the prior plan was water stored in the A. C. Rupp Reservoir No. 1 and the A. C. Rupp Reservoir No. 2, pursuant to storage priorities decreed to both structures. The reliability of the Reservoirs as augmentation sources has proven to be problematic. As a consequence, Rupp has elected to obtain a more dependable source of augmentation water and process this augmentation plan.

5. All customers of the Arabian Acres Water Company are metered. The Decree issued in Case No. 81CW379 assumed that meters would not be used within the Arabian Acres Subdivision, and that water usage would average approximately 225 gallons per residence. This figure was based on an occupancy of 3.5 persons per household and a per capita water usage of 65 gallons per day. Meter readings compiled by Rupp indicate that per capita water usage for the 30 residences presently being served by the Arabian Acres Water Company is less than 35 gallons per day. Rather than assume a fixed water usage figure, this plan for augmentation shall be based on the depletions associated with measured water deliveries to customers of the Arabian Acres Water Company.

6. Wastewater from all in-building uses of water supplied to customers of the Arabian Acres Water Company is treated using non-evaporative septic systems connected to soil absorption leach fields. Return flows from the septic systems are to the Grape Creek and Twin Creek drainage basins. No more than ten percent

(10%) of the water used for in-building purposes is consumed. Wastewater treatment systems which consume less water may be utilized if demonstrated to be more effective than the standard non-evaporative septic type system. In the event that a mechanical type of treatment system is used in the future, consumption shall be reduced to five percent (5%) of gross water usage for in-building purposes.

7. This augmentation plan will also cover the depletions associated with the watering of up to 25 head of domestic livestock. It is assumed that the livestock will be present on a year around basis, that each animal will require ten gallons of water per day and that all of the water will be consumed. No outside irrigation will be allowed by customers of the Arabian Acres Water Company.

8. Maximum out-of-priority stream depletions associated with water use by customers of the Arabian Acres Water Company, plus any water to offset transportation charges allocable to this plan, shall not exceed 6.906 acre feet per year unless additional augmentation water is acquired by Rupp. The use of additional augmentation water to replace depletions in excess of 6.906 acre feet shall first be approved by the State Engineer under a substitute water supply plan, or in the alternative shall be approved by the Water Court.

9. In order to provide the necessary replacement water to the stream system, A. C. Rupp has contracted with North Fork Associates for the purchase of 220 shares of the capital stock of the Mountain Mutual Reservoir Company, a nonprofit Colorado corporation which has been created for the following principal purposes:

i. To receive and hold title to direct flow and storage water rights, reservoirs and interests therein, lands, easements, rights-of-way, and other related facilities, in trust, for its shareholders; and

ii. To administer water rights and operate facilities for its shareholders, in accordance with individual plans for augmentation approved by the Water Court.

The 220 shares of stock represents the right to receive 6.906 acre feet of augmentation water per year from the water rights and storage facilities which Mountain Mutual Reservoir Company holds for the benefit of its shareholders. A copy of Mountain Mutual's Bylaws is on file with the Court.

10. North Fork Associates and Mountain Mutual Reservoir Company own the following water rights which will be used to meet the annual augmentation requirements for the Arabian Acres Water Company:

a. Guiraud 3T Ditch. North Fork Associates and Mountain Mutual Reservoir Company own 2.556 cubic feet per second of the water rights decreed to the Guiraud 3T Ditch as follows:

<u>Adjudication</u> <u>Date</u>	<u>Appropriation</u> <u>Date</u>	<u>Amount</u>
Oct. 18, 1889	July 1, 1867	20 cfs

(Original Adjudication, Water District 23)

The Guiraud 3T Ditch headgate is located on the South bank of the Middle Fork of the South Platte River in the NE 1/4, Section 8, Township 11 South, Range 76 West, 6th P.M., Park County, Colorado, at a point whence the Northeast Corner of the NE 1/4 of said Section 8 bears North 63° 35' East, 1,305 feet. Originally decreed for irrigation uses, this water right has been subject to various change proceedings. A decree authorizing a change of the point of diversion and place of use was entered on May 15, 1954, in Civil Action No. 3376, Park County District Court. Subsequent to 1954, various change of water right and plan for augmentation proceedings have either been decreed or are pending which are anticipated to reduce the quantity of water left at the Guiraud 3T Ditch headgate to 0 cfs. Historically, water diverted through the Guiraud 3T Ditch was used to irrigate 276.28 acres of hay meadows in Sections 9, 10 and 15, Township 11 South, Range 76 West, 6th P.M., Park County, Colorado. Past decrees have determined the average annual consumptive use under the Guiraud 3T Ditch to be 1.5 acre feet per acre. The owner of the lands historically irrigated by the 2.556 cfs now owned by North Fork Associates and Mountain Mutual Reservoir Company has contracted to remove and has removed 37.19 acres of land from irrigation. Said acreage has been surveyed and monumented in the field.

b. Spinney Mountain Reservoir. North Fork Associates and Mountain Mutual Reservoir Company are the owners by deed of a firm annual yield of 80 acre feet of water stored in Spinney Mountain Reservoir. Said Reservoir is located on the South Platte River, with the left abutment of the dam being at a point whence the Southwest Corner of Section 36, Township 12 South, Range 74 West, 6th P.M., Park County, Colorado, bears South 23° 26' West, a distance of 8,314.3 feet. A storage decree for the Reservoir has been entered for domestic, irrigation, municipal and all other beneficial uses as follows:

<u>Adjudication</u> <u>Date</u>	<u>Appropriation</u> <u>Date</u>	<u>Amount</u> <u>(AF)</u>
1973: Case No. W-7395	March 26, 1973	86,000

In addition, various decreed direct flow water rights have been transferred to storage in the structure by the District Court for Water Division No. 1 and provide the basic yield of the annual allotment of 80 acre feet.

c. Lower Sacramento Creek Reservoir No. 1. North Fork Associates owns a 25.2 percent interest in the Lower Sacramento Creek Reservoir No. 1. The Reservoir has been constructed and holds the following decree for domestic, municipal, commercial, industrial, irrigation, fish and wildlife propagation, recreational and all other beneficial purposes, including exchange, to compensate for depletions in the South Platte River or its tributaries:

<u>Adjudication</u> <u>Date</u>	<u>Appropriation</u> <u>Date</u>	<u>Amount</u> <u>(AF)</u>
1974: Case No. W-7741-74	July 25, 1974	40

The Reservoir is located in the NE 1/4 NW 1/4, Section 32 and the SE 1/4 SW 1/4, Section 29, Township 9 South, Range 77 West, 6th P.M., Park County, Colorado. Releases from the Reservoir are made pursuant to the Decrees issued in Case Nos. 84CW250 and 85CW465.

11. In order to assure that sufficient augmentation water will be available for the Arabian Acres Water Company, North Fork Associates has agreed to assign to Mountain Mutual Reservoir Company for the benefit of A. C. Rupp, his successors and assigns, and for use in this augmentation plan, 0.134 of a cubic foot per second of the Guiraud 3T Ditch priority, yielding 2.918 acre feet of water per year, from the 2.556 cubic feet per second above described. In addition, North Fork Associates has agreed to assign to Mountain Mutual Reservoir Company, 3.988 acre feet of its right to annual water deliveries from Spinney Mountain Reservoir. In order to provide augmentation water from the Guiraud 3T Ditch for use in this plan, North Fork Associates and Mountain Mutual Reservoir Company have caused 0.667 of an acre of the grounds historically irrigated by the Guiraud 3T Ditch to be removed from irrigation for each acre foot of consumptive use water under the Ditch. Sufficient acreage has previously been monumented in the field and set aside for the benefit of plans for augmentation administered by Mountain Mutual Reservoir Company. The approval and monumentation of the dried up lands are on the basis of criteria which have been approved and accepted by the Water Court in prior plans for augmentation and which have been adopted by the State Engineer. Deliveries from the Guiraud 3T Ditch and Spinney

Mountain Reservoir which are committed to other augmentation plans and stockholders of Mountain Mutual Reservoir Company are set forth in the attached Exhibits "A" and "B."

12. Depletions to the South Platte River drainage basin which are attributable to water use at the proposed development will principally be augmented during the period May through September, inclusive, by leaving the above referenced Guiraud 3T Ditch water rights in the stream. During times when the Guiraud 3T Ditch is not in priority and during the months of October through April, inclusive, depletions will be augmented by releasing water from Spinney Mountain Reservoir or the Lower Sacramento Creek Reservoir No. 1. Transportation charges from the point where water is released to the stream system from Mountain Mutual Reservoir Company's facilities, to the point of depletion, shall be computed on the basis of 0.13 percent per mile, as set forth in the attached Exhibit "C."

13. In order to provide the necessary augmentation water for this and other augmentation plans, Mountain Mutual Reservoir Company will attempt to fill the Lower Sacramento Creek Reservoir No. 1 under the Reservoir's own priority. If the structure cannot be so filled, Mountain Mutual Reservoir Company may elect to exchange water from Spinney Mountain Reservoir to storage in the Lower Sacramento Creek Reservoir No. 1. The exchange has been decreed in prior plans for augmentation. Mountain Mutual Reservoir Company has previously agreed to limit the exchange between Spinney Mountain Reservoir and the Lower Sacramento Creek Reservoir No. 1 to those times when all vested water rights with priority dates senior to February 29, 1980, which divert water from Sacramento Creek and/or the Middle Fork of the South Platte River between the point of diversion for the Lower Sacramento Creek Reservoir No. 1 and Spinney Mountain Reservoir are either in priority and fully satisfied to the extent of their call, or are out-of-priority because of a downstream call initiated by a more senior water right which can be at least partially satisfied by the release of Spinney Mountain Reservoir water. The decreed rate of exchange into Lower Sacramento Creek Reservoir No. 1 is limited to 2 c.f.s. Evaporation losses incurred by the Lower Sacramento Creek Reservoir No. 1 will be replaced by the exchange of Spinney Mountain Reservoir water to storage.

14. Due to the small volume of annual stream depletions projected to occur from the service area of the Arabian Acres Water Company, instantaneous stream depletions during times when the Guiraud 3T Ditch water right is not used for augmentation purposes, shall be aggregated and replaced by one or more releases of short duration from storage. The rate and timing of an aggregated release shall be determined by the Division Engineer or his

designated representative; provided, however, that an aggregated release shall be required no more frequently than once per month. With respect to releases to be made from Spinney Mountain Reservoir, the Mountain Mutual Reservoir Company and the Division Engineer, or his designated representative, shall provide the City of Aurora, operator of Spinney Mountain Reservoir, with at least 24 hours prior notice during regular working hours, Monday through Friday, of the required time and amount of such releases.

15. The Referee finds that the source of replacement water and the protective terms outlined above are sufficient to protect the vested rights of other water users in the South Platte River Basin.

CONCLUSIONS OF LAW

16. This Application was filed with the Water Clerk, Water Division No. 1, pursuant to §37-92-302(a), 15 C.R.S. (1990). Statements of Opposition were filed by Lost Dutchman Creek, Inc., the Highland Lakes Water District, Donna L. Louden and the Farmers Reservoir and Irrigation Company. Donna L. Louden later withdrew her Statement of Opposition. As is specified in §37-92-302(1)(c), 15 C.R.S. (1990), the time for filing statements of opposition has expired.

17. The Application for Approval of a Plan for Augmentation and Change of Water Rights, Including Exchanges, described herein is contemplated and authorized by law, and if administered in accordance with this decree, will permit the uninterrupted utilization of the wells described in Paragraph Nos. 2 and 3, supra, without adversely affecting any other vested water rights in the South Platte River or its tributaries. Sections 37-92-305(3), (5) and (8), §37-80-120 and §37-83-104, 15 C.R.S. (1990).

18. The State Engineer may lawfully be required to administer this plan for augmentation and change of water rights and the water exchanges, in the manner set forth herein.

19. As a result of the operation of the Plan for Augmentation set forth herein, there is water available for withdrawal from the wells described in Paragraph Nos. 2 and 3, supra, and the construction and use of same will not result in the material injury of the vested water rights of others. Accordingly, the State Engineer shall approve applications for well permits or replacement well permits submitted by Rupp, or their successors-in-interest, subject to the conditions set forth in Paragraph No. 28, infra. Section 37-90-137(2), 15 C.R.S. (1990) and Cache La Poudre Water Users Association v. Glacier View Meadows, 191 Colo. 53, 550 P.2d 288 (1976).

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED AS FOLLOWS:

20. The plan for augmentation, change of water rights and water exchanges, proposed by Rupp, North Fork Associates and Mountain Mutual Reservoir Company are approved.

21. The State Engineer, the Division Engineer and/or the Water Commissioner for former Water District No. 23 shall not, at the request of appropriators, or on their own initiative, curtail the diversion and use of water by the Arabian Acres Water Company which are covered by this plan for augmentation, so long as the out-of-priority depletions associated with such diversions are replaced to the stream system pursuant to the conditions contained herein. To the extent that Rupp, or the successors and assigns of Rupp are ever unable to provide the replacement water required, then the wells described in Paragraph Nos. 2 and 3, supra, shall not be entitled to operate under the protection of this Plan, and shall be subject to administration and curtailment in accordance with the laws, rules and regulations of the State of Colorado. Pursuant to §37-92-305(8), 15 C.R.S. (1990), the State Engineer shall curtail all out-of-priority diversions which are not so replaced as to prevent injury to vested water rights.

22. All of the foregoing Findings of Fact and Conclusions of Law are incorporated by reference herein, and are to be considered a part of the decretal portion hereof as though set out in full.

23. Rupp and the successors and assigns of Rupp, shall make available for release to the stream system, a sufficient quantity of water to replace depletions caused by diversions from the above referenced wells. The volume of augmentation water required to be released each year shall be limited to out-of-priority depletions to the stream system directly attributable to diversions through the wells described in Paragraph Nos. 2 and 3, supra.

24. A total of 0.134 of a cubic foot per second of the above described 2.556 cubic feet per second decreed to the Guiraud 3T Ditch is hereby changed to allow replacement of depletions associated with water use within the Arabian Acres Water Company service area, at the point of injury rather than at its present point of diversion in the NE 1/4 of Section 8, Township 11 South, Range 76 West, 6th P.M., Park County, Colorado. The Referee also confirms that storage water available to Rupp in Spinney Mountain Reservoir and the Lower Sacramento Creek Reservoir No. 1 can be utilized for replacement and augmentation purposes to replace depletions associated with out-of-priority water use within the service area.

25. The point of depletion associated with the out-of-priority diversions from the wells described herein is upstream of the point of delivery of augmentation water from the Guiraud 3T Ditch, Spinney Mountain Reservoir and the Lower Sacramento Creek Reservoir No. 1. Rupp, and the successors and assigns of Rupp, are therefore decreed appropriative rights of substitute supply and exchange pursuant to §37-80-120 and §37-92-302(1)(a), 15 C.R.S. (1990). The reach of the stream system affected by this appropriative right of substitute supply and exchange, shall extend from the confluence of the South Platte River and Twin Creek near the Southeast Corner of Section 30, Township 12 South, Range 71 West, 6th P.M. at Lake George, up Twin Creek to its confluence with Grape Creek in the SW 1/4 of Section 2, Township 13 South, Range 71 West, 6th P.M., up Grape Creek to its confluence with an unnamed tributary of Grape Creek in the SW 1/4 SW 1/4 of Section 12, Township 13 South, Range 71 West, 6th P.M., and up the unnamed tributary of Grape Creek to the East line of the W 1/2 of Section 16, Township 13 South, Range 70 West, 6th P.M. The reach shall also extend up Twin Creek to the confluence of Twin Creek and an unnamed tributary of Twin Creek in the NW 1/4 SW 1/4 of Section 9, Township 13 South, Range 70 West, 6th P.M., and up the unnamed tributary of Twin Creek to the South line of Section 9. This unnamed tributary is downstream of and different than the unnamed tributary of Twin Creek referred to as Lost Dutchman Creek in Case No. 94CW271. The program of substitute supply and exchange shall operate to replace depletions to the flow of water in the above referenced streams as the depletions occur. The program shall be administered with a priority date of June 24, 1994, at a maximum flow rate of 0.25 of a cubic foot per second, to the extent of 6.65 acre feet per year.

26. Depletions from the wells described in Paragraph Nos. 2 and 3, supra, shall be calculated by adding: (1) the sum of the individual water meters of the customers of the Arabian Acres Water Company, minus the total water provided to livestock as determined in (2) below, multiplied by either ten percent (10%) or five percent (5%); and (2) the number of livestock boarded by customers of the Company, multiplied by 10 gallons per animal per day. Mountain Mutual Reservoir Company shall include such depletions which are out-of-priority in the monthly reports made to the State water officials for other plans for augmentation which utilize Mountain Mutual Reservoir Company augmentation water supplies. On the basis of the submitted reports, and in accordance with the directives of the Division Engineer, Mountain Mutual Reservoir Company shall make the required release of augmentation water by properly documenting the instream delivery of replacement water from the Guiraud 3T Ditch or the release of storage water from Spinney Mountain Reservoir and the Lower Sacramento Creek Reservoir

No. 1. Releases of storage water shall be subject to the conditions stated in Paragraph No. 14, supra. It shall be the responsibility of Rupp or the Arabian Acres Water Company to complete an annual survey on or before October 1 of each year, of the number of horses or equivalent livestock units that are owned by customers of the Company. Mountain Mutual Reservoir Company shall be provided with a copy of the annual survey and the appropriate water use figures so that adequate replacement of depletions can be made. An example of the type of information to be included in the water accounting to be maintained by the Applicants is attached as Exhibit "C." It is not the Court's intention to mandate the use of Exhibit "C" in its existing format. The Exhibit has been included simply to provide an illustration of the information that must be gathered and recorded. The Applicants, in coordination with the Division Engineer, shall be allowed to modify the form in the future as changes become necessary for proper administration.

27. The point of diversion for the Rupp Well No. 4-58790 (i.e. Permit No. 044311-F), is hereby changed from the SW 1/4 NW 1/4 to the NW 1/4 SW 1/4 of Section 16, Township 13 South, Range 70 West, 6th P.M., at a point approximately 2,580 feet from the South section line and 1,100 feet from the West section line of said Section 16. Water diverted from the Rupp Well No. 1-55210 and the Rupp Well No. 4-58790 shall be available for municipal, domestic and stock watering uses.

28. As a result of the approval of this Plan for Augmentation, water will be made available from the tributary wells described in Paragraph Nos. 2 and 3, supra, and the vested rights of others will not be materially injured by the contemplated diversions therefrom. Accordingly, if this plan for augmentation is operating as envisioned herein at the time an application for constructing one of the wells is submitted to the State Engineer, and the well will be constructed no closer than 600 feet from any then existing decreed or permitted well which is not owned by Rupp, or the successors or assigns of Rupp, a permit for construction of the well shall be granted pursuant to §37-92-137(2), 15 C.R.S. (1990). The reconstruction of all wells described in Paragraph Nos. 2 and 3, supra, shall be approved upon the submittal of new applications to the State Engineer if the location of the replacement well will be within 200 feet of the location of the existing well; provided, however, that if the well to be replaced is within 600 feet of another well not owned or used by Rupp, or the successors or assigns of Rupp, such reconstruction will not result in the replacement well being moved any closer to the existing structure. Well permit requests which would result in the location of a new well at a point closer than 600 feet to an existing well not owned or used by Rupp or his assigns, or which

would result in the relocation of a well already within 600 feet of an existing well to a point closer to the existing well, shall be approved if the construction will not result in material injury to the existing well after a hearing pursuant to §37-90-137(2), 15 C.R.S., (1990), or if the owner of the existing well executes a written waiver of objection to the proposed location.

29. The Referee finds that the Arabian Acres Water Company is a viable provider of water utility services to the lots within the Arabian Acres Subdivision. Accordingly, pursuant to §37-92-602(6), 15 C.R.S. (1990), the exemptions set forth in §37-92-602 are not applicable to the owners of undeveloped lots within the Arabian Acres Subdivision, and the State Engineer shall not issue exempt well permits to the owners of undeveloped lots unless it can be conclusively demonstrated that the owner of the lot is unable to obtain water service from the Arabian Acres Water Company because water mains have not been extended to the lot, and cannot be economically extended within a reasonable period of time. The owners of seven lots within the Arabian Acres Subdivision have previously been issued exempt well permits by the State Engineer. A listing of the existing exempt wells is set out in Exhibit "D." Such wells, and the owners' ability to redrill or obtain replacement permits for such wells, shall not be affected by this decree, but the owners of the lots shall be allowed to obtain water service from the Arabian Acres Water Company if they so choose in the future.

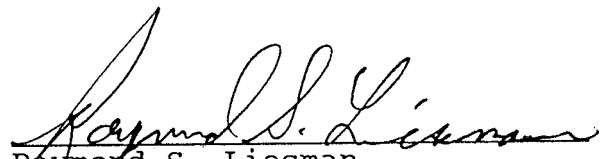
30. Pursuant to the provisions contained in §37-92-304(6), 15 C.R.S. (1990), the plan for augmentation decreed herein shall be subject to the reconsideration of this Court, for the purpose of evaluating injury to vested water rights, for a period of five years. Any person, within the five year period, may petition the Court to invoke its retained jurisdiction. Any such request shall state with particularity the factual basis for requesting that the Court evaluate injury to vested water rights associated with the operation of this decree, together with proposed decretal language to effect the petition. Unless otherwise stated herein, the party lodging the petition shall have the burden of going forward to establish the prima facie facts alleged in the petition. If the Court finds those facts to be established, the Applicants shall thereupon have the burden of proof to show: (a) that any modification sought by the Applicants will avoid injury to other appropriators, or (b) that any modification sought by an opposer is not required to avoid injury to other appropriators, or (c) that any term or condition proposed by the Applicants in response to opposer's petition does avoid injury to other appropriators. Such petition shall be filed with the Court under the above styled caption and case number and shall be served by certified mail, return receipt requested, on all parties who have appeared herein,

17

A. C. Rupp (a/k/a Arabian
Acres Water Company)
Case No. 94CW281
Page 13

or on their counsel of record. If no such petition is lodged within the five year period, and the retained jurisdiction period is not extended by the Court in accordance with the provisions of the statute, this decree shall become final under its own terms.

DATED this 29 day of November, 1995.


Raymond S. Liesman
Water Referee
Water Division No. 1

THE COURT DOTH FIND: NO PROTEST WAS FILED IN THIS MATTER

THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

DATED: December 21, 1995

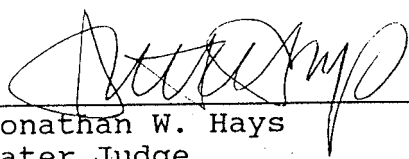

Jonathan W. Hays
Water Judge
Water Division No. 1
State of Colorado

EXHIBIT C
WATER ACCOUNTING FORM
ARABIAN ACRES

Case No. 94-CW-281

November 1 _____ to October 31 _____

(1) Month	(2) Water Delivered (Gal)	(3) Water Delivered (2)/325851 (AF)	(4) Horses (No.)	(5) Horse CU (4) X 0.0009 (AF)	(6) In-house Delivery (3) - (5) (AF)	(7) In-house CU (6) X 0.10 (AF)	(8) Total CU (5) + (7) (AF)
NOV							
DEC							
JAN							
FEB							
MAR							
APR							
MAY							
JUN							
JUL							
AUG							
SEP							
OCT							

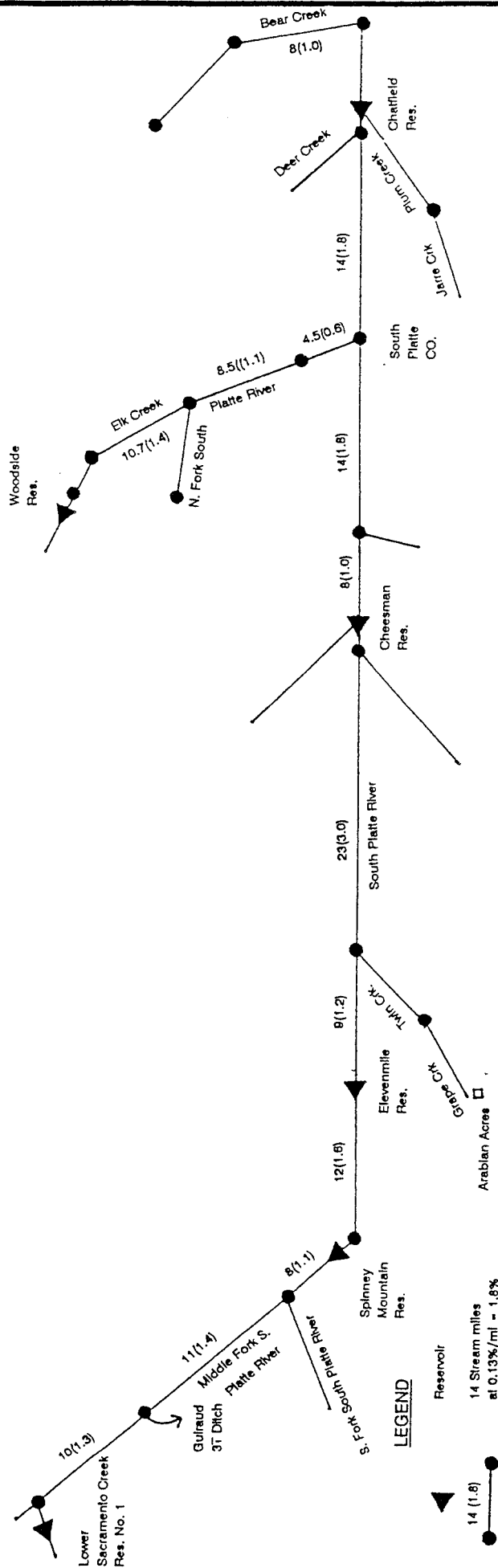
TOTAL _____

(a) TOTAL CU (Col. 8) (AF) _____

(b) TOTAL CU (Col. 8)
FOR MAY-SEP (AF) _____

(c) TOTAL CU FOR WINTER
(a) - (b) (AF) _____

Submit form to Mountain Mutual Reservoir Company and Former District 23 Water Commissioner by November 5.



NET TRANSPORTATION CHARGES

Arablan Acres Subdivision 84CW281

STORAGE EXCHANGES

Charge (Credit)	
Against Release	
From Spinney	
<u>Mountain Res.</u>	<u>5.6%</u>
	<u>(3.8%)</u>

EXCHANGE FOR DEPLETION REPLACEMENT

From	To	Charge on Water Released
Gulraud 3T Ditch	Arabian Acres	5.3%
Spinney Mt. Res	Arabian Acres	2.8%
L Sac. Cr. Res. #1	Arabian Acres	6.6%
Woodside Res.	Arabian Acres	3.1%



blatchley associates, inc.
CONSULTING ENGINEERS
2525 SOUTH WADSWORTH BOULEVARD • 306
DENVER, COLORADO 80227

EXHIBIT D
EXISTING EXEMPT WELLS
ARABIAN ACRES SUB-DIVISION

LOT	BLK	FLG	WELL PERMIT NO.
3	8	2	124808
6	1	2	144226
33	1	1	121273
17		3	125680
28	1	1	132464
9	1	1	136202
16	1	2	156009

34:69 017507



AquaWorks DBO, Inc.
3252 Williams Street
Denver, Colorado 80205

(303) 477-5915
www.aquaworksdbo.com
info@aquaworksdbo.com

Board of Directors
Arabian Acres Metropolitan District
c/o Metropolitan District Management
23005 Whispering Woods
Golden, CO 80401

April 17, 2018

RE: Capital Improvement Plan Letter Report

Dear Directors:

The engineering consulting firm of AquaWorks DBO has been retained by the Arabian Acres Metropolitan District to prepare this letter report that summarizes the existing condition of its water treatment and distribution systems, recommends capital improvements, and presents recommended next steps to obtain funding assistance. The following documents were reviewed during the completion of this task:

- Arabian Acres Water Company Water System Appraisal (2002)
- Arabian Acres Metropolitan District Service Plan (2002 & Amended 2009)
- Water System Evaluation and Master Plan (September 2002)
- Capital Improvement Plan for Fire Flow System
- Water System Improvements Preliminary Engineering Report (2011)
- Arabian Acres Rules & Regulations with Design Standards (2013)
- Distribution System Improvement Project Preliminary Engineering Report (2014)

The following are the most significant deficiencies identified during the review of the information provided:

Water Loss: There have been significant amounts of water losses throughout the distribution system, peaking at 52% in 2007 and 2008. Current water losses are estimated between 25 and 29%. Expected water losses for similar systems are typically in the order of 10%. There are two likely sources of water loss. The first area is in the 2"-6" main lines of the distribution system. The district's operator is aware of the locations in the distribution system most prone to leaks and has been able to decrease water loss by half in the past 10 years. The second area in which water losses are believed to occur are the water service lines in between the district's water mains and the individual homes. Water service lines are the property of individual homeowners. The cost for any water loss taking place in the lines is the responsibility of the homeowner. However, the water meters are installed inside of the homes downstream of the suspected water losses occurring in the service lines. Therefore, the district is unable to identify which service lines are leaking and seek cost recovery from the homeowners who own those lines.

Pipe Material: Section 8.1.1 of Colorado's Design Criteria for Potable Water Systems calls for all materials, pipes, fittings, valves, and hydrants to conform to the latest standards issued by ASTM, AWWA, and ANSI/NSF. AquaWorks has been informed that the water main lines of the existing distribution system were not constructed with piping intended for distribution systems; rather, SDR 35 PVC was used. This pipe is typically used for non-pressure sewer collection systems and is not intended for potable water use.

Figure 1: SDR 35 Pipe Used in Potable Water Distribution System



Dead Ends: Section 8.2.4 of Colorado's Design Criteria for Potable Water Systems calls for minimizing dead ends whenever practical in order to provide increased reliability and reduce head loss. There are several dead ends in the system, which results in inadequate looping and water flow throughout the system. This causes problems with water age in the dead end segments, inability to isolate sections of the distribution system, and freezing. Blow-off hydrants are provided at the dead ends; however, this only provides partial relief. Dead ends of the water mains can be drained using the hydrants, but only during warm months. Draining the lines also wastes an unacceptable amount of potable water.

Line Freezing: Section 8.7.3 of Colorado's Design Criteria of Potable Water Systems requires water mains to be covered with sufficient earth or insulation to prevent freezing. Several areas of the system are below the district's requirement of 7' of pipe depth. Dead ends in the distribution system exacerbate the issue because water becomes stagnant and has enough time to freeze.

Inadequate Pipe Diameter: Section 8.2.2 of the State of Colorado Design Criteria for Potable Water Systems calls for a minimum pipe diameter of 3". Several areas of the distribution main lines have a diameter of 2".

Table #1 summarizes the proposed improvements developed during the planning process to address the deficiencies in the distribution and treatment systems. These items include:

Water Storage Tank Improvements:

The existing 38,200-gallon water storage tank has been adequate to store water for the current population as long as there are no significant water loss events. Over time, the population will increase, especially as additional homes from Trout Haven are connected to the system, and additional water storage will be required. A second tank, sized at 100,000 gallons, has been included with the recommendations. A budget for additional level control is included to integrate the second tank into the SCADA system.

Drinking Water Well Improvements:

The existing wells pull raw water from fractured granite, except for Well #3, which is shallow and pulls groundwater under the influence of surface water. As such, the production of these wells is variable and unreliable due to factors such as the amount of precipitation received and the volume of water that has been pumped from the well. The plan recommends a series of improvements to improve the quantity and quality of water the district can acquire.

Over time, potable water well yields can decrease as sediment clogs the fissures in the fractured granite, restricting the amount of water accessible to the well. This report recommends hydrofracturing the existing groundwater wells. This process involves sending highly pressurized water down the wells to remove the sediment (similar to backwashing a filter), breaking up rock, and opening new channels in the bedrock. Hydrofracturing wells typically improves well yield; however, the degree of success is unpredictable due to the variability of the properties of each well. Due to the relatively low cost of hydrofracturing the wells compared to other options that increase water flow, this activity could result in a cost-benefit ratio favorable to the district. The improvement to the yield, however, will not be known until the process is complete.

The report recommends drilling three new drinking water wells. These wells should be drilled deep enough so that they will be classified as groundwater sources by the Colorado Department of Public Health and Environment. Included in Table 1 are the costs to connect the wells to the distribution system. The cost to drill wells is partially based on how deep new wells will need to be drilled to access the water table. Well drillers typically charge a base fee and then a unit cost per foot of well depth to cover drilling and casing costs. Therefore, exact cost of the well drilling is not known until it is actually drilled. The opinion of cost factored in an estimate for the three wells.

Well #3 is shallow, approximately 20' deep, and will likely eventually be classified by the Colorado Department of Public Health and Environment as groundwater under the influence of surface water. Once reclassified, the water from the well will need to undergo additional costly treatment, including meeting the filtration rule. The

most cost-effective approach to avoid having the well reclassified is to drill the well deeper to maintain its status as a groundwater well.

Control Buildings A & B are not in satisfactory condition. A budget for each building has been included for general building and process piping improvements. Additionally, the chlorine contact volume for Building B is based on the longer accepted sizing method of using 30 minutes of contact time. A budget to increase chlorine contact based on the current log inactivation of the Giardia lamblia and viruses requirement is included.

Install New Smart Water Meters:

The district's existing metering system for both well production and individual home consumption is not reliable and considered to inaccurately meter the amount of water the district produces and sells. As such, it is likely that the district is not billing individual residents for the full amount of water it is entitled to.

Additionally, the location of the water meters inside each home is problematic. It is thought that many of the service lines between the district's collection lines and the homes are prone to failure, resulting in leaks. The service lines are owned by individual homeowners. Homeowners are responsible for the cost of water loss in the service lines. However, the water meters are located downstream of the service lines. Therefore, there is no way to measure the amount of water lost in the service line. This report recommends installing new water meters upstream of the service lines. The new location will allow the district to measure the amount of water consumed at the home and lost in the service line. Homes with significant water consumption will receive higher water bills, which will incentivize homeowners to investigate the cause of the unexpected water loss and to repair their service line if necessary.

In summary, installing new water meters will benefit the district by both increasing the amount of water it can charge for and decreasing the amount of water that is lost in the service lines.

Existing Distribution System Improvements:

Removing and replacing the water distribution lines, along with making other incremental improvements, will resolve the issues identified with the condition of the system above, specifically reducing dead ends, using pipe suitable for potable water distribution, decreasing freezing areas, and resolving any existing leaks. The recommended improvements include removing the entire 38,803 linear feet of pipe and replacing it with 4" HDPE water line. The cost includes a 10% allowance of the pipe cost for gate valves, hydrants, and air/pressure relief valves. Where possible, water lines will be installed deeper or additional pipe cover/insulation will be installed.

Trout Haven Extension Distribution System Improvements:

Properties in the Trout Haven subdivision are within the district's boundaries. Only a small number of Trout Haven homes are connected to the district's distribution system because most homes are not close to the existing water mains. Homes within Trout Haven but not connected to the system pay property tax to the district but not a service fee. Table 1 includes costs to extend the distribution system to the remainder of Trout Haven. If the water

line extension is installed, homeowners will have the option to connect and pay for the amount of water consumed or not connect and pay the availability of service fee.

Funding of Improvements:

The district is faced with a series of challenges with respect to maintaining its existing treatment and distribution systems. The current infrastructure has become difficult to effectively operate and requires frequent repairs. The ability to fund the recommended improvements based on the number of taps, geographic size of the district, linear feet of existing line, and condition of the existing infrastructure, as well as the ability to assume additional debt without funding assistance, is not realistic.

The list of potential improvements in Table 1 is comprehensive, and the magnitude of costs is significant for a district this size. In order to fund as many of the improvements as possible, the recommendations have been broken into three different groups. The costs were segregated into the groups because certain improvements will qualify for funding from different sources.

Group 1: The improvement that will result in the most favorable cost-benefit ratio to the district will be the installation of the new smart water meters. The engineer's opinion of probable cost for this work is \$389,817. The cost of this work, when compared to the overall cost of the recommended improvements, is manageable. Because this work will result in two benefits, increased water billings and decreased water loss, the payback for the costs will likely be favorable.

There is one low interest loan and one grant source that could be obtained to fund the improvements. The Department of Natural Resources has a program that could potentially fund 50% of the costs of the water meters through its loan program. The remaining 50% of the water meters costs could potentially be funded by a Department of Local Affairs Energy Impact Assistance Grant.

Group 2: The improvements in this group include all the treatment and distribution improvements excluding the improvements in the Trout Haven neighborhood and the smart water meters. These items include water storage tank improvements, drinking water well improvements, and replacing the existing water lines. The engineer's opinion of probable cost for this work is \$6,819,971.

Implementing all of the improvements at one time is likely unfeasible. As such, three different 10-year fiscally constrained plans were developed. The first plan is to spend \$1,000,000 in the first year and then defer the remaining costs over the remaining years. The second and third plans are to spend \$2,000,000 and \$4,000,000, respectively, the first year and then defer the remaining costs over the remaining years. The three fiscally constrained plans are attached to this letter.

The funding for this group of improvements can be obtained by a combination of a State Revolving Fund loan, Energy Impact Assistance Fund grants, and district funds. If the district is able to be granted Disadvantaged Community status by the Colorado Department of Public Health and Environment Grants & Loans Unit,

advantageous State Revolving Fund loan terms can possibly be obtained, such as acquiring a loan with an interest rate of 0% and having the cost of engineering fees reimbursable through a grant. AquaWorks, along with Ms. Bertrand and Mr. Brown, is currently applying to the Grants & Loans Unit to designate the district as a Disadvantaged Community as directed by its board.

Group 3: The improvements in this group will extend the water distribution system to the remainder of Trout Haven. The engineer's opinion of probable cost for this work is \$3,754,985. The costs for this work were broken down into separate groups because the improvements will specifically benefit only those in the Trout Haven neighborhood. As such, the costs will be borne only by the users in Trout Haven not already connected to the system.

The cost for the work in Group 3 could be funded by an SRF loan. The additional user fees generated by the new taps connected to the system within the Trout Haven neighborhood would be used to service the debt of the SRF loan. Homes already connected to the system, such as those in Arabian Acres, would not be responsible for paying for the work in Group 3.

Attached to the letter report are a series of six existing conditions maps and six proposed improvement maps. These maps were created based on the limited information provided to AquaWorks DBO. If this project enters the design phase, additional information, such as a site survey, will be added to the proposed improvement maps. Furthermore, additional time will be spent to verify the accuracy of the information, such as confirming which properties have private wells. The accuracy level of the maps should be considered conceptual until additional effort is made to verify the information during the design phase of the project.

AquaWorks DBO looks forward to continuing assisting the district with its Capital Improvement Planning needs and will continue to pursue the Disadvantaged Community status and any other funding opportunities as directed by the board.

Please feel free to contact me with any questions pertaining to the information in this report.

Sincerely,

AQUAWORKS DBO, INC.



Adam Sommers, P.E., AICP

cc: Judy Bertrand, District Manager
Clay Brown, Department of Local Affairs

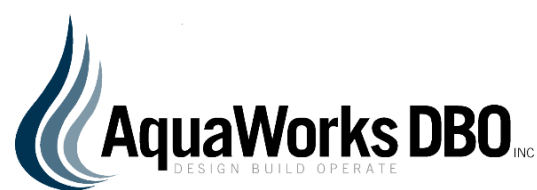


Table #1

System: Arabian Acres Metro District
Task: CIP Conceptual Opinion of Cost
Date: 3/5/2018

Water Storage Tank Improvements			Cost:	\$	357,750
Water Storage Tank Addition. 100,000 gallons. Includes Site Work & Foundation.	1	Each	\$	250,000	\$ 250,000
Additional Tank Level Control	1	Each	\$	15,000	\$ 15,000
Contractor Overhead & Profit	10%				\$ 26,500
Design Engineering & Permitting	10%				\$ 26,500
Bidding, SRF Administration, & Construction Engineering Consulting	5%				\$ 13,250
Contingency	10%				\$ 26,500
Drinking Water Well Improvements			Cost:	\$	699,975
Hydrofracturing Existing Wells	4	Each	\$	5,000	\$ 20,000
Drilling New Wells w/Connections to System	3	Each	\$	75,000	\$ 225,000
Connect New Wells with 1" HDPE to System (Assume 500' per well)	3	Each	\$	45,000	\$ 135,000
Redrill Well #3	1	Each	\$	75,000	\$ 75,000
Well/Treatment Building Improvements (Control Buildings A & B)	2	Each	\$	25,000	\$ 50,000
Install Additional Pipe Loop at Building B	90	Feet	\$	150	\$ 13,500
Contractor Overhead & Profit	10%				\$ 51,850
Design Engineering & Permitting	10%				\$ 51,850
Bidding, SRF Administration, & Construction Engineering Consulting	5%				\$ 25,925
Contingency	10%				\$ 51,850
Install New Smart Water Meters			Cost:	\$	389,817
Based on 145 Meters			Cost per Meter:	\$	2,688
Automatic Meter Read (AMR) Hardware, Software, 145 Meters (138 - 3/4" + 7 -1")	1	Each	\$	56,753	\$ 56,753
Meter Pits	145	Pits	\$	800	\$ 116,000
Annual Support (After First Year)	1	Year	\$	2,200	
Excavation Cost Per Pit	145	Unit	\$	700	\$ 101,500
Installation Cost Per Meter	145	Unit	\$	100	\$ 14,500
Contractor Overhead & Profit	10%				\$ 28,875
Design Engineering & Permitting	10%				\$ 28,875
Bidding, SRF Administration, & Construction Engineering Consulting	5%				\$ 14,438
Contingency	10%				\$ 28,875
Existing Distribution System Improvements			Cost:	\$	5,762,246
Replace Existing Water Lines with 4" HDPE (maintain bury depth) ¹	38,083	Feet	\$	100	\$ 3,808,300
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves / Pressure Relief (10% of Line Work)	10%				\$ 380,830
Restore Gerka Ln to Lower Gerka Ln Loop	720	Feet	\$	100	\$ 72,000
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves (10% of Line Work)	10%				\$ 7,200
Contractor Overhead & Profit	10%				\$ 426,833
Design Engineering & Permitting	10%				\$ 426,833
Bidding, SRF Administration, & Construction Engineering Consulting	5%				\$ 213,417
Contingency	10%				\$ 426,833
Trout Haven Extension Distribution System Improvements ²			Cost:	\$	3,754,985
Assume 175 Homes Will Ultimately Be Connected			Cost per Home:	\$	21,457
Pawutsy Rd/Kutsu Ridge Rd Main Extension (South & East of Existing Line)	2,829	Feet	\$	100	\$ 282,900
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves (10% of Line Work)	10%				\$ 28,290
Kutsu Ridge Road, Kokwapy Ct, Kayfa Ct, Pawutsy	5,610	Feet	\$	100	\$ 561,000
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves (10% of Line Work)	10%				\$ 56,100
Tawatsy Ln, Matagutsy Ct, Nuaka Road	5,066	Feet	\$	100	\$ 506,600
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves (10% of Line Work)	10%				\$ 50,660
Nununukuku Ct	567	Feet	\$	100	\$ 56,700
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves (10% of Line Work)	10%				\$ 5,670
Trout Haven Rd, Tioga, Tuputsu Rd, Unitah Ridge Rd, Unitah Valley Rd	5,805	Feet	\$	100	\$ 580,500
◦ Allowance for Gate Valves, Hydrants, and Air Relief Valves (10% of Line Work)	10%				\$ 58,050
Water Meters & Hardware	175	Meter	\$	300	\$ 52,500
Meter Pits	175	Pits	\$	800	\$ 140,000
Excavation Cost Per Pit	175	Unit	\$	700	\$ 122,500
Installation Cost Per Meter	175	Unit	\$	100	\$ 17,500
Laterals from Main to Meter	175	Unit	\$	1,500	\$ 262,500
Contractor Overhead & Profit	10%				\$ 278,147
Design Engineering & Permitting	10%				\$ 278,147
Bidding, SRF Administration, & Construction Engineering Consulting	5%				\$ 139,074
Contingency	10%				\$ 278,147

Notes:

- 1) Length equals 38,803 feet of piping in existing distribution system taken from Water System Appraisal Appendix C minus Gerka Loop Restoration
2) Each homeowner would additionally be responsible for installing service line from meter to home

System: Arabian Acres Metro District
Item: 10-Year Fiscally Constrained Plan - Option #1
Date: 3/5/2018



	Total Present Day Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Costs w/Inflation
Water Storage Tank Improvements	\$357,750											
New 100,000 gallon water storage tank.	\$337,500										\$337,500	\$432,028
Additional tank level control	\$20,250										\$20,250	\$25,921
Drinking Water Well Improvements	\$699,975											
Hydrofracture Existing Wells	\$27,000	\$27,000										\$27,000
Drilling New Wells w/Connections to System	\$303,750	\$303,750										\$303,750
Connect New Wells with 1" HDPE to System (Assume 500' per well)	\$182,250	\$182,250										\$182,250
Redrill Well #3	\$101,250	\$101,250										\$101,250
Well/Treatment Building Improvements (Control Buildings A & B)	\$67,500	\$67,500										\$67,500
Install Additional Pipe Loop at Building B	\$18,225	\$18,225										\$18,225
Existing Distribution System Improvements	\$5,762,246											
Restore Gerka Ln to Lower Gerka Ln Loop	\$106,920	\$106,920										\$106,920
Replace Existing Water Lines with 4" HDPE	\$5,655,326	\$193,105				\$5,462,221						\$6,373,106
Total:	\$6,819,971	\$1,000,000	\$0	\$0	\$0	\$5,462,221	\$0	\$0	\$0	\$0	\$357,750	\$7,637,950

Color Code Index:

	Operations Costs	Items that Address Operational Lifecycle Costs & Reduce Operational Demands
	Health Risks	Items that Address Potential Health Risks or CDPHE Regulations
	Affordability	Items that Address Capital Improvement Lifecycle Costs

Inflation Costs: Inflation Rate of 2.5% per Year Applied After Year 1

System: Arabian Acres Metro District
Item: 10-Year Fiscally Constrained Plan - Option #2
Date: 3/5/2018



	Total Present Day Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Costs w/Inflation
Water Storage Tank Improvements	\$357,750											
New 100,000 gallon water storage tank.	\$337,500										\$337,500	\$432,028
Additional tank level control	\$20,250										\$20,250	\$25,921
Drinking Water Well Improvements	\$699,975											
Hydrofracture Existing Wells	\$27,000	\$27,000										\$27,000
Drilling New Wells w/Connections to System	\$303,750	\$303,750										\$303,750
Connect New Wells with 1" HDPE to System (Assume 500' per well)	\$182,250	\$182,250										\$182,250
Redrill Well #3	\$101,250	\$101,250										\$101,250
Well/Treatment Building Improvements (Control Buildings A & B)	\$67,500	\$67,500										\$67,500
Install Additional Pipe Loop at Building B	\$18,225	\$18,225										\$18,225
Existing Distribution System Improvements	\$5,762,246											
Restore Gerka Ln to Lower Gerka Ln Loop	\$106,920	\$106,920										\$106,920
Replace Existing Water Lines with 4" HDPE	\$5,655,326	\$1,193,105				\$4,462,221						\$6,241,698
Total:	\$6,819,971	\$2,000,000	\$0	\$0	\$0	\$4,462,221	\$0	\$0	\$0	\$0	\$357,750	\$7,506,542

Color Code Index:

	Operations Costs	Items that Address Operational Lifecycle Costs & Reduce Operational Demands
	Health Risks	Items that Address Potential Health Risks or CDPHE Regulations
	Affordability	Items that Address Capital Improvement Lifecycle Costs

Inflation Costs: Inflation Rate of 2.5% per Year Applied After Year 1

System: Arabian Acres Metro District
Item: 10-Year Fiscally Constrained Plan - Option #3
Date: 3/5/2018



	Total Present Day Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Costs w/Inflation
Water Storage Tank Improvements	\$357,750											
New 100,000 gallon water storage tank.	\$337,500										\$337,500	\$432,028
Additional tank level control	\$20,250										\$20,250	\$25,921
Drinking Water Well Improvements	\$699,975											
Hydrofracture Existing Wells	\$27,000	\$27,000										\$27,000
Drilling New Wells w/Connections to System	\$303,750	\$303,750										\$303,750
Connect New Wells with 1" HDPE to System (Assume 500' per well)	\$182,250	\$182,250										\$182,250
Redrill Well #3	\$101,250	\$101,250										\$101,250
Well/Treatment Building Improvements (Control Buildings A & B)	\$67,500	\$67,500										\$67,500
Install Additional Pipe Loop at Building B	\$18,225	\$18,225										\$18,225
Existing Distribution System Improvements	\$5,762,246											
Restore Gerka Ln to Lower Gerka Ln Loop	\$106,920	\$106,920										\$106,920
Replace Existing Water Lines with 4" HDPE	\$5,655,326	\$3,193,105				\$2,462,221						\$5,978,882
Total:	\$6,819,971	\$4,000,000	\$0	\$0	\$0	\$2,462,221	\$0	\$0	\$0	\$0	\$357,750	\$7,243,726

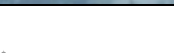
Color Code Index:

	Operations Costs	Items that Address Operational Lifecycle Costs & Reduce Operational Demands
	Health Risks	Items that Address Potential Health Risks or CDPHE Regulations
	Affordability	Items that Address Capital Improvement Lifecycle Costs

Inflation Costs: Inflation Rate of 2.5% per Year Applied After Year 1

NOTE:
INFORMATION SHOWN ON THIS SHEET WAS OBTAINED FROM SOURCES CONTAINING LIMITED ACCURACY. INFORMATION IS FOR PLANNING PURPOSES ONLY. PROPERTIES ON PRIVATE WELLS NEED TO BE VERIFIED BY DISTRICT.



REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: AS		 AquaWorks DBO INC DESIGN BUILD OPERATE	PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT DISTRIBUTION SYSTEM PLANNING TELLER COUNTY, COLORADO		SHEET TITLE: EXISTING WATER DISTRIBUTION SYSTEM MAP		
				DESIGNED BY: AS			ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER: #1744	SCALE: 1"= 200'	SHEET: 2	
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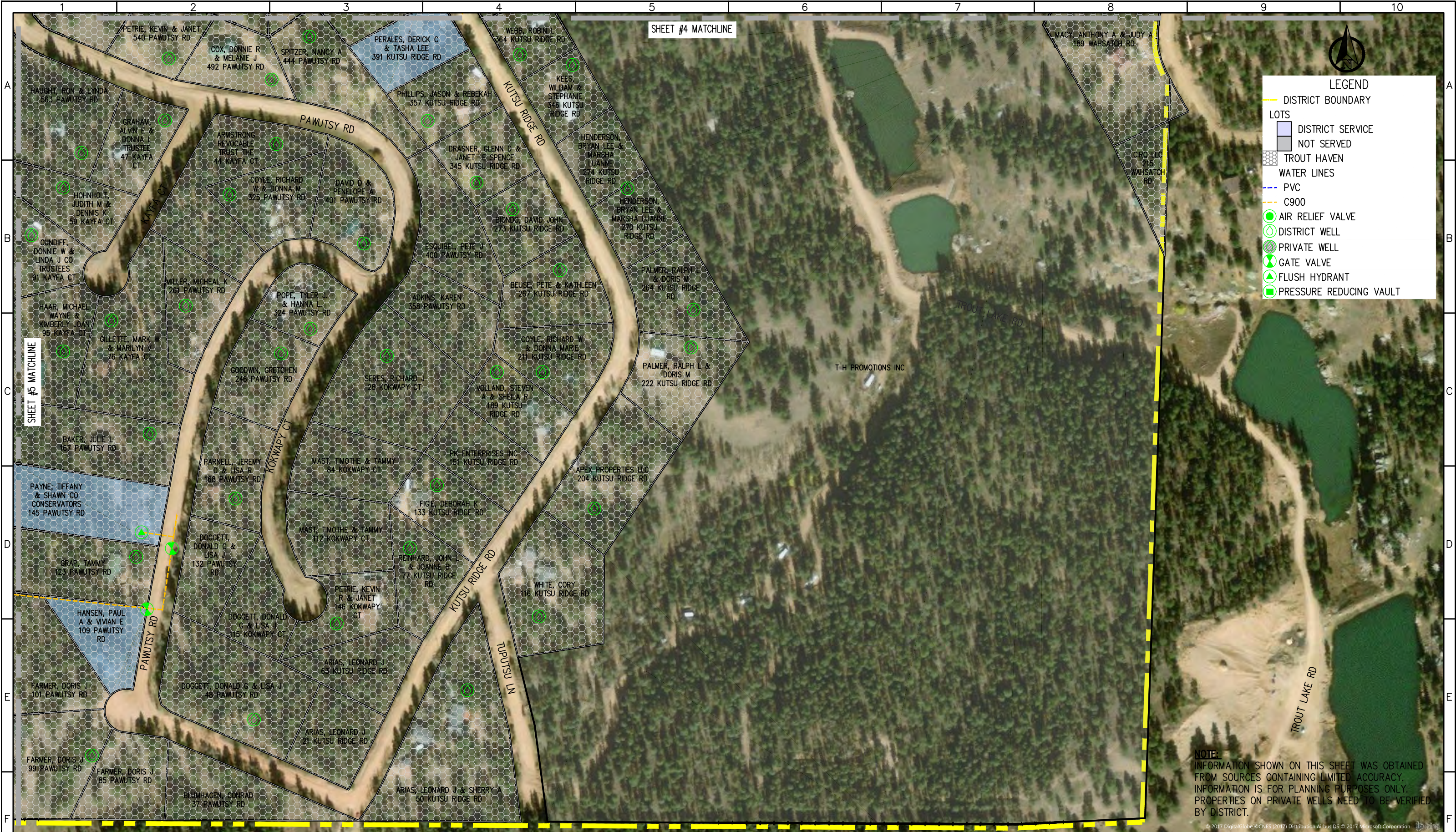
AquaWorks DBO

DESIGN BUILD OPERATE

PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT
DISTRIBUTION SYSTEM PLANNING
TELLER COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.
3252 WILLIAMS STREET
DENVER, COLORADO 80205
(303) 477-5915

SHEET TITLE:		
EXISTING WATER DISTRIBUTION SYSTEM MAP		
PROJECT NUMBER:	SCALE:	SHEET:
#1744	1' = 200'	4



REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: AS	 AquaWorks DBO INC DESIGN BUILD OPERATE	PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT DISTRIBUTION SYSTEM PLANNING TELLER COUNTY, COLORADO	SHEET TITLE: EXISTING WATER DISTRIBUTION SYSTEM MAP				
				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER: #1744	SCALE: 1' = 200'	SHEET: 6		
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NUMBER	OWNER NAME	ADDRESS	PROPERTY TYPE	SUBDIVISION	NUMBER	OWNER NAME	ADDRESS	PROPERTY TYPE	SUBDIVISION	NUMBER	OWNER NAME	ADDRESS	PROPERTY TYPE	SUBDIVISION	NUMBER	OWNER NAME	ADDRESS	PROPERTY TYPE	SUBDIVISION
1	AGEE, SUE L	374 GERKA LN	Residential	ARABIAN ACRES	45	HANEY, TRAVIS MICHAEL & MATISA DIANE	67 DEER RIDGE TR	Residential	ARABIAN ACRES	89	PETERS, RANDY K & GLENDA K	617 DONZI TR	Residential	ARABIAN ACRES	133	WILLIAMS III, GLENN A & BETTY J	435 BANNER TR	Residential	ARABIAN ACRES
2	ARMENTA, PAULA JEAN	280 BANNER TR	Residential	ARABIAN ACRES	46	HANSEN, PAUL A & VIVIAN E	109 PAWUTSY RD	Residential	TROUT HAVEN 1-5	90	PHELPS, BRITTNEY T & CODY MICHAEL	221 TIDI RD	Residential	ARABIAN ACRES	134	WINTERER, ROBERT D & JANET L	187 DENWOOD DR	Residential	ARABIAN ACRES
3	BAKER, CRAIG	464 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5	47	HANSEN-BARTHELS, JEFFREY J & KATHY A	202 JENWOOD DR	Residential	ARABIAN ACRES	91	PK ENTERPRISES INC	132 TROUT LAKE RD	Commercial	CENTRAL AREA	135	WOODS, RICHARD L & JEANETTE K	186 DENWOOD DR	Residential	ARABIAN ACRES
4	BARTA, RAYMOND F & PATRICIA M	127 KENWOOD DR	Residential	ARABIAN ACRES	48	HARVELL, CHARLES E & JANICE R	441 DEER RIDGE TR	Residential	ARABIAN ACRES	92	POVONDR, MELYNDA S	9 SILBANI LN	Residential	ARABIAN ACRES	136	WORBITON, DOYLE & VELMA	3124 CR 42	Residential	CENTRAL AREA
5	BEITZEL, MICAH	166 BANNER TR	Residential	ARABIAN ACRES	49	HAUNSCHILD, DAVID C	20 GOLDEN LN	Residential	ARABIAN ACRES	93	RAMEY, RICKY G & TONYA D	638 DONZI TR	Residential	ARABIAN ACRES	137	WORK, THOMAS C & BEVERLY J	151 DENWOOD DR	Residential	ARABIAN ACRES
6	BELFIORE, DAVID M & JOYCE L	198 DANIWOOD GROVE	Residential	ARABIAN ACRES	50	HENDERLONG, JENNA LEIGH	45 LA ABU TR	Residential	ARABIAN ACRES	94	REED, BILLIE J & RENESSA R	146 GERKA LN	Residential	ARABIAN ACRES	138	WYANT, DOUGLAS	153 KENWOOD DR	Residential	ARABIAN ACRES
7	BERES, KIM & CHERYLE	3310 TWIN ROCKS RD	Residential	ARABIAN ACRES	51	HERMAN, DAVID	120 SILBANI LN	Residential	ARABIAN ACRES	95	REIFSCHEIDER, JOHN & VERONICA	144 SILBANI LN	Residential	ARABIAN ACRES	139	YOUNG III, ROBERT R	114 JENWOOD DR	Residential	ARABIAN ACRES
8	BERGERON JR, JAMES E & PATRICIA A	67 SILDONA TR	Residential	ARABIAN ACRES	52	HESSELGRAVE, MATTHEW R & MARY B	109 SILBANI LN	Residential	ARABIAN ACRES	96	RHEUDE, CHARLES R & SARAH N	92 DANIWOOD GROVE	Residential	CENTRAL AREA	140	ZUNIGA, RICARDO J	23 SILDONA TR	Residential	ARABIAN ACRES
9	BEST, MICHAEL J & PIPER JO	203 TIDI RD	Residential	ARABIAN ACRES	53	HIGHNESS, WAYNE M & DENISE R	22 SILVER TR	Residential	ARABIAN ACRES	97	RICE, DANIEL E & ERIN R	77 SILVER TR	Residential	ARABIAN ACRES	141	REINHOLZ, TRACY	132 BANNER TR	Residential	ARABIAN ACRES
10	BLAIR, CHRISTINA L	181 JENWOOD DR	Residential	ARABIAN ACRES	54	HOEL, LANNY E	482 GERKA LN	Residential	ARABIAN ACRES	98	RIEHEL, THOMAS L	485 DONZI TR	Residential	ARABIAN ACRES					
11	BLEVINS, KATHLEEN K	185 BANNER TR	Residential	ARABIAN ACRES	55	HOPPENRATH, EDWARD F & SHARI K	110 SILVER TR	Residential	ARABIAN ACRES	99	ROBINSON, PETER J & CATHLEEN M	23 DONZI TR	Mobile Home	ARABIAN ACRES					
12	BOTTOM LINE RESULTS INC	386 GERKA LN	Residential	ARABIAN ACRES	56	HOULE, PATRICK O & SUSAN D	225 DEER RIDGE TR	Residential	ARABIAN ACRES	100	RUOFF TRUSTS, HERBERT & MARGARET	42 DUSTI CIR	Residential	ARABIAN ACRES					
13	BOURDON, GARY E & JAYNE A	287 DONZI TR	Residential	ARABIAN ACRES	57	HUDGINS, GREGORY A & MISHELLE L	111 SILDONA TR	Residential	ARABIAN ACRES	101	SCHAEFER, DAVID C	573 DONZI TR	Residential	ARABIAN ACRES					
14	BROCKLESBY, FREDRICK D & GAIL D	309 GERKA LN	Residential	ARABIAN ACRES	58	INSCOE, BRADLEY G & NICOLE E	119 BANNER TR	Residential	ARABIAN ACRES	102	SEAMAN, REBECCA	112 KENWOOD DR	Residential	ARABIAN ACRES					
15	BROOK, KELLY S	177 DANIWOOD GROVE	Residential	ARABIAN ACRES	59	JACKSON, DALE J	23 LA ABU TR	Residential	ARABIAN ACRES	103	SHEMO, ANDREW L & ELIZABETH A	306 DANIWOOD GROVE	Residential	ARABIAN ACRES					
16	BUNCE, PAULA A	167 DEER RIDGE TR	Residential	ARABIAN ACRES	60	JENSEN, ROBERT M & ROSEMARY A	78 GERKA LN	Residential	ARABIAN ACRES	104	SHINKLE, JORDAN	66 GOLDEN LN	Residential	ARABIAN ACRES					
17	CALLAN, ROBERT & MARILYN	222 DENWOOD DR	Residential	ARABIAN ACRES	61	JOHNSON, DAVID K & SUSAN K	29 LADY LN	Residential	ARABIAN ACRES	105	SHOFNER, BOBBI JO	27 KENWOOD DR	Residential	ARABIAN ACRES					
18	CANTRELL, MICHAEL W	747 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5	62	JONES, JUSTIN W & BRIANNA M	133 DONZI TR	Residential	ARABIAN ACRES	106	SHUMATE, WAYMON L & YVONNE M	67 LADY LN	Residential	ARABIAN ACRES					
19	CARNEIN, CARL ROBERT LIVING TRUST	507 DONZI TR	Residential	ARABIAN ACRES	63	JONES, MARGO AILEEN	124 DANIWOOD GROVE	Residential	ARABIAN ACRES	107	SILBANI HOUSING INVESTMENT LLC	149 SILBANI LN	Residential	ARABIAN ACRES					
20	CASSIDY, MICHAEL W	33 TIDI RD	Residential	ARABIAN ACRES	64	KARON, SLAWOMIR R & ROXANNE M	37 SILBANI LN	Residential	ARABIAN ACRES	108	SMITH, BLAND A	353 DONZI TR	Residential	ARABIAN ACRES					
21	CHRISTENSEN, CARY L & TIFFANY M	452 BANNER TR	Residential	ARABIAN ACRES	65	KIRTLEY, TIMOTHY	310 GERKA LN	Residential	ARABIAN ACRES	109	SMITH, BUDDY JOE & LORETTA M	551 DONZI TR	Residential	ARABIAN ACRES					
22	COFFMAN, CHRISTOPHER L	414 GERKA LN	Residential	ARABIAN ACRES	66	LANSFORD, JAMES L& LYNN M	460 GERKA LN	Residential	ARABIAN ACRES	110	SMITH, IAN STUART	148 DENWOOD DR	Residential	ARABIAN ACRES					
23	COOK, MARTIN C & KATHLEEN L	397 DONZI TR	Residential	ARABIAN ACRES	67	LARIMORE, CHARLES S	486 BANNER TR	Residential	ARABIAN ACRES	111	SNIDER JR, HENRY F	149 DEER RIDGE TR	Residential	ARABIAN ACRES					
24	CORNISH, STEVEN M AND KAREN A	78 LADY LN	Residential	ARABIAN ACRES	68	LEMPECKI, MARTIN C & SANDRA M	395 DEER RIDGE TR	Residential	ARABIAN ACRES	112	SNOOK, HOWARD R	111 LA ABU TR	Residential	ARABIAN ACRES					
25	CRAMER, CALEB D & SALLY J	131 DEER RIDGE TR	Residential	ARABIAN ACRES	69	LEONHARDT, DUSTIN K	317 DEER RIDGE TR	Residential	ARABIAN ACRES	113	SPRINGER, BYRLE K	111 KENWOOD DR	Residential	ARABIAN ACRES					
26	DALZELL, DAVID W & AMBER L	177 DONZI TR	Residential	ARABIAN ACRES	70	LEWELLEN, JASON & HANNAH	44 SILVER TR	Residential	ARABIAN ACRES	114	STAHL, JONATHAN	96 SILBANI LN	Residential	ARABIAN ACRES					
27	DEHERRERA, MICHAEL R & HOLLY S	331 DONZI TR	Residential	ARABIAN ACRES	71	LUEDECKE, DEXTER & RISA A	211 TIOGA TR	Residential	TROUT HAVEN 1-5	115	STEPHENS, MICHAEL	214 GERKA LN	Residential	ARABIAN ACRES					
28	DILLAVOU, KATHLEEN RAE	886 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5	72	M A TUSSING INC DBA MATCO	155 DONZI TR	Residential	ARABIAN ACRES	116	STOCK, JEREMY	114 GERKA LN	Residential	ARABIAN ACRES					
29	DIXON, CLAY A & TERESA	375 GERKA LN	Residential	ARABIAN ACRES	73	MATHEWS, MICHAEL S	297 BANNER TR	Residential	ARABIAN ACRES	117	STROUP, JOHN D	401 BANNER TR	Residential	ARABIAN ACRES					
30	DOUGLASS, ELIZABETH	52 LADY LN	Residential	ARABIAN ACRES	74	MAXWELL, JENNIFER	156 SILDONA TR	Residential	ARABIAN ACRES	118	SULLIVAN, DOUGLAS M & DAWN L	138 DONZI TR	Residential	ARABIAN ACRES					
31	EISNER, LAWRENCE M & MARY LOU	192 SILBANI TR	Residential	ARABIAN ACRES	75	MCBRIDE, KALVIN R & CYNTHIA K	71 GOLDEN LN	Residential	ARABIAN ACRES	119	SWITZER, SHANDY E & CINDY A	719 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5					
32	EMERY, ERIN E	189 TIDI RD	Residential	ARABIAN ACRES	76	MCCOLLOUGH, COLMER J & LINDA M	56 SILDONA TR	Residential	ARABIAN ACRES	120	THANNUM, ELAINE KAREN	503 BANNER TR	Residential	ARABIAN ACRES					
33	FELDMAN, RONALD R & CARLA J	186 GERKA LN	Residential	ARABIAN ACRES	77	MCCONKEY, ROBERT K & TERI E	29 UINTAH VALE DR	Residential	TROUT HAVEN 1-5	121	THEDE, JULIANNA	394 DEER RIDGE TR	Residential	ARABIAN ACRES					
34	FENTON, STEVEN C	105 DENWOOD DR	Residential	ARABIAN ACRES	78	MCCORMACK, DENNIS O & LINDA M	419 DONZI TR	Residential	ARABIAN ACRES	122	THOE, MICHAEL J	463 GERKA LN	Residential	ARABIAN ACRES					
35	FIEDLER, ADAM L	16 TIDI LN	Residential	ARABIAN ACRES	79	MEADOWS, LUKE J & VANESSA R	318 DEER RIDGE TR	Residential	ARABIAN ACRES	123	TOWNSEND, BILLY B & HOLLY R	400 BANNER TR	Residential	ARABIAN ACRES					
36	GACITA, JUAN M & CAROL A	148 BANNER TR	Residential	ARABIAN ACRES	80	MEDINA, DENNIS R & KIMBERLY K	74 DENWOOD DR	Residential	ARABIAN ACRES	124	TUCKER, JIMMY G & LILLIAN E	562 DONZI TR	Residential	ARABIAN ACRES					
37	GODSOE, JESSICA L	538 BANNER TR	Residential	ARABIAN ACRES	81	MIJARES, NICHOLAS & MACKENZIE A	203 BANNER TR	Residential	ARABIAN ACRES	125	U S BANK NATIONAL ASSOC	62 JENWOOD DR	Residential	ARABIAN ACRES					
38	GONZALES JR, ISRAEL & ANNA T	39 GOLDEN LN	Residential	ARABIAN ACRES	82	MOODY, PATRICIA S	222 TIDI RD	Residential	ARABIAN ACRES	126	ULIBARRI, RAYMOND A & VERLENE	11 SILBANI LN	Residential	ARABIAN ACRES					
39	GOOCHER, KELLY J	562 BANNER TR	Residential	ARABIAN ACRES	83	MORGAN, LYNDA J & JAMES F	14 DONZI CIR	Residential	ARABIAN ACRES	127	UNGER, VICKI L & JAMES R	430 GERKA LN	Residential	ARABIAN ACRES					
40	GORDON, DARRELL T	208 GERKA LN	Residential	ARABIAN ACRES	84	MUELLER, DEBRA LYNN	70 GOLDEN LN	Residential	ARABIAN ACRES	128	VANNINI, JOHANNA PATRICIA	734 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5					
41	GORDON, KEITH A	453 DONZI TR	Residential	ARABIAN ACRES	85	NELSON, JON	151 BANNER TR	Residential	ARABIAN ACRES	129	WAND, KATHLEEN	55 DENWOOD DR	Residential	ARABIAN ACRES					
42	GRINNELL, DERRICK A & MEGAN RENEE	243 DONZI TR	Residential	ARABIAN ACRES	86	NOGA, KEVIN M	510 BANNER TR	Residential	ARABIAN ACRES	130	WALLER, THOMAS H	816 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5					
43	HAINS, PATRICIA A	3501 CR 42	Residential	CENTRAL AREA	87	PAYNE, TIFFANY & SHAWN CO CONSERVATORS	145 PAWUTSY RD	Residential	TROUT HAVEN 1-5	131	WEISE, EDWARD ALAN & KELLY MARIE	222 BANNER TR	Vacant Land	ARABIAN ACRES					
44	HALLAM III, CHARLES S & ROBIN C	45 SILDONA TR	Residential	ARABIAN ACRES	88	PERALES, DERICK C & TASHA LEE	391 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5	132	WEISE, STEPHEN D & CHRISTINA AMOS	94 TIDI RD	Residential	ARABIAN ACRES					
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PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT DISTRIBUTION SYSTEM PLANNING TELLER COUNTY, COLORADO																			
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915																			
SHEET TITLE: PROPERTIES SERVED BY DISTRICT																			
PROJECT NUMBER: #1744 SCALE: N.T.S. SHEET: 7																			
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A	NUMBER	OWNER NAME			ADDRESS	PROPERTY TYPE	SUBDIVISION			NUMBER	OWNER NAME			ADDRESS	PROPERTY TYPE	SUBDIVISION			NUMBER	OWNER NAME			ADDRESS	PROPERTY TYPE	SUBDIVISION			NUMBER	OWNER NAME			ADDRESS	PROPERTY TYPE	SUBDIVISION															
	1	A & F HOLDING INC			3393 CR 421	Residential	CENTRAL AREA			66	DOGETT, DONALD G & LISA J			132 PAWUTSY RD	Vacant Land	TROUT HAVEN 1-5			129	LITTLE CHAPEL OF THE HILLS				Exempt	CENTRAL AREA			194	ROSS, THOMAS S & DEBORAH A TSTEE			54 NUNUNUKUKU CT	Vacant Land	TROUT HAVEN 1-5															
	2	AAMODT, GARROLL L & NAPASSAKORN S			65 TIOGA TR	Residential	TROUT HAVEN 1-5			67	DOGETT, DONALD G & LISA J			115 KOKWAPY CT	Vacant Land	TROUT HAVEN 1-5			130	LOUDEN, DONNA L			10 JENWOOD DR	Residential	ARABIAN ACRES			195	RUOFF LIVING TRUST, HERBERT C			56 LA ABU TR	Vacant Land	ARABIAN ACRES															
	3	ADKINS, KAREN			358 PAWUTSY RD	Vacant Land	TROUT HAVEN 1-5			68	DOGETT, DONALD G & LISA J			48 PAWUTSY RD	Residential	TROUT HAVEN 1-5			131	LUCAS, JAMES D				Vacant Land	TWIN ROCKS			196	RUOFF LIVING TRUST, HERBERT C			78 LA ABU TR	Vacant Land	ARABIAN ACRES															
	4	APEX PROPERTIES LLC			204 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			69	DOUGLASS, ELIZABETH			40 LADY LN	Vacant Land	ARABIAN ACRES			132	LUEDECKE, DEXTER & RISA A			157 TIOGA TR	Vacant Land	TROUT HAVEN 1-5			197	RUPP, KENNETH R TRUSTEE			132 SILVER TR	Vacant Land	ARABIAN ACRES															
	5	APPLEGATE, ALICIA GARCIA			CR 42	Mobile Home	PALMER VILLAGE			70	DOUGLASS, ELIZABETH			66 LADY LN	Vacant Land	ARABIAN ACRES			133	MACKEY, MICHAEL J & AMBER D			88 TIOGA TR	Residential	TROUT HAVEN 1-5			198	RYAN, JOHN M			121 UINTAH RIDGE DR	Residential	TROUT HAVEN 1-5															
	6	APPLEGATE, ALICIA GARCIA			3162 CR 421	Mobile Home	CENTRAL AREA			71	DOUGLASS, ELIZABETH				Residential	ARABIAN ACRES			134	MACY, ANTHONY A & JUDY A			189 WAHSATCH RD	Residential	TROUT HAVEN 1-5			199	SCHUETTE, CAROL J			17 TIOGA TR	Residential	TROUT HAVEN 1-5															
	7	ARABIAN ACRES METROPOLITAN DISTRICT			72 SILBANI LN	Exempt	ARABIAN ACRES			72	DRASNER, GLENN D & JANET E SPENCE			345 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			135	MACY, ANTHONY A & JUDY A			WAHSATCH RD	Residential	TROUT HAVEN 1-5			200	SCHWARTZ, DOROTHY N			112 DENWOOD DR	Residential	ARABIAN ACRES															
	8	ARABIAN ACRES METROPOLITAN DISTRICT				Exempt	ARABIAN ACRES			73	DUDLEY, RICHARD G & KAREN S			346 DEER RIDGE TR	Vacant Land	ARABIAN ACRES			136	MACY, ANTHONY A & JUDY A			WAHSATCH RD	Residential	TROUT HAVEN 1-5			201	SCOTT, KENNETH C & SHARON M			15 DUSTI CIR	Vacant Land	ARABIAN ACRES															
	9	ARABIAN ACRES METROPOLITAN DISTRICT				Exempt	ARABIAN ACRES			74	DUDLEY, RICHARD G & KAREN S			374 DEER RIDGE TR	Residential	ARABIAN ACRES			137	MARTIN, RALPH & GAIL			715 PAWUTSY RD	Residential	TROUT HAVEN 1-5			202	SEBRING, JASON M & LUCYNDA M			121 UINTAH VALE DR	Residential	TROUT HAVEN 1-5															
B	10	ARABIAN ACRES METROPOLITAN DISTRICT			45 SILVER TR	Exempt	ARABIAN ACRES			75	ELLENBERGER, JAMES C & KAREN D			28 TAWATSY LN	Residential	TROUT HAVEN 1-5			138	MAST, TIMOTHE & TAMMY			84 KOKWAPY CT	Vacant Land	TROUT HAVEN 1-5			203	SECRETARY OF HOUSING & URBAN DEV			169 TAWATSY LN	Residential	TROUT HAVEN 1-5															
	11	ARABIAN ACRES METROPOLITAN DISTRICT			595 DONZI TR	Exempt	ARABIAN ACRES			76	ELLIS, CHRISTINA MARIE			3535 CR 42	Agricultural	FLORISSANT CANYON			139	MAST, TIMOTHE & TAMMY			112 KOKWAPY CT	Vacant Land	TROUT HAVEN 1-5			204	SEELY, HAROLD T				Vacant Land	ARABIAN ACRES															
	12	ARIAS, LEONARD J			63 KUTSU RIDGE RD	Vacant Land	TROUT HAVEN 1-5			77	ELLIS, CHRISTINA MARIE			3535 CR 42	Agricultural	FLORISSANT CANYON			140	MAXWELL, TERRY & JENNIFER			133 SILDONA TR	Vacant Land	ARABIAN ACRES			205	SEELY, HAROLD T				Vacant Land	ARABIAN ACRES															
	13	ARIAS, LEONARD J			21 KUTSU RIDGE RD	Vacant Land	TROUT HAVEN 1-5			78	ESQUIBEL, PETE J			400 PAWUTSY RD	Vacant Land	TROUT HAVEN 1-5			141	MCCONKEY, ROBERT K & TERI E			21 UINTAH RIDGE DR	Vacant Land	TROUT HAVEN 1-5			206	SEELY, HAROLD T				Vacant Land	ARABIAN ACRES															
	14	ARIAS, LEONARD J & SHERRY A			50 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			79	FARMER, DORIS J			101 PAWUTSY RD	Residential	TROUT HAVEN 1-5			142	MCCOY, RONALD A SR & ROSALIE I			29 DUSTI CIR	Vacant Land	ARABIAN ACRES			207	SERES, RICHARD J			28 KOKWAPY CT	Residential	TROUT HAVEN 1-5															
	15	ARMSTRONG REVOCABLE TRUST THE			44 KAYFA CT	Residential	TROUT HAVEN 1-5			80	FARMER, DORIS J			99 PAWUTSY RD	Residential	TROUT HAVEN 1-5			143	MCGINTY, TERRENCE J			3188 CR 421	Residential	CENTRAL AREA			208	SESKAR, LAWRENCE J & CLAUDIA E			98 MATAGUTSY CT	Residential	TROUT HAVEN 1-5															
	16	ATENCIO, SHANNON P SOLORZANO			22 GERKA LN	Vacant Land	ARABIAN ACRES			81	FARMER, DORIS J			85 PAWUTSY RD	Residential	TROUT HAVEN 1-5			144	MCGINTY, TERRENCE J			CR 42	Vacant Land	PALMER VILLAGE			209	SHELL, ROBERT			180 UINTAH VALE DR	Residential	TROUT HAVEN 1-5															
	17	ATENCIO, SHANNON P SOLORZANO			50 GERKA LN	Vacant Land	ARABIAN ACRES			82	FAULK, DENISE J & ROBERT L			44 UINTAH VALE DR	Residential	CENTRAL AREA			145	MILES, CORNELIA B			25 TAWATSY LN	Residential	TROUT HAVEN 1-5			210	SHREEVE JR, ROBERT A			62 UINTAH RIDGE DR	Residential	TROUT HAVEN 1-5															
	18	ATENCIO, SHANNON P SOLORZANO			66 GERKA LN	Vacant Land	ARABIAN ACRES			83	FIGIE, DEBORAH K			133 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			146	MILES, CORNELIA B			71 NUAKU RD	Vacant Land	TROUT HAVEN 1-5			211	SKYWAY RANCH, LLC			214 UINTAH VALE DR	Agricultural	TROUT HAVEN 1-5															
	19	BAKER, JULIE L			167 PAWUTSY RD	Residential	TROUT HAVEN 1-5			84	FOX, PAULA J			58 MATAGUTSY CT	Residential	TROUT HAVEN 1-5			147	MILLER III, JAMES N & THERESA A			481 TROUT HAVEN RD	Vacant Land	TROUT HAVEN 1-5				SKYWAY RANCH, LLC			3579 CR 42	Agricultural	FLORISSANT CANYON															
C	20	BECKER, MARGARET A			185 UINTAH RIDGE DR	Residential	TROUT HAVEN 1-5			85	FOX, PAULA J			262 DANIWOOD GROVE	Vacant Land	ARABIAN ACRES			148	MILLER, MICHAEL K			261 PAWUTSY RD	Residential	TROUT HAVEN 1-5			212	SKYWAY RANCH, LLC			3770 CR 42	Agricultural	CENTRAL AREA															
	21	BEUSE, PETE & KATHLEEN			267 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			86	FOX, MONIKA			96 UINTAH VALE DR	Residential	TROUT HAVEN 1-5			149	MILLER, WAYNE G			3374 CR 42	Residential	TROUT HAVEN 1-5			213	SKYWAY RANCH, LLC			3770 CR 42	Agricultural	CENTRAL AREA															
	22	BIONDO, DAVID JOHN			99 UINTAH RIDGE DR	Vacant Land	TROUT HAVEN 1-5			87	GILLETTE, MARK W & MARILYN V			76 KAYFA CT	Residential	TROUT HAVEN 1-5			150	MONTGOMERY, RICK D & CINDY			673 KUTSU RIDGE RD	Vacant Land	TROUT HAVEN 1-5			214	SKYWAY RANCH, LLC			3770 CR 42	Agricultural	CENTRAL AREA															
	23	BIONDO, DAVID JOHN			273 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			88	GLUMARTIN, JOHN P			146 UINTAH VALE DR	Residential	TROUT HAVEN 1-5			151	MONTGOMERY, RICK D & CINDY			72 PAWUTSY RD	Residential	TROUT HAVEN 1-5			215	SMITH JR, THOMAS E			143 WAHSATCH RD	Residential	TROUT HAVEN 1-5															
	24	BIRCH, KEVIN W			661 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			89	GONZALEZ, MARTHA A			210 TIOGA TR	Residential	TROUT HAVEN 1-5			152	MOORE, DIANE LYNN & THOMAS JOSEPH			5 NUAKU RD	Residential	TROUT HAVEN 1-5			216	SNEED, MARY D			87 GOLDEN LN	Residential	ARABIAN ACRES															
	25	BLUMHAGEN, CONRAD			37 PAWUTSY RD	Vacant Land	TROUT HAVEN 1-5			90	GOODWIN, GRETCHEN			246 PAWUTSY RD	Residential	TROUT HAVEN 1-5			153	MORALES, GREGORY M			99 KENWOOD DR	Vacant Land	ARABIAN ACRES			217	SNEED, MARY D			90 GOLDEN LN	Vacant Land	ARABIAN ACRES															
	26	BOLLINGER, JUSTIN COLE & DELEIGN			899 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			91	GORDON, KEITH A			441 DONZI TR	Vacant Land	ARABIAN ACRES			154	MORALES, GREGORY M			71 KENWOOD DR	Vacant Land	ARABIAN ACRES			218	SNEED, MARY D			72 GOLDEN LN	Vacant Land	ARABIAN ACRES															
	27	BOSCH III, ADAM J & MICHELLE D			43 NUAKU RD	Residential	TROUT HAVEN 1-5			92	GOULD JR, KENNETH & JACQUI EUSE			156 TIOGA TR	Residential	TROUT HAVEN 1-5			155	MORGAN, JAMES & LYNDA			30 DONZI CIR	Vacant Land	ARABIAN ACRES			219	SPITZER, NANCY A			444 PAWUTSY RD	Residential	TROUT HAVEN 1-5															
	28	BOTTOM LINE RESULTS INC				Mobile Home	PALMER VILLAGE			93	GRAHAM, ALVIN E & DONNA L TRUSTEE			47 KAYFA CT	Residential	TROUT HAVEN 1-5			156	MORGAN, JAMES F & LYNDA J			15 DONZI CIR	Vacant Land	ARABIAN ACRES			220	STANTON, STEVEN C			215 UINTAH VALE DR	Vacant Land	TROUT HAVEN 1-5															
	29	BOTTOM LINE RESULTS INC			3144 CR 421	Mobile Home	CENTRAL AREA			94	GRAP, TAMMY			123 PAWUTSY RD	Residential	TROUT HAVEN 1-5			157	MORGAN, JAMES F & LYNDA J			67 DONZI TR	Vacant Land	ARABIAN ACRES			221	STANTON, STEVEN C			248 UINTAH VALE DR	Vacant Land	TROUT HAVEN 1-5															
D	30	BOULDERS ROYALTY CORP				Vacant Land	ARABIAN ACRES			95	GWINN III, LAWRENCE M			198 KENWOOD DR	Vacant Land	ARABIAN ACRES			158	MURRAY, KELLY G & KARL D			259 DEER RIDGE TR	Residential	ARABIAN ACRES			222	STEWART, B J			2 KUTSU RIDGE RD	Vacant Land	CENTRAL AREA															
	31	BOULDERS ROYALTY CORP				Vacant Land	CENTRAL AREA			96	HAAR, MICHAEL WAYNE & KIMBERLY JOAN			95 KAYFA CT	Residential	TROUT HAVEN 1-5			159	NEELY, ALFORD B & NANCY J			77 DENWOOD DR	Vacant Land	ARABIAN ACRES			223	SWANSON, KEVIN M			850 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5															
	32	BOYLE, JOHN R			225 NUAKA RD	Residential	TROUT HAVEN 1-5			97	HABITAT FOR HUMANITY OF TELLER COUNTY			160 SILBANI LN	Vacant Land	ARABIAN ACRES				NORTHROP, ANDREW S & SHARON H VOSS			4091 CR 42	Agricultural	FLORISSANT CANYON			224	T BAR J RANCH LLC			150 TUPUTSY LN	Vacant Land	CENTRAL AREA															
	33	BOYLE, JOHN R				Residential	CENTRAL AREA			98	HARDING, RICK L				Residential	CENTRAL AREA			160	ORKNEY, SCOTT & LAVONN M			603 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			225	T BAR J RANCH LLC			11 KUTSU RIDGE RD	Vacant Land	CENTRAL AREA															
	34	BOYLE, JOHN R			228 NUAKA RD	Vacant Land	TROUT HAVEN 1-5			99	HARDING, RICK L				Residential	CENTRAL AREA			161	OWSLEY, SCOTT & LAVONN M			136 NUAKA RD	Vacant Land	TROUT HAVEN 1-5			226	T H PROMOTIONS INC				Comm Vacant	CENTRAL AREA															
	35	BRACKIN, ANDRE P & JUNKO K			43 DUSTI CIR	Vacant Land	ARABIAN ACRES			100	HAUGHT, RON & LYNDA			563 PAWUTSY RD	Residential	TROUT HAVEN 1-5			162	OWSLEY, JUDITH M REVOCABLE TRUST			136 NUAKA RD	Vacant Land	TROUT HAVEN 1-5			227	TELLER COUNTY				Exempt	TROUT HAVEN 1-5															
	36	BRADY, GAIL E			191 NUAKA RD	Residential	TROUT HAVEN 1-5			101	HENDERSON, BRYAN LEE & MARSHA LUANNE			274 KUTSU RIDGE RD	Vacant Land	TROUT HAVEN 1-5			163	OWSLEY, JUDITH M TRUST			184 NUAKA RD	Vacant Land	TROUT HAVEN 1-5			228	TELLER COUNTY				Exempt	CENTRAL AREA															
	37	BRADY, PHILLIP A			262 DEER RIDGE TR	Vacant Land	ARABIAN ACRES			102	HENDERSON, BRYAN LEE & MARSHA LUANNE			270 KUTSU RIDGE RD	Vacant Land	TROUT HAVEN 1-5			164	OWSLEY, JUDITH M TRUST			156 NUAKA RD	Residential	TROUT HAVEN 1-5			229	THROOP, JAMES M & DONNA D			574 DONZI TR	Vacant Land	ARABIAN ACRES															
	38	BRADY, PHILLIP A			171 SILBANI LN	Residential	ARABIAN ACRES			103	HIBBERT JR, JOHN WESLEY			2 NUAKA RD	Residential	TROUT HAVEN 1-5			165	PALMER, RALPH L & DORIS M			264 KUTSU RIDGE RD	Vacant Land	TROUT HAVEN 1-5			230	TUCKER, JIMMY G & LILLIAN E			540 DONZI TR	Vacant Land	ARABIAN ACRES															
	39	BRASBY, CHRISTOPHER P & ELLA M			95 TROUT HAVEN RD	Residential	TROUT HAVEN 1-5			104	HOEL, LANNY E			GERKA LN	Residential	ARABIAN ACRES			166	PALMER, RALPH L & DORIS M			222 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			231	TURNER, JOHNNY			396 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5															
E	40	BROWN REVOC LIV TRUST, DANIEL B & NINA G			296 RHYOLITE RD	Residential	ARABIAN ACRES			105	HOHNHOLT, JUDITH M & DENNIS K			59 KAYFA CT	Residential	TROUT HAVEN 1-5			167	PAPIC, DEBRA A & GEORGE R			33 DEER RIDGE TR	Vacant Land	ARABIAN ACRES			232	VAUGHN, TERRY			43 TIOGA TR	Residential	TROUT HAVEN 1-5															
	41	BROWNING, HEIDI M			87 TIOGA TR	Residential	TROUT HAVEN 1-5			106	HOPPENRATH, EDWARD F & SHARI K			88 SILVER TR	Vacant Land	ARABIAN ACRES			168	PAPIC, GEORGE R & DEBRA ANNE			17 DEER RIDGE TR	Vacant Land	ARABIAN ACRES			233	VOLLAND, STEVEN A & SHEILA R			189 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5															
	42	BRYAN, JAMES D & REBECCA K			163 UINTAH VALE DR	Vacant Land	TROUT HAVEN 1-5			107	HOPPENRATH, EDWARD F & SHARI K			66 SILVER TR	Vacant Land	ARABIAN ACRES			169	PARNELL, JEREMY D & LISA R			168 PAWUTSY RD	Residential	TROUT HAVEN 1-5			234	WALKER, RADFORD K & SHARON L			45 GERKA LN	Vacant Land	ARABIAN ACRES															
	43	BURKHART, BONNIE			61 SILBANI LN	Vacant Land	ARABIAN ACRES			108	HURLEY, CALEB J			109 TIOGA TR	Residential	TROUT HAVEN 1-5			170	PECHSTEIN, MICHAEL G			28 UINTAH VALE DR	Vacant Land	CENTRAL AREA			235	WALKER, RADFORD K & SHARON L			23 GERKA LN	Vacant Land	ARABIAN ACRES															
	44	CAMPBELL, JEROD S			139 TROUT HAVEN RD	Residential	TROUT HAVEN 1-5			109	HURLEY, ELLIE M			298 BANNER TR	Vacant Land	ARABIAN ACRES			171	PECHSTEIN, MICHAEL G			507 TROUT HAVEN RD	Residential	CENTRAL AREA			236	WALKER, RADFORD K & SHARON L			89 GERKA LN	Vacant Land	ARABIAN ACRES															
	45	CARTWRIGHT, PAMELA			166 TAWATSY LN	Residential	TROUT HAVEN 1-5			110	INSOE, NICOLE & BRADLEY			298 DONZI TR	Vacant Land	ARABIAN ACRES			172	PERRY, RYAN L			116 BANNER TR	Vacant Land	ARABIAN ACRES			237	WALKER, RADFORD K & SHARON L			111 GERKA LN	Vacant Land	ARABIAN ACRES															
	46	CHRISTENSEN, CARY			135 JENWOOD DR	Vacant Land	ARABIAN ACRES			111	JOHNSON, MICHAEL S & SHIRLEY K			469 BANNER TR	Residential	ARABIAN ACRES			173	PETRIE, KEVIN & JANET			628 PAWUTSY RD	Vacant Land	TROUT HAVEN 1-5			238	WALKER, RADFORD K & SHARON L			67 GERKA LN	Vacant Land	ARABIAN ACRES															
	47	CIRQ LLC			215 WAHSATCH RD	Vacant Land	TROUT HAVEN 1-5			112	JUBILEE HOLDINGS TRS			141 HIDDEN POINT	Agricultural	ARABIAN ACRES			174	PETRIE, KEVIN & JANET			588 PAWUTSY RD	Vacant Land	TROUT HAVEN 1-5			239	WALLACE, BRENT D & DEBORAH E			95 TIDI RD	Vacant Land	ARABIAN ACRES															
	48	CLARYS, MARY			110 LA ABU TR	Vacant Land	ARABIAN ACRES			113	JUBILEE HOLDINGS TRS			141 HIDDEN POINT	Agricultural	ARABIAN ACRES			175	PETRIE, KEVIN & JANET			540 PAWUTSY RD	Residential	TROUT HAVEN 1-5			240	WALTERS, DAVID A & LOIS E			50 MATAGUTSY CT	Residential	TROUT HAVEN 1-5															
	49	COWAN TRST, SHIRLEY A			43 UINTAH RIDGE DR	Vacant Land	TROUT HAVEN 1-5			114	KARASA, NORM			178 GERKA LN	Vacant Land	ARABIAN ACRES			176	PETRIE, KEVIN R & JANET			146 KOKWAPY CT	Residential	TROUT HAVEN 1-5			241	WEBB, ROBIN L			364 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5															
F	50	COX, DONNIE R & MELANIE J			492 PAWUTSY RD	Residential	TROUT HAVEN 1-5			115	KEES, WILLIAM & STEPHANIE			346 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			177	PHILLIPS, JASON & REBEKAH			357 KUTSU RIDGE RD	Residential	TROUT HAVEN 1-5			242	WEISE, STEFAN			66 TIDI RD	Vacant Land																



NOTE:
INFORMATION SHOWN ON THIS SHEET WAS OBTAINED FROM SOURCES CONTAINING LIMITED ACCURACY. INFORMATION IS FOR PLANNING PURPOSES ONLY. PROPERTIES ON PRIVATE WELLS NEED TO BE VERIFIED BY DISTRICT.

LEGEND

DISTRICT BOUNDARY

LOTS

DISTRICT SERVICE

NOT SERVED

TROUT HAVEN

WATER LINES

MAINTAIN EXISTING

PROPOSED 4" HDPE

AIR RELIEF VALVE

DISTRICT WELL

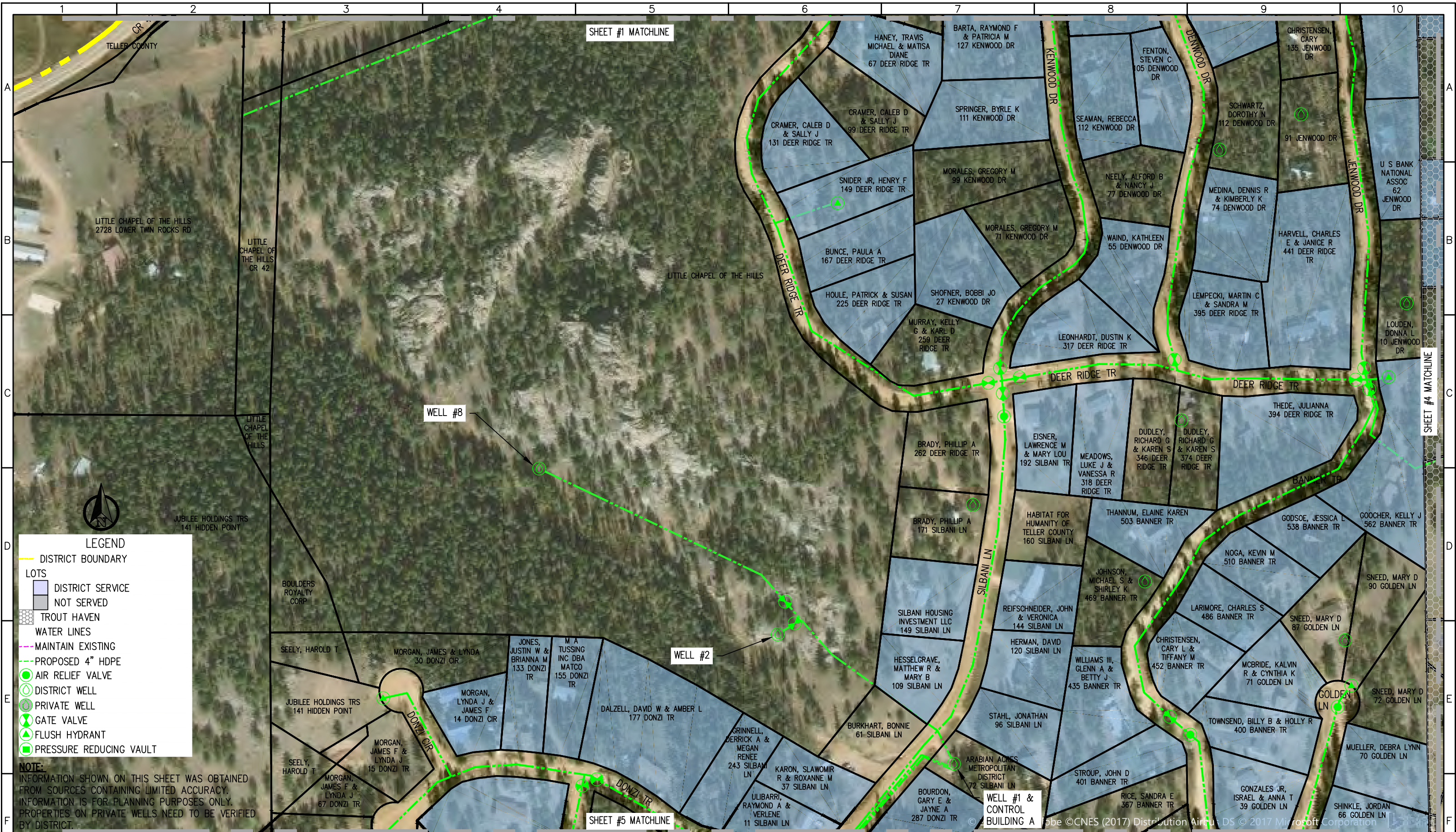
PRIVATE WELL

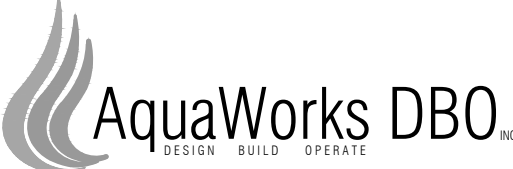
GATE VALVE

FLUSH HYDRANT

PRESSURE REDUCING VAULT

REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: AS	PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT	SHEET TITLE: PROPOSED WATER DISTRIBUTION SYSTEM MAP
				DESIGNED BY: AS	DISTRIBUTION SYSTEM PLANNING	
				FILE PRINTED ON: 2/19/2018 1:41:40 PM	TELLER COUNTY, COLORADO	
				COPYRIGHT: AQUAWORKS DBO, INC.	ENGINEER: AQUAWORKS DBO, INC.	PROJECT NUMBER: #1744
				0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE	3252 WILLIAMS STREET	SCALE: 1" = 200'
					DENVER, COLORADO 80205	SHEET: 2
					(303) 477-5915	



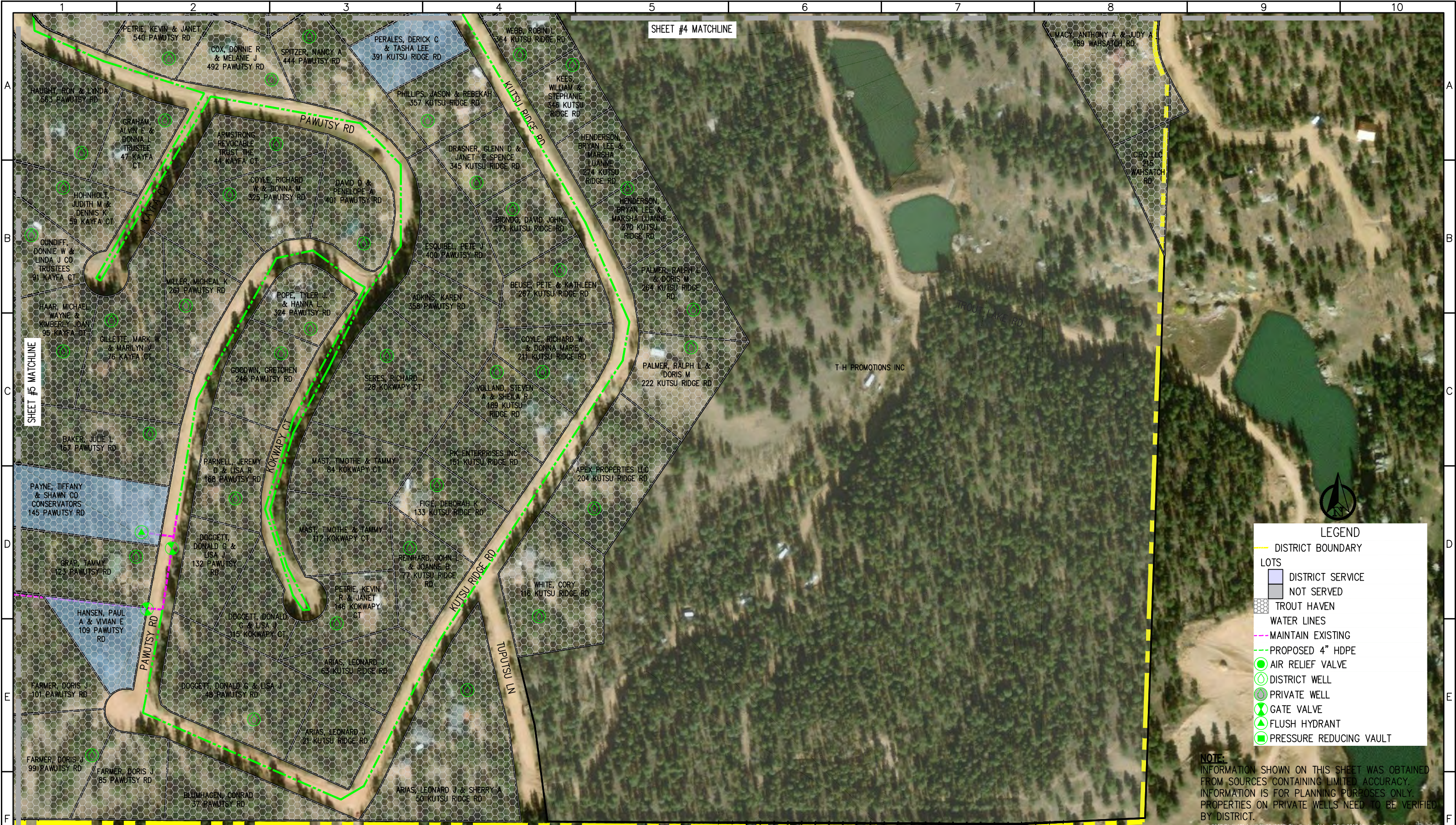
REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: AS			PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT DISTRIBUTION SYSTEM PLANNING TELLER COUNTY, COLORADO		SHEET TITLE: PROPOSED WATER DISTRIBUTION SYSTEM MAP		
				DESIGNED BY: AS			ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: #1744	SCALE: 1' = 200'	SHEET: 3
				FILE PRINTED ON: 2/19/2018 1:41:40 PM							
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				0 1 IF THIS BAR DOES NOT READ 1"  DRAWING IS NOT LABELED TO SCALE							
1	2	3	4	5	6	7	8	9	10		



REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: AS
				DESIGNED BY: AS
				FILE PRINTED ON: 2/19/2018 1:41:40 PM
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				0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE



PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT DISTRIBUTION SYSTEM PLANNING TELLER COUNTY, COLORADO			SHEET TITLE: PROPOSED WATER DISTRIBUTION SYSTEM MAP		
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #1744	SCALE: 1' = 200'	SHEET: 4



SHEET #4 MATCHLINE

SHEET #5 MATCHLINE

LEGEND

DISTRICT BOUNDARY

LOTS

DISTRICT SERVICE

NOT SERVED

TROUT HAVEN

WATER LINES

MAINTAIN EXISTING

PROPOSED 4" HDPE

AIR RELIEF VALVE

DISTRICT WELL

PRIVATE WELL

GATE VALVE

FLUSH HYDRANT

PRESSURE REDUCING VAULT

NOTE:
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REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: AS
				DESIGNED BY: AS
				FILE PRINTED ON: 2/19/2018 1:41:40 PM
				COPYRIGHT: AQUAWORKS DBO, INC.
				0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE



PROJECT: ARABIAN ACRES METROPOLITAN DISTRICT DISTRIBUTION SYSTEM PLANNING TELLER COUNTY, COLORADO			SHEET TITLE: PROPOSED WATER DISTRIBUTION SYSTEM MAP		
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: #1744		SCALE: 1' = 200'	SHEET: 6



COLORADO WATER RESOURCES & POWER DEVELOPMENT AUTHORITY

Logan Tower Bldg - Suite 620, 1580 Logan Street, Denver, Colorado 80203-1942
303-830-1550 · Fax 303-832-8205 · info@cwrpda.com

August 27, 2018

Judy Bertrand, Owner & CEO
Arabian Acres Metropolitan District (Metropolitan District Management)
23005 Whispering Woods
Golden, CO 80401

Re: Drinking Water Revolving Fund ("DWRF") Business Case Approval

Dear Ms. Bertrand:

On August 23, 2018, the Board of Directors of the Colorado Water Resources and Power Development Authority approved the Arabian Acres Metropolitan District's business case and awarded the District Disadvantaged Communities status for a term of 18 months. This determination allows the District to potentially have access to a planning grant, design and engineering grant, term of up to 30 years (based on project useful life), and a reduced interest rate on a direct loan if there is an affordable and viable project. The District must apply for a direct loan prior to the expiration of the 18-month period to receive a reduced interest rate.

We look forward to working with you and your representatives towards a successful project. Please call me at (303) 830-1550, extension 1014 or email me at iloffert@cwrpda.com with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Ian Loffert", with a stylized flourish extending to the right.

Ian Loffert
Financial Analyst

CC:

Erick Worker, WQCD, (via email)
Matthew Stearns P.E. (via email)
Desi Santerre, (via email)

3. DESCRIPTION OF EXISTING FACILITIES

3.1 SERVICE AREA FEATURES

Principal distribution system components are shown on the attached Distribution System Map included in the Appendix. Elements shown include two water treatment plants (Control Buildings A and B), a 38,200 gallon water storage/disinfection tank, 9 wells, and distribution lines. Air relief valves, isolation valves, and blow off hydrants are also part of the distribution system but are not shown on the attached Distribution System Map.

3.2 FACILITIES LAYOUT AND DESCRIPTION

3.2.1 RAW WATER QUANTITY

There are currently nine wells installed in the District. Water from the wells is treated in two locations. Control Building A treats Wells 1, 2, 6, 7, and 8. Control Building B treats Wells 3, 4, 5, and 9. Control Building A feeds a 38,200 gallon disinfection/water storage tank with a 2 inch line. Control Building B discharges to a 12 inch PVC pipe loop approximately 90 feet long prior to the distribution system entry point. One of the recommended alternatives includes adding SCADA capabilities to improve the well call-to-run signal timing.

Table 4: Well Summary

Well #	Well Depth (Feet)	Control Building	Initial Rating (GPM)	Approx. Current Yield (GPM)
1 (Permit# 044597-F)	120	A	3	Control Building A " Approximate Current Yield of 13.5 GPM (19,400 GPD)
2 (Permit# 74381-F)	300	A	2	
6 (Permit# 053350-F)	300	A	4	
7 (Permit # 054114-F)	400	A	1.5	
8 (Permit# 055182-F)	380	A	3	
3 (Permit# 051210-F)	20	B	5	Control Building B Approximate Current Yield of 12.2 GPM (17,500 GPD)
4 (Permit# 051408-F)	200	B	1.5	
5 (Permit# 68439-F)	600	B	0.75	
9 (Permit #77155-F)	600	B	5	

Water production rates of the existing wells have decreased over the years, at times making it difficult for the system to provide enough water to the residents. The problem results from the wells needing to produce extra water to make up for the distribution losses or occasional peak flow demands from the commercial taps. Current well production capacity based on current yields from Control Buildings A and B is about 25 GPM or 36,000 GPD. If the current production rate continues and water losses are minimized there would be an adequate supply volume for the